

# **Differences Between High, Medium, and Low profit Producers: An Analysis of 2002-2006 Kansas Farm Management Association Crop Enterprises**

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Farm profitability is a topic widely discussed in both the agricultural community and in Washington D.C. It is important on both the individual farm level and also on the policy making level. At the macro level, many factors uncontrollable by producers (e.g., interest rates, trade policies, government programs) impact overall farm profitability. However, producers do have more control of profitability at the farm level relative to other producers. That is, while numerous factors beyond the producer's control impact the absolute level of profitability, producers' management abilities impact their relative profitability. In a competitive industry that is consolidating, such as agriculture, relative profitability will dictate which producers will remain in business in the long run. Thus, it is important to recognize which characteristics determine relative farm profitability between producers. Do profitable farms get higher yields? Do profitable farms receive more for their commodities? Do they have lower costs? If they have lower costs, in what areas are their costs lower? To consider these questions, crop enterprise budgets from the Kansas Farm Management Association (KFMA) Enterprise Analysis for the years 2002-2006 were divided into three profitability groups, high, middle, and low, based on the 5-year average per acre return to management.<sup>1</sup> The enterprises (number of farms) included in this analysis were alfalfa (34), corn (45), irrigated corn (15), grain sorghum (85), soybean (74), and wheat (178). Enterprise analyses were completed at the regional level, but these data were aggregated for the entire state for this analysis. Additionally, for a farm to be included in the analysis, it had to have data each year over the 5-year period. A 5-year average of individual producers' returns is used as this should do a better job of characterizing profitability differences that are due to management abilities as opposed to random returns, which might be the case if only a single year were considered.

To allow for easier comparisons, a number of the income and expense categories reported in the KFMA enterprise reports were aggregated. Crop income was calculated for each farm-year by taking the yield and multiplying it by the operator percentage and the commodity price. Gross income includes crop income plus any government payments, crop insurance payments and any other type of miscellaneous income directly related to the production of the specific crop. Machinery costs were the summation of general machinery repairs, machinery hire net of custom work, fuel, gas, oil, market depreciation, and machinery-related labor costs. Other costs were the summation of fees, grain storage and marketing, personal property tax, general farm insurance, utility expense, conservation, and auto-expense. Land costs were the summation of cash rent, real estate taxes and an opportunity cost on owned land. The following is a brief discussion of each of the enterprises analyzed.

## ***Non-irrigated Corn (Table 1)***

On average, the high profit farms earned \$91.13 per acre more profit than the low profit farms and averaged \$35.16 per acre more than the mid profit farms. Yields and prices varied across all three profit categories, resulting in over \$30 per acre difference in gross income between high

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<sup>1</sup> The words profitability and profit used in this paper refer to the Net Return to Management measure reported in the Kansas Farm Management Association Enterprise *PROFITCENTER* Summary reports. Net Return to Management is gross income less all costs, which includes unpaid labor, depreciation, and a charge for owned land.

profit farms and mid profit farms. Interestingly, the low profit farm's gross income was \$2.42 per acre more than high profit farms. Thus, over 100% of the difference in net profit was due to cost differences. Of the various cost categories, machinery costs had the largest impact on farm profitability. Machinery costs were \$31.53 per acre lower for the high profit farms relative to the low profit farms. Approximately 35% of the total cost difference was due to the machinery cost. However, there was only about \$3.29 per acre difference between the high and mid profit categories for machinery costs. High profit farms had lower costs relative to low profit farms in every category, with most of the differences being over 30%. The one exception to this was crop insurance costs, where the difference between the high and low profit farms was only \$0.10 per acre. There was a strong relationship between enterprise size (acres) and profit category. High profit farms had the most acres with 458, mid profit farms came in second with 342, while low profit farms had the least with 298. High profit farms had 53% more acres (458 versus 298) when compared to low profit farms and had 34% more acres (458 versus 342) when compared to mid profit farms.

As a summary of the three profit groups, high profit farms had similar gross income as low profit farms, but they had considerably lower costs. Mid profit farms had the lowest gross income, but had lower costs than the low profit farm making this group more profitable than the low profit farms. Low profit farms had the highest gross income, but incurred \$93.54 and \$89.80 per acre more in costs than the high and mid profit farms, respectively. A breakdown of price and yields for the three profitability groups can be seen in Figure 1a and a similar breakdown of costs can be seen in Figure 1b.

### ***Center-Pivot Irrigated Corn (Table 2)***

The average difference in profitability between high profit and low profit farms for irrigated corn (center pivot) in Kansas was \$138.74 per acre. The average profit difference between high and mid profit farms was \$44.52 per acre. Prices were similar across all three profit categories, implying that differences in gross income were due to yields and other factors (e.g., government payments, crop insurance). High profit farms had a 3% higher gross income than low profit farms, and 30% higher gross income when compared to mid profit farms. The difference in gross income between high and low profit farms accounted for approximately 9.3% of the profitability difference, whereas 90.7% of the difference was due to cost differences. Of the various cost categories, land and machinery costs had the largest impact on farm profitability. Machinery costs were \$31.21 per acre lower for the high profit farms than the low profit farms. Thus, approximately 25% of the total cost difference was due to a machinery cost difference. High profit farms had lower costs than low profit farms in every category except crop insurance, where high profit farms spent \$2.21 per acre more than the low profit farms. There was a positive relationship between enterprise size (acres) and profit category, as high profit farms were largest and low profit farms were the smallest. High profit farms farmed 114% more acres in their irrigated corn enterprise than low profit farms. This suggests economies of size exist, which likely was a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had relatively high income and low costs, while mid profit farms had relatively low income and low costs. Low profit farms had higher income than the mid profit farm, but they also had higher costs. This suggests that achieving high yields is not necessarily optimal if it cannot be done without controlling costs. A breakdown of price and yields for the three profitability groups can be seen in Figure 2a and a breakdown of costs for the three groups can be seen in Figure 2b.

### ***Non-irrigated Grain Sorghum (Table 3)***

On average, the high profit farms earned \$81.38 per acre more profit than low profit farms and about \$32 per acre more than mid profit farms. Prices were basically equal across all three profit categories, suggesting that the \$30.42 per acre difference in gross income was not due to marketing efforts, but rather other factors. Yields showed some variability. High profit farms had the best yield with 77.1 bushels per acre. On average, mid profit farms had 6.2 bushels less than high profit farms while low profit farms had an average of 14.8 less bushels per acre than high profit farms. Of the \$81.38 per acre difference in profitability, 37.4% was income related (principally yield), with the other 62.6% coming from the cost side. Of the various cost categories, machinery costs had the largest impact on farm profitability. Machinery costs were \$22.14 per acre lower for the high profit category compared to the low profit category. As a result, 43% of the cost difference was due to differences in machinery costs. High profit farms had lower costs than low profit farms in almost every category with most of the differences being between 20% and 50%. The exception to this was the herbicide-insecticide category where high profit farms spent \$0.44 more per acre. There was a positive relationship between enterprise size (acres) and profit category as high profit farms were the largest and low profit farms were the smallest. High profit farms farmed 65% more acres (407 versus 246) in their grain sorghum enterprise than low profit farms. This suggests economies of size exist, which likely was a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had higher income than the mid profit farms but considerably lower costs. Mid profit farms received more gross income per acre and had lower costs than low profit farms. Low profit farms had the lowest gross income, and significantly higher costs than either of the other farm groups. A breakdown of price and yields for the three profitability groups can be seen in Figure 3a and a similar breakdown of costs can be seen in Figure 3b.

