

Differences Between High, Medium, and Low profit Producers: An Analysis of 2002-2004 Kansas Farm Management Association Crop Enterprises

*Hannah Berns, Kevin Dhuyvetter, and Terry Kastens
Department of Agricultural Economics, Kansas State University
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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 producers 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 2002-2004 were divided into three profitability groups, high, middle, and low, based on the 3-year average per acre return to management.¹ The enterprises (number of farms) included in this analysis are alfalfa (50), corn (109), irrigated corn (37), grain sorghum (171), soybean (168), and wheat (307). Enterprise analyses are completed at the regional level, but these data are 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 3-year period.

To allow for easier comparisons, a number of the income and expense categories reported in the KFMA enterprise reports were aggregated. Machinery costs are the summation of general machinery repairs, machinery hire, fuel, gas, oil, market depreciation, and machinery-related labor costs. Other costs are the summation of fees, grain storage and marketing, personal property tax, general farm insurance, utility expense, conservation, and auto-expense. Land costs are 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 approximately \$108 per acre more profit than the low profit farms and \$46 per acre more than the mid profit farms. Yields and prices were comparable across all three profit categories, resulting in less than \$6 per acre difference in gross income between the groups. Thus, only slightly over 5% of the profitability difference is income related (i.e., yield and price) meaning about 95% of the difference is due to cost differences. Of the various cost categories, machinery costs have the largest impact on farm profitability. Machinery costs were \$42.34 per acre lower for the high profit category relative to the low profit category. Thus, approximately 42% of the cost differences were due to machinery cost differences. Interestingly, there was only about \$12 per acre difference between the high and mid profit

¹ 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.

categories for machinery costs. High profit farms had lower costs than low profit farms in every category, with most of the differences being over 30%. Exceptions to this were seed and crop insurance costs, where the differences between the high and low profit farms were much smaller. 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 over twice as many acres (512 versus 231) in their corn enterprise as compared to low profit farms. This suggests economies of size exist, which likely is a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had slightly higher income and considerably lower costs than the other groups. Mid profit farms had similar income as other groups but had lower costs than the low profit farm. Low profit farms had similar income as the other groups but 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 1a and a similar breakdown of costs can be seen in Figure 1b.

Center-Pivot Irrigated Corn (Table 2)

The average difference in returns to profitability between high profit and low profit farms for irrigated corn (center pivot) in Kansas was \$154.61 per acre. The profit difference between high and mid profit farms was \$79.84 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 12% higher gross income than low profit farms, with roughly half of that due to higher yields. The difference in income between high and low profit farms accounted for approximately 31% of profitability difference, meaning about 69% of this difference is due to cost differences. Of the various cost categories, land and machinery costs have the largest impact on farm profitability. Machinery costs were \$40.77 per acre lower for the high profit farms than the low profit farms. Thus, approximately 38% of the cost differences were due to machinery cost differences. High profit farms had lower costs than low profit farms in every category except crop insurance, where high profit farms spent \$0.69 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 had 52% more acres in their irrigated corn enterprise than low profit farms. This suggests economies of size exist, which likely is 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 medium profit farms had relatively low income and low costs. Low profit farms had higher income than the medium size, but they had higher costs. This suggests that striving for top yields, hence gross income, is not optimal if this 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 almost \$80 per acre more profit than the low profit farms and about \$31 per acre more than mid profit farms. Prices were basically equal across all three profit categories, suggesting that the \$13.15 per acre difference in gross income was not due to marketing efforts but rather other factors. Yields also were also similar (less than four bushel per acre difference between groups), which suggests that most of the income differences were due to factors such as crop insurance and government program payments. Of the \$80 per acre difference in profitability, approximately 17% is income related (i.e., yield and price), with the other 83% coming on the cost side. Of the various cost categories, machinery costs have the largest impact on farm profitability. Machinery costs were \$25.72 per acre lower for the high profit category

compared to the low profit category. Thus, approximately 40% of the cost differences were due to machinery cost differences. High profit farms had lower costs than low profit farms in every category with most of the differences being between 20% and 50%. The exception to this was crop insurance costs, where the difference between the high and low profit farms was much smaller. 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 more than twice as many acres (446 versus 207) in their grain sorghum enterprise than low profit farms. This suggests economies of size exist, which likely is a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had similar income to the mid profit farms but considerably lower costs. Mid profit farms had similar income as high profit farms but their costs were significantly higher. 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 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 almost \$80 per acre. The difference between high and mid profit farms was about \$34 per acre. The high and mid profit farms received similar prices that were about \$0.12 higher than low profit farms. High profit farms had substantially higher yields (over 8 bu/acre) compared to mid and low profit farms. The combination of higher yields and higher prices resulted in high profit farms having over \$24 per acre higher crop income than the low profit farms (almost \$22/acre higher than mid profit farms). Even though there were substantial differences in income, of the \$80 per acre difference in profitability, only about a third (34.1%) is income related (i.e., yield and price) with the other two-thirds (65.9%) coming on the cost side. Of the various cost categories, machinery costs have the largest impact on farm profitability. Machinery costs were \$26.98 per