### ***Non-irrigated Wheat (Table 4)***

The average difference in profit between high profit and low profit farms was \$65.39 per acre, while the average difference in profit between high and mid profit farms was about \$26.83 per acre. The high and mid profit farms received similar prices, which were about \$0.11 per bushel higher than low profit farms. High profit farms had substantially higher yields (7.5 bu/acre) compared to mid profit farms; however, the difference in yields between high profit farms and low profit farms was only 4.5 bushel per acre. Mid profit farms actually had the lowest yield of the three profit categories. The combination of higher yields and higher prices resulted in high profit farms receiving \$11.05 per acre more gross income than the low profit farms (\$24.66 per acre higher than mid profit farms). Interestingly, low profit farms received \$13.61 per acre more in gross income than mid profit farms. Even though there were substantial differences in income between the high and low profit farms, of the \$65 per acre difference in profitability, only about a fifth (18%) is income related (i.e., yield and price) with the other four-fifths (82%) coming from the cost side. Of the various cost categories, machinery costs had the largest impact on farm profitability. Machinery costs were \$24.18 per acre lower for the high profit category relative to the low profit category. Thus, 45% of the total cost difference was due to machinery cost differences. Another 19% of the total cost difference was due to higher land costs. High profit farms had lower costs than low profit farms in every cost category with many of the differences being over 20%. Like most of the other crop enterprises, there was a positive relationship between enterprise size (acres) and profit category, as larger acre farms incurred less cost per acre than smaller acre farms. Mid profit farms farmed 82% more acres than the low profit farms (775 versus 425) and farmed 6% more acres than high profit farms.

As a summary of the three profit groups, high profit farms had the highest income and the lowest cost of the three different groups. Mid profit farms had the lowest gross income out of the three groups but substantially lower costs than the low profit farms. Low profit farms had higher income relative to mid profit farms and they had significantly higher costs than the other farm groups. A breakdown of price and yields for the three profitability groups can be seen in Figure 4a and a breakdown of the costs for the three groups can be seen in Figure 4b.

### ***Non-irrigated Soybeans (Table 5)***

On average, the high profit farms net income was \$74.52 more per acre than the low profit farms and \$26.57 more per acre than mid profit farms. High profit farms had higher yields compared to mid (2.8 bu/acre) and low (6.9 bu/acre) profit farms. These higher yields resulted in high profit farms having \$27.28 per acre higher crop income than the low profit farms (\$6.36 per acre higher than mid profit farms). Of the \$74.52 per acre difference in profitability, about 29% was gross income related (i.e., yield), with the other 71% coming from the cost side. Of the various cost categories, machinery costs had the largest impact on farm profitability. Machinery costs were \$21.88 per acre lower for the high profit category relative to the low profit category. Thus, 41% of the cost difference was due to machinery cost differences. High profit farms had lower costs than low profit farms in every cost category with most of the differences being over 20% lower for high profit farms. There was a positive relationship between enterprise size (acres) and profit category as high profit farms were largest and low profit farms were the smallest. High profit farms had considerably more acres in their soybean enterprises than the low profit farms (424 versus 286). This suggests economies of size exist, which likely was a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had both the highest gross income and the lowest cost of the three different groups. Mid profit farms had significantly higher gross income and substantially lower costs than low profit farms. Low profit farms had both lower income and significantly higher costs than the other farm groups. A breakdown of price and yields for the three profitability groups can be seen in Figure 5a and a similar breakdown of costs for the three groups can be seen in Figure 5b.

### ***Non-irrigated Alfalfa (Table 6)***

The average difference in profit between high profit and low profit farms was almost \$134 per acre. The difference between high and mid profit farms was about \$63 per acre. The high profit farms received prices about \$5.50/ton higher than the low profit farms and about \$7/ton higher than the mid profit farms. Likewise, high profit farms had a yield advantage over both the mid and low profit farms; the greatest difference being between high profit and low profit farms with a difference of 0.6 tons/acre. This 0.6 yield advantage translated into \$47 per acre (0.6 x \$77.73) additional crop income for high profit farms. This was one of the main factors that contributed to high profit farms receiving \$68 per acre higher gross income compared to low profit farms. Thus, 51% of the profitability difference between high and low profit farms was due to income, while the other 49% was due to cost differences. Of the various cost categories, machinery costs had the largest impact on farm profitability. Machinery costs were \$35 per acre lower for high profit farms relative to the low profit farms. As a result, slightly more than half (53%) of the cost differences were due to machinery cost differences. High profit farms had lower costs than low profit farms in every cost category except seed and fertilizer. However, the differences were negligible with high and low profit farms having very similar costs in these two categories. Many of the other costs differences were 20% or more favoring the high profit farms. Alfalfa was the one enterprise where there was basically no relationship between enterprise size (acres) and profit category, as high profit farms

were the medium sized farms. Mid profit farms had the most acres for this enterprise. It may be of interest to note that the difference between high profit and low profit farms was not related to economies of scale, there being only a five acre difference between them.

As a summary of the three profit groups, high profit farms had significantly higher income over all categories as well as significantly lower costs compared to the low profit farms and slightly higher costs than mid profit farms. Mid profit farms had slightly higher income than the low profit farms but substantially lower costs. Marketing seemed to be the biggest issue for mid profit farms having received the lowest price per ton. Low profit farms had both lower income and significantly higher costs than the other farm groups. A breakdown of price and yields for the three profitability groups can be seen in Figure 6a and a similar breakdown of costs can be seen in Figure 6b.

### ***Summary***

There are some significant conclusions to be drawn from this information. The difference between the average profit (returns to management) for high profit and low profit farms ranges from \$65.39 for wheat to \$138.74 for irrigated corn (Table 7). For most of the crop enterprise, the majority of the difference in profitability between high and low profit farms was due to costs as opposed to income (i.e., yield and price). The greatest exception to this was alfalfa, where yield and price played a larger role in explaining profitability differences between operations. In most cases, high profit farms had lower costs than low profit farms for every cost category. The most common exception to this was crop insurance, suggesting that this is one area where high profit farms do not necessarily minimize cost. Of the cost differences, machinery costs were consistently the most important cost category. In dollars per acre, machinery cost advantages for high profit farms compared to low profit farms ranged from a low \$21.88 for soybeans to a high of \$35.02 for alfalfa. As a percentage of total cost differences, machinery cost differences between high and low profit farms ranged from 24.8% (soybeans) to 53.2% (alfalfa). Thus, machinery management is one of the areas producers should focus their efforts to improve their relative profit positions. The other finding that was quite consistent across enterprises was that high profit farms were generally larger than mid and low profit farms (the exception to this was alfalfa and to a lesser extent wheat). This provides evidence that economies of size exist, with the primary benefit of larger farm sizes coming through lower costs. Figure 7 shows a summary of the cost advantages, by cost category, for the high profit farms over the low profit farms by crop.

**Table 1. Kansas Farm Management Association Enterprise Analysis  
Nonirrigated Corn -- State Averages, 2002-2006**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	15	15	15		
Enterprise acres	458	342	298	160	53%
Yield per acre, bu	100.4	91.9	93.9	6.5	7%
Operator percentage	83.6%	80.4%	86.6%	-2.9%	-3%
Price per bushel	\$2.40	\$2.36	\$2.35	\$0.05	2%
<b><u>INCOME (\$/acre)</u></b>					
Crop income	\$196.09	\$169.51	\$185.10	\$10.99	6%
<b>Gross income</b>	<b>\$233.81</b>	<b>\$202.40</b>	<b>\$236.23</b>	<b>-\$2.42</b>	<b>-1%</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>					
Seed	\$28.21	\$28.40	\$31.32	-\$3.11	-10%
Fertilizer	\$32.34	\$34.35	\$48.11	-\$15.77	-33%
Herbicide-insecticide	\$20.00	\$20.26	\$28.04	-\$8.04	-29%
Crop insurance	\$7.49	\$6.54	\$7.40	\$0.10	1%
Repairs	\$13.93	\$14.34	\$21.79	-\$7.86	-36%
Machinery	\$59.28	\$62.57	\$90.82	-\$31.53	-35%
Other	\$14.98	\$14.82	\$24.24	-\$9.26	-38%
Land	\$32.40	\$28.73	\$49.54	-\$17.15	-35%
Interest	\$14.81	\$17.58	\$23.58	-\$8.77	-37%
<b>Total Cost</b>	<b>\$209.50</b>	<b>\$213.25</b>	<b>\$303.05</b>	<b>-\$93.54</b>	<b>-31%</b>
<b>Net Return to Management</b>	<b>\$24.31</b>	<b>-\$10.85</b>	<b>-\$66.82</b>	<b>\$91.13</b>	

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

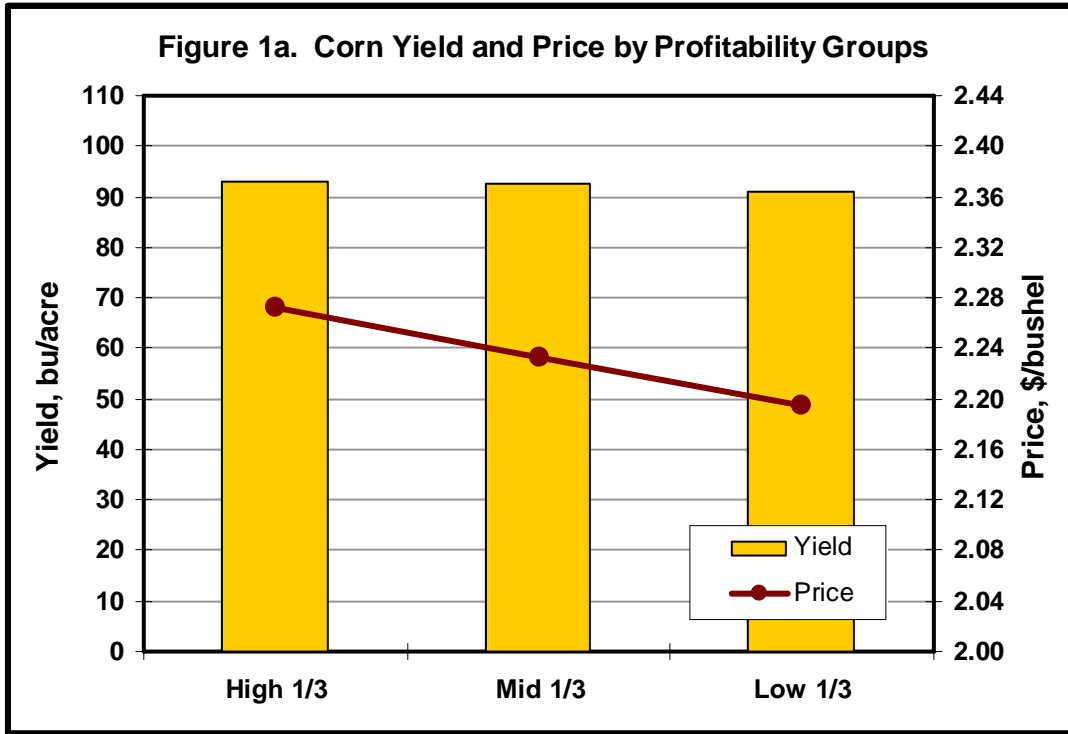


Figure 1a. Relationship between price and yields for low, medium and high profit farms – Corn enterprise.

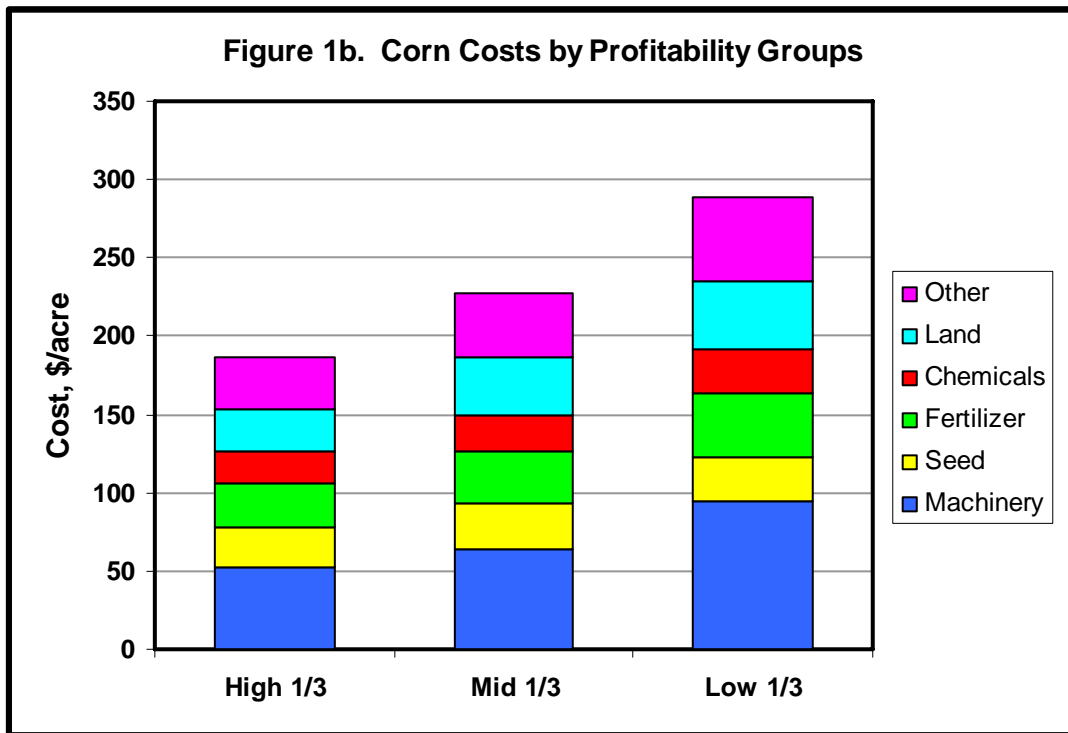


Figure 1b. Relationship of different costs between low, medium and high profit farms – Corn enterprise.

**Table 2. Kansas Farm Management Association Enterprise Analysis**  
**Irrigated Corn -- State Averages, 2002-2006**

	Profit Category			Difference between	
	High 1/3	Mid 1/3	Low 1/3	High 1/3 and Low 1/3 Absolute	%
Number of farms	5	5	5		
Enterprise acres	975	284	455	520	114%
Yield per acre, bu	183.5	168.2	167.9	15.6	9%
Operator percentage	81.4%	69.6%	89.2%	-7.9%	-9%
Price per bushel	\$2.46	\$2.41	\$2.46	\$0.00	0%
<b><u>INCOME (\$/acre)</u></b>					
Crop income	\$360.09	\$271.26	\$367.51	-\$7.41	-2%
<b>Gross income</b>	<b>\$436.26</b>	<b>\$335.81</b>	<b>\$423.31</b>	<b>\$12.95</b>	<b>3%</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>					
Seed	\$38.66	\$41.56	\$48.19	-\$9.53	-20%
Fertilizer	\$41.45	\$39.13	\$58.03	-\$16.58	-29%
Herbicide-insecticide	\$39.34	\$26.36	\$46.45	-\$7.12	-15%
Crop insurance	\$14.19	\$10.27	\$11.97	\$2.21	19%
Repairs	\$14.01	\$20.80	\$24.21	-\$10.20	-42%
Machinery	\$73.77	\$82.49	\$104.98	-\$31.21	-30%
Other	\$88.89	\$54.57	\$104.09	-\$15.20	-15%
Land	\$41.06	\$33.53	\$82.10	-\$41.03	-50%
Interest	\$31.19	\$24.71	\$38.53	-\$7.34	-19%
<b>Total Cost</b>	<b>\$368.55</b>	<b>\$312.62</b>	<b>\$494.35</b>	<b>-\$125.79</b>	<b>-25%</b>
<b>Net Return to Management</b>	<b>\$67.71</b>	<b>\$23.19</b>	<b>-\$71.03</b>	<b>\$138.74</b>	

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

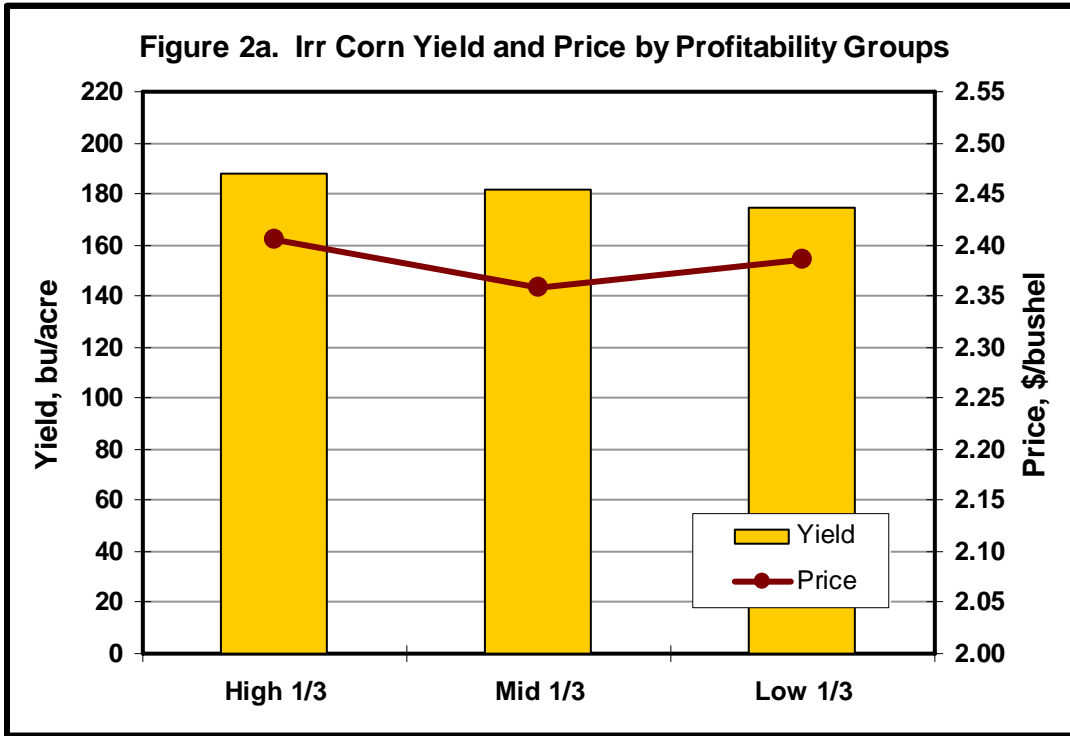


Figure 2a. Relationship between price and yields for low, medium and high profit farms – Irrigated corn enterprise.

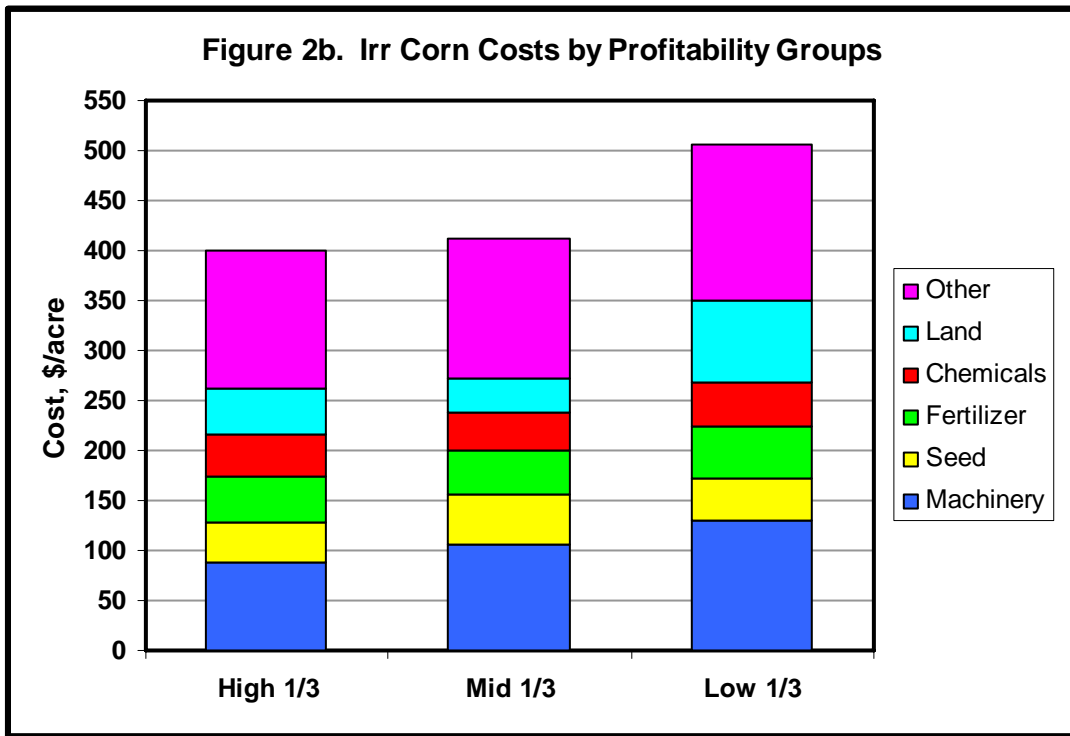


Figure 2b. Relationship of different costs between low, medium and high profit farms – Irrigated corn enterprise.

**Table 3. Kansas Farm Management Association Enterprise Analysis  
Nonirrigated Sorghum -- State Averages, 2002-2006**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	28	29	28		
Enterprise acres	407	332	246	161	65%
Yield per acre, bu	77.1	70.9	62.3	14.8	24%
Operator percentage	79.5%	79.3%	80.3%	-0.8%	-1%
Price per bushel	\$2.26	\$2.24	\$2.27	\$0.00	0%
<b><u>INCOME (\$/acre)</u></b>					
Crop income	\$135.08	\$120.32	\$106.57	\$28.50	27%
<b>Gross income</b>	<b>\$168.20</b>	<b>\$155.07</b>	<b>\$137.78</b>	<b>\$30.42</b>	<b>22%</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>					
Seed	\$9.98	\$11.15	\$12.82	-\$2.84	-22%
Fertilizer	\$25.60	\$25.48	\$31.44	-\$5.84	-19%
Herbicide-insecticide	\$21.52	\$23.32	\$21.07	\$0.44	2%
Crop insurance	\$4.70	\$4.85	\$5.62	-\$0.92	-16%
Repairs	\$10.94	\$12.54	\$16.47	-\$5.52	-34%
Machinery	\$51.08	\$60.09	\$73.22	-\$22.14	-30%
Other	\$13.42	\$16.06	\$22.05	-\$8.64	-39%
Land	\$18.28	\$19.93	\$22.61	-\$4.33	-19%
Interest	\$11.37	\$13.86	\$18.07	-\$6.70	-37%
<b>Total Cost</b>	<b>\$155.94</b>	<b>\$174.74</b>	<b>\$206.90</b>	<b>-\$50.96</b>	<b>-25%</b>
<b>Net Return to Management</b>	<b>\$12.26</b>	<b>-\$19.67</b>	<b>-\$69.12</b>	<b>\$81.38</b>	

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

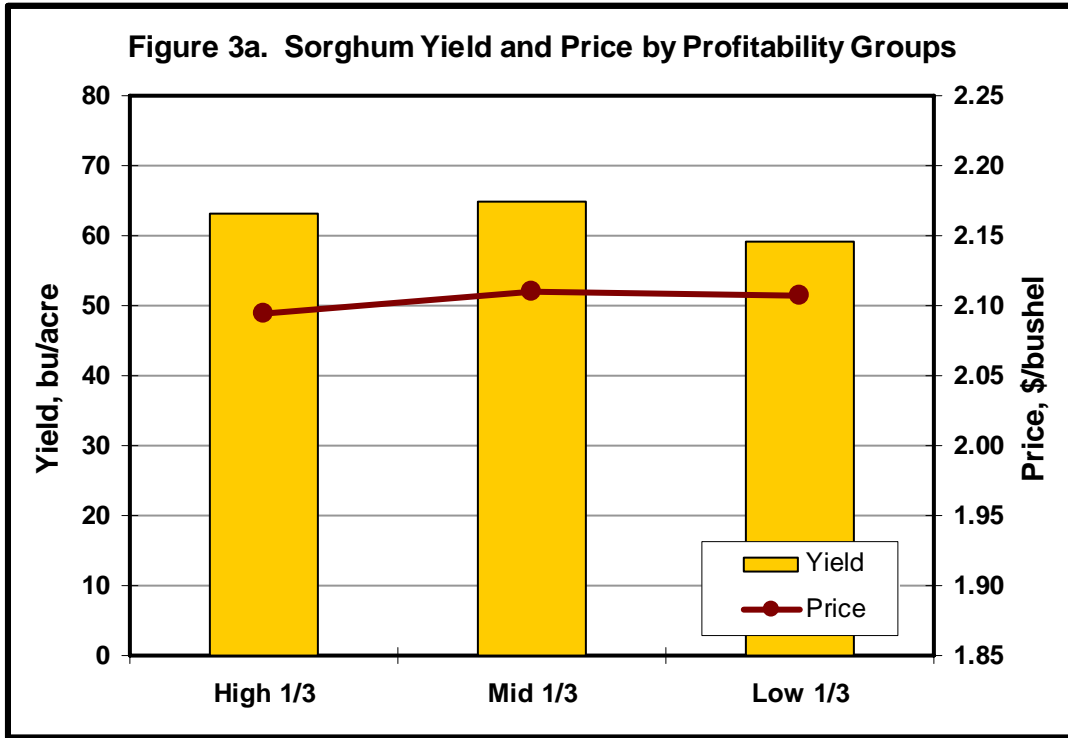


Figure 3a. Relationship between price and yields for low, medium and high profit farms – Sorghum enterprise.

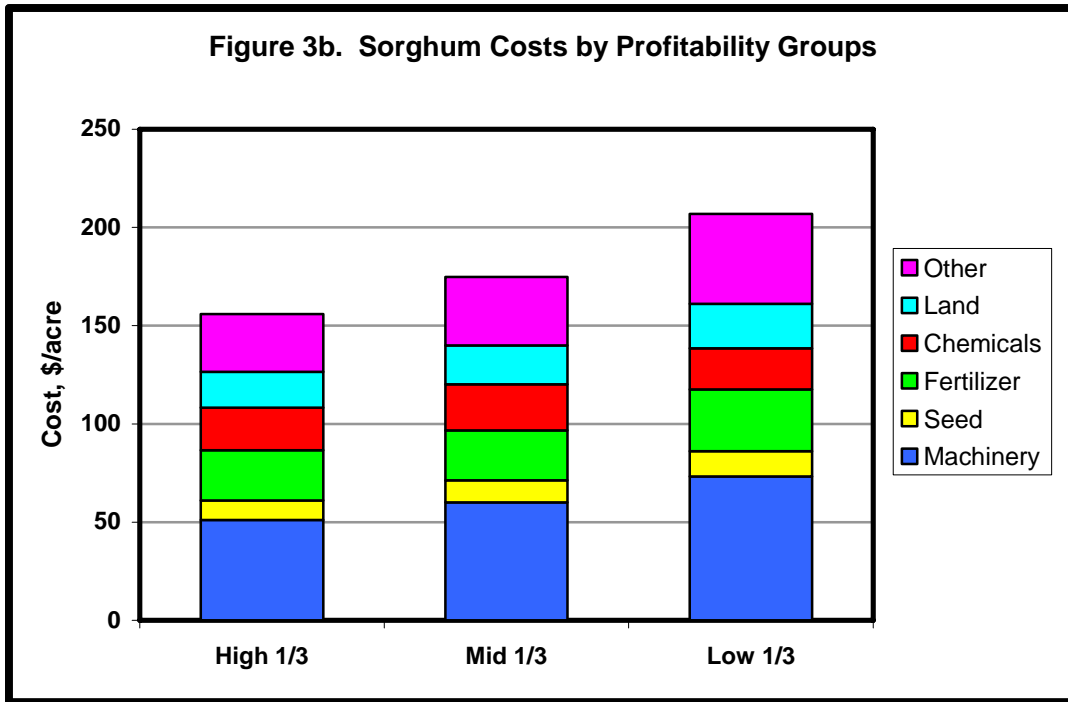


Figure 3b. Relationship of different costs between low, medium and high profit farms – Sorghum enterprise.

**Table 4. Kansas Farm Management Association Enterprise Analysis**  
**Nonirrigated Wheat -- State Averages, 2002-2006**

	Profit Category			Difference between	
	High 1/3	Mid 1/3	Low 1/3	High 1/3 and Low 1/3 Absolute	%
Number of farms	59	60	59		
Enterprise acres	743	775	425	318	75%
Yield per acre, bu	45.5	38.0	41.0	4.5	11%
Operator percentage	81.1%	79.7%	84.9%	-3.8%	-4%
Price per bushel	\$3.64	\$3.63	\$3.53	\$0.11	3%
<b><u>INCOME (\$/acre)</u></b>					
Crop income	\$134.89	\$106.37	\$124.15	\$10.74	9%
<b>Gross income</b>	<b>\$160.99</b>	<b>\$135.65</b>	<b>\$149.44</b>	<b>\$11.55</b>	<b>8%</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>					
Seed	\$6.49	\$6.20	\$7.42	-\$0.93	-13%
Fertilizer	\$22.09	\$19.38	\$25.02	-\$2.93	-12%
Herbicide-insecticide	\$5.01	\$5.13	\$6.60	-\$1.58	-24%
Crop insurance	\$3.93	\$4.87	\$4.04	-\$0.10	-3%
Repairs	\$11.31	\$11.94	\$16.22	-\$4.91	-30%
Machinery	\$51.54	\$55.48	\$75.72	-\$24.18	-32%
Other	\$12.40	\$13.38	\$21.45	-\$9.05	-42%
Land	\$20.46	\$18.50	\$30.61	-\$10.15	-33%
Interest	\$10.87	\$11.35	\$15.78	-\$4.91	-31%
<b>Total Cost</b>	<b>\$132.80</b>	<b>\$134.28</b>	<b>\$186.64</b>	<b>-\$53.84</b>	<b>-29%</b>
<b>Net Return to Management</b>	<b>\$28.19</b>	<b>\$1.36</b>	<b>-\$37.20</b>	<b>\$65.39</b>	

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

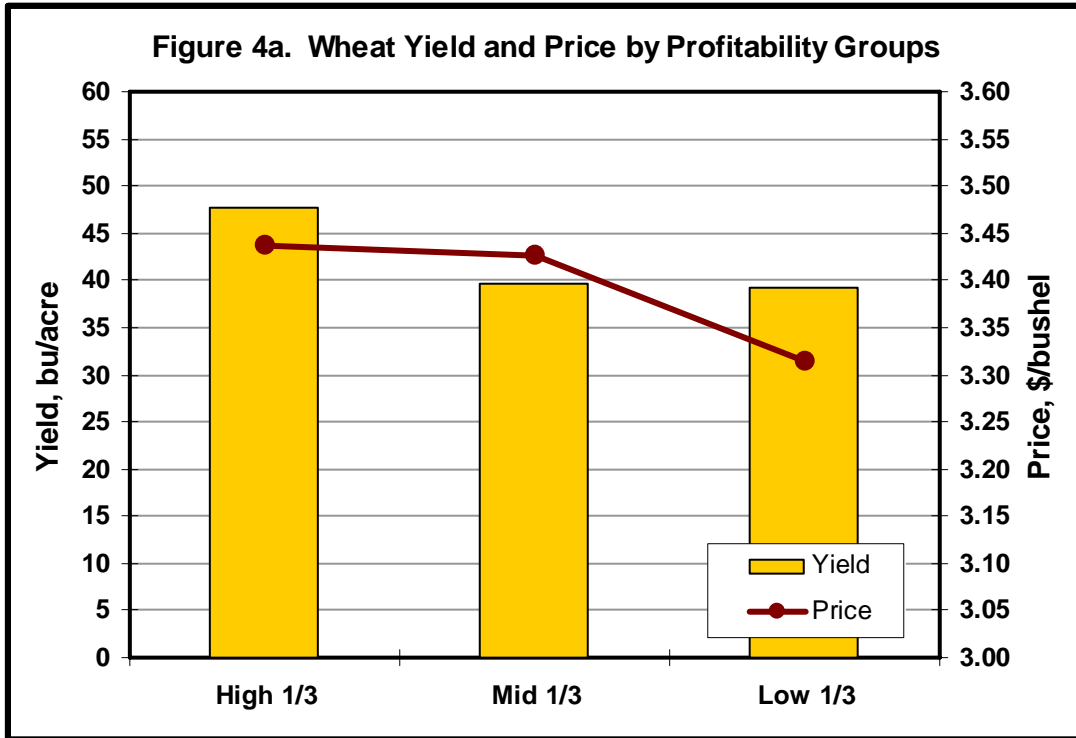


Figure 4a. Relationship between price and yields for low, medium and high profit farms – Wheat enterprise.

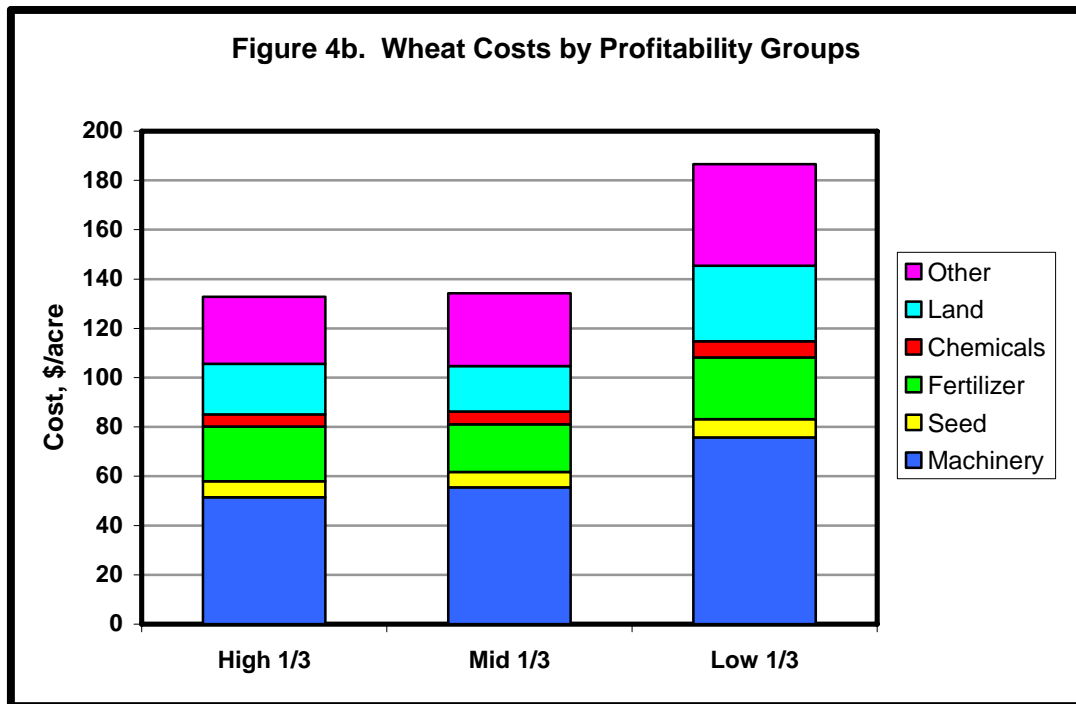


Figure 4b. Relationship of different costs between low, medium and high profit farms – Wheat enterprise.

**Table 5. Kansas Farm Management Association Enterprise Analysis  
Nonirrigated Soybeans -- State Averages, 2002-2006**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	25	24	25		
Enterprise acres	424	328	286	138	48%
Yield per acre, bu	31.9	29.3	25.7	6.2	24%
Operator percentage	81.4%	84.4%	83.4%	-2.0%	-2%
Price per bushel	\$5.87	\$5.91	\$5.85	\$0.02	0%
<b><u>INCOME (\$/acre)</u></b>					
Crop income	\$149.14	\$142.78	\$121.86	\$27.28	22%
<b>Gross income</b>	<b>\$176.09</b>	<b>\$168.64</b>	<b>\$154.73</b>	<b>\$21.37</b>	<b>14%</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>					
Seed	\$23.32	\$23.03	\$26.30	-\$2.98	-11%
Fertilizer	\$3.94	\$4.44	\$6.60	-\$2.66	-40%
Herbicide-insecticide	\$15.06	\$14.20	\$17.73	-\$2.67	-15%
Crop insurance	\$5.83	\$5.13	\$6.89	-\$1.06	-15%
Repairs	\$12.13	\$15.14	\$18.83	-\$6.70	-36%
Machinery	\$54.10	\$62.84	\$75.98	-\$21.88	-29%
Other	\$13.38	\$16.47	\$22.48	-\$9.11	-41%
Land	\$26.38	\$32.82	\$29.26	-\$2.88	-10%
Interest	\$11.41	\$13.61	\$21.33	-\$9.91	-46%
<b>Total Cost</b>	<b>\$153.41</b>	<b>\$172.53</b>	<b>\$206.57</b>	<b>-\$53.15</b>	<b>-26%</b>
<b>Net Return to Management</b>	<b>\$22.68</b>	<b>-\$3.90</b>	<b>-\$51.84</b>	<b>\$74.52</b>	

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

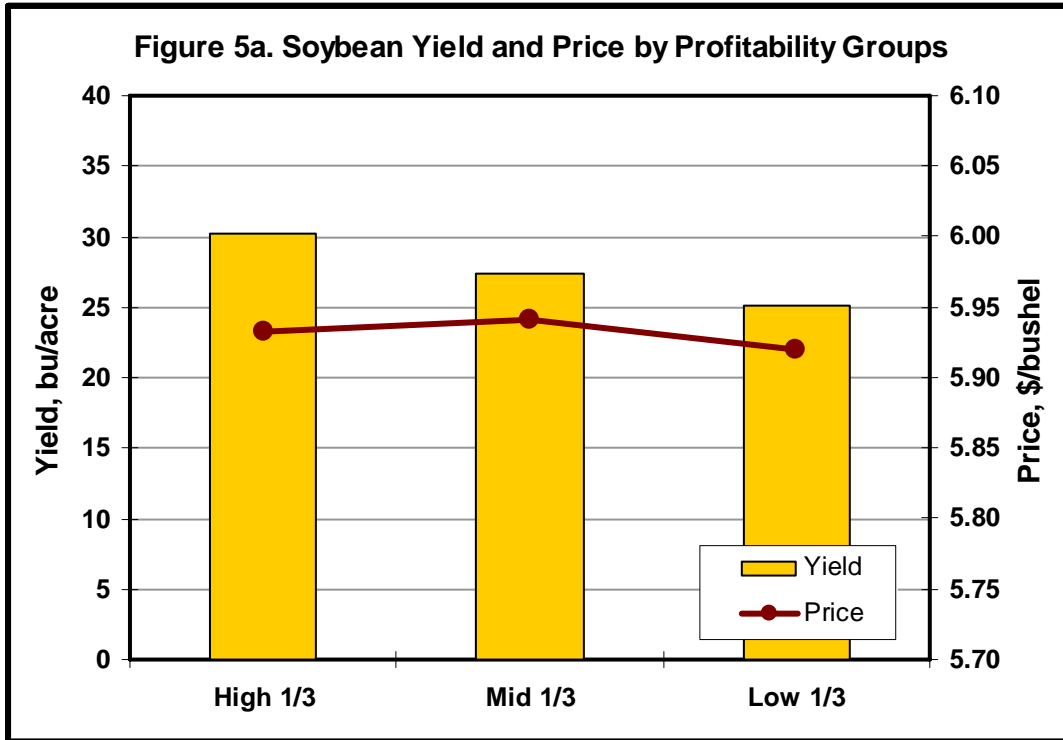


Figure 5a. Relationship between price and yields for low, medium and high profit farms – Soybean enterprise.

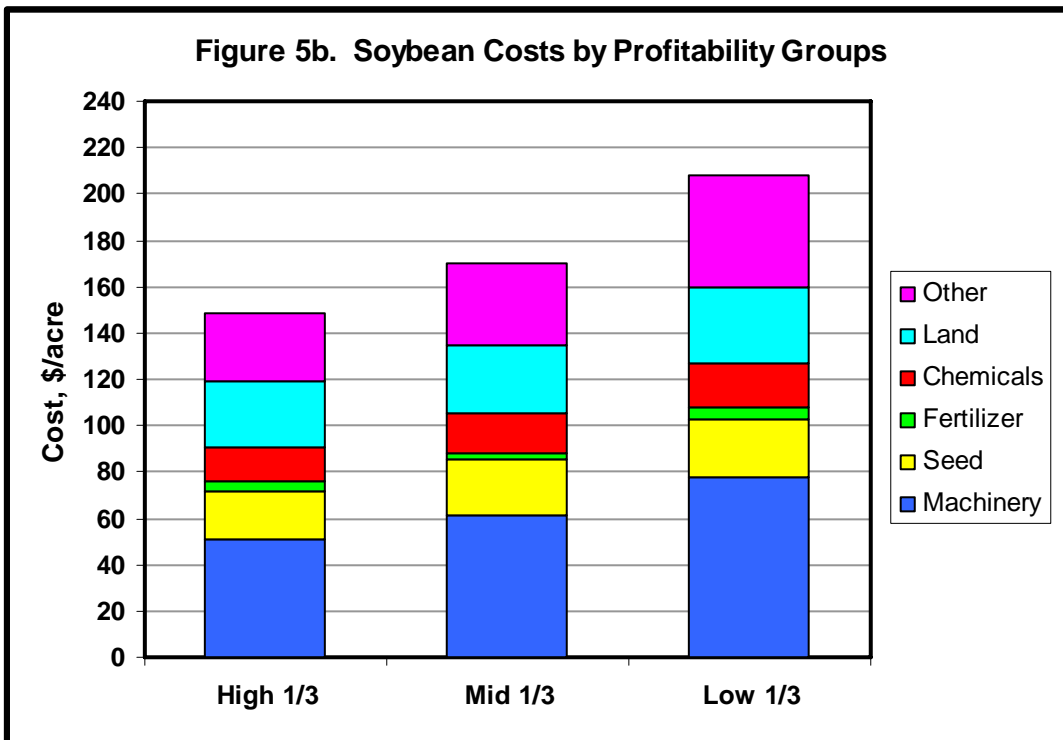


Figure 5b. Relationship of different costs between low, medium and high profit farms – Soybean enterprise.

**Table 6. Kansas Farm Management Association Enterprise Analysis**  
**Alfalfa -- State Averages, 2002-2006**

	Profit Category			Difference between	
	High 1/3	Mid 1/3	Low 1/3	High 1/3 and Low 1/3 Absolute	%
Number of farms	11	12	11		
Enterprise acres	112	185	107	5	5%
Yield per acre, tons	3.5	3.2	2.9	0.6	21%
Operator percentage	95.9%	85.9%	93.2%	2.7%	3%
Price per ton	\$77.73	\$71.15	\$72.17	\$5.56	8%
<b><u>INCOME (\$/acre)</u></b>					
Crop income	\$253.87	\$187.06	\$186.16	\$67.72	36%
<b>Gross income</b>	<b>\$268.13</b>	<b>\$201.01</b>	<b>\$200.19</b>	<b>\$67.94</b>	<b>34%</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>					
Seed	\$7.82	\$5.67	\$7.79	\$0.03	0%
Fertilizer	\$10.91	\$6.89	\$10.79	\$0.11	1%
Herbicide-insecticide	\$9.60	\$10.95	\$13.13	-\$3.53	-27%
Crop insurance	\$0.12	\$0.47	\$0.61	-\$0.49	-80%
Repairs	\$14.33	\$13.10	\$19.66	-\$5.34	-27%
Machinery	\$74.13	\$79.48	\$109.15	-\$35.02	-32%
Other	\$16.05	\$17.36	\$26.60	-\$10.55	-40%
Land	\$41.58	\$35.54	\$49.28	-\$7.71	-16%
Interest	\$13.13	\$12.60	\$21.82	-\$8.70	-40%
<b>Total Cost</b>	<b>\$173.33</b>	<b>\$168.97</b>	<b>\$239.19</b>	<b>-\$65.86</b>	<b>-28%</b>
<b>Net Return to Management</b>	<b>\$94.80</b>	<b>\$32.05</b>	<b>-\$38.99</b>	<b>\$133.79</b>	

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

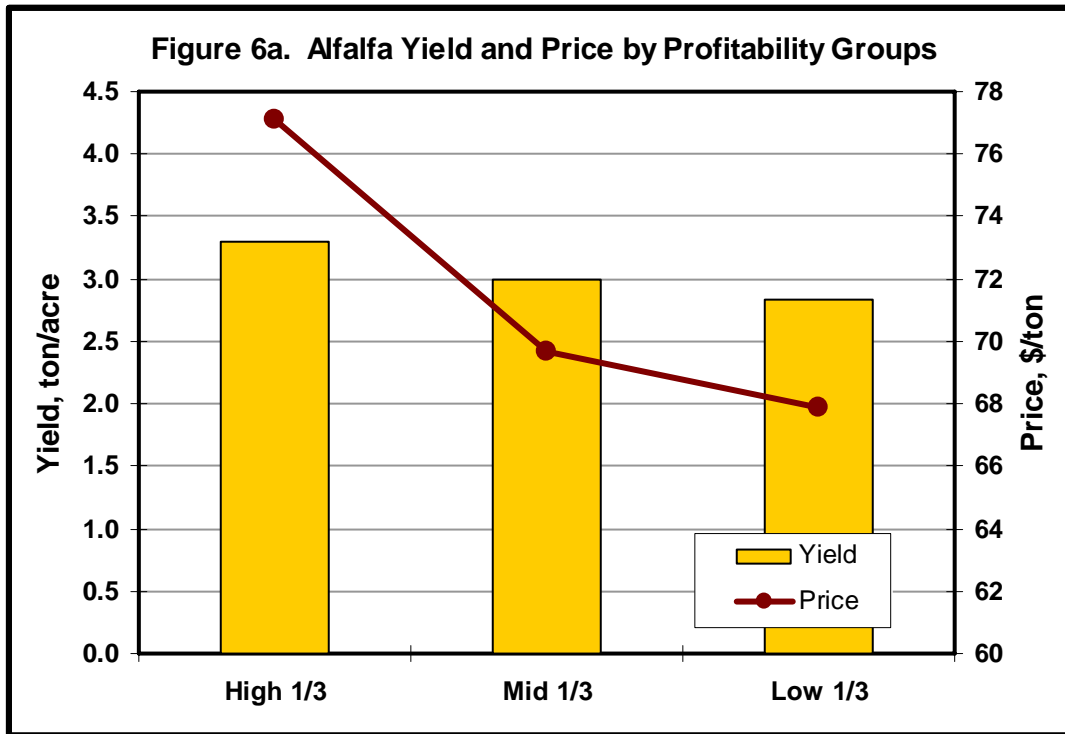


Figure 6a. Relationship between price and yields for low, medium and high profit farms – Alfalfa enterprise.

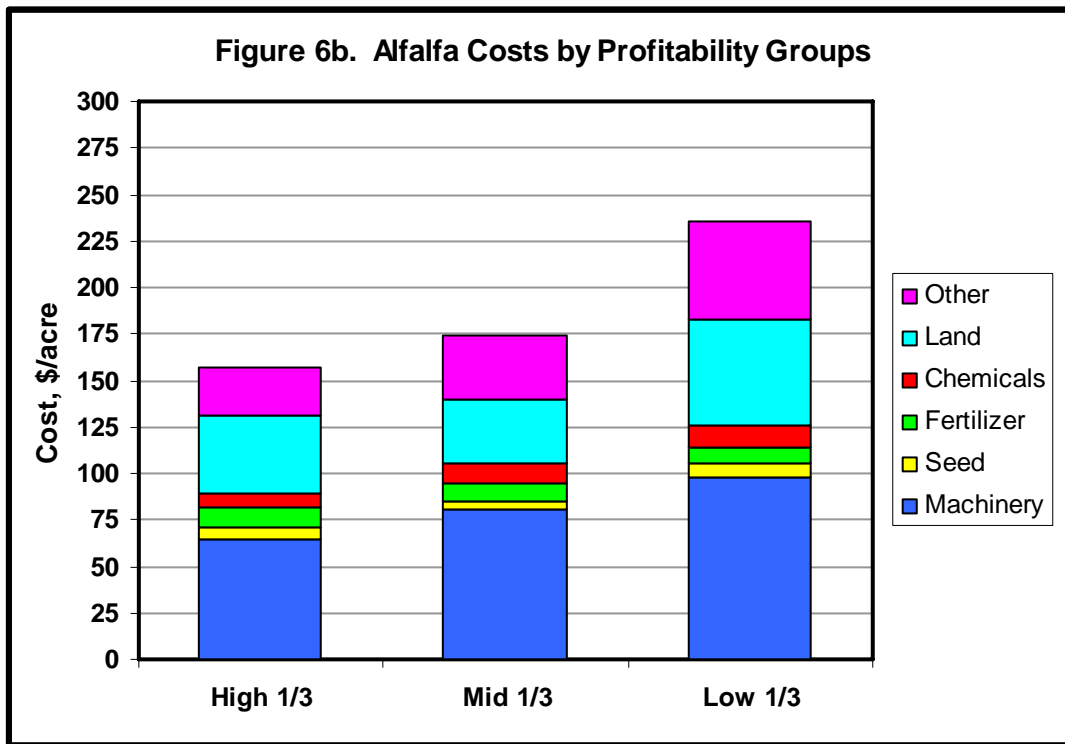


Figure 6b. Relationship of different costs between low, medium and high profit farms – Alfalfa enterprise.

**Table 7. Kansas Farm Management Association Enterprise Analysis**  
**Nonirrigated Crops -- State Averages, 2002-2006**

	Corn	Irr Corn	Sorghum	Wheat	Soybean	Alfalfa
Number of farms	45	15	85	178	74	34
Enterprise acres	160	520	161	318	138	5
Yield per acre, bu	6.5	15.6	14.8	4.5	6.2	0.6
Operator percentage	-2.9%	-7.9%	-0.8%	-3.8%	-2.0%	2.7%
Price per unit	\$0.05	\$0.00	\$0.00	\$0.11	\$0.02	\$5.56
<b><u>INCOME (\$/acre)</u></b>						
Crop income	\$10.99	-\$7.41	\$28.50	\$10.74	\$27.28	\$67.72
<b>Gross income</b>	<b>-\$2.42</b>	<b>\$12.95</b>	<b>\$30.42</b>	<b>\$11.55</b>	<b>\$21.37</b>	<b>\$67.94</b>
<b><u>COSTS (\$/acre)<sup>1</sup></u></b>						
Seed	-\$3.11	-\$9.53	-\$2.84	-\$0.93	-\$2.98	\$0.03
Fertilizer	-\$15.77	-\$16.58	-\$5.84	-\$2.93	-\$2.66	\$0.11
Herbicide-insecticide	-\$8.04	-\$7.12	\$0.44	-\$1.58	-\$2.67	-\$3.53
Crop insurance	\$0.10	\$2.21	-\$0.92	-\$0.10	-\$1.06	-\$0.49
Repairs	-\$7.86	-\$10.20	-\$5.52	-\$4.91	-\$6.70	-\$5.34
Machinery	-\$31.53	-\$31.21	-\$22.14	-\$24.18	-\$21.88	-\$35.02
Other	-\$9.26	-\$15.20	-\$8.64	-\$9.05	-\$9.11	-\$10.55
Land	-\$17.15	-\$41.03	-\$4.33	-\$10.15	-\$2.88	-\$7.71
Interest	-\$8.77	-\$7.34	-\$6.70	-\$4.91	-\$9.91	-\$8.70
<b>Total Cost</b>	<b>-\$93.54</b>	<b>-\$125.79</b>	<b>-\$50.96</b>	<b>-\$53.84</b>	<b>-\$53.15</b>	<b>-\$65.86</b>
<b>Net Return to Management</b>	<b>\$91.13</b>	<b>\$138.74</b>	<b>\$81.38</b>	<b>\$65.39</b>	<b>\$74.52</b>	<b>\$133.79</b>

<sup>1</sup> Based on the operator's share of production, and thus includes only production expenses paid by the operator.

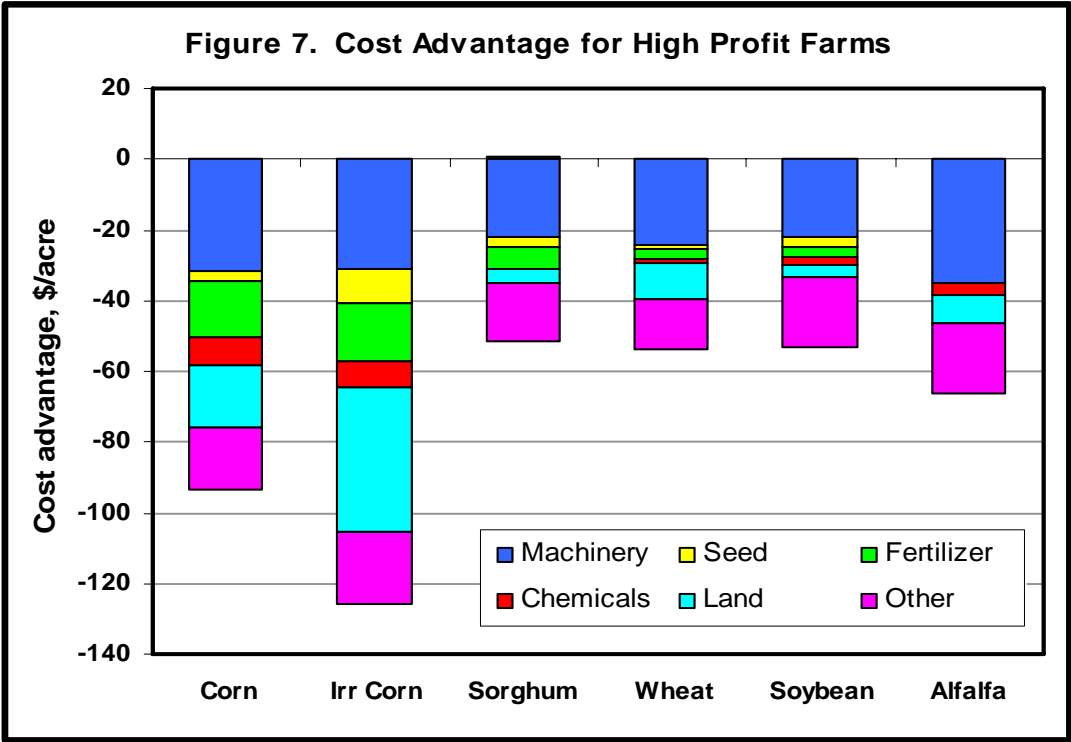


Figure 7b. Cost advantage of high profit farms for different crops analyzed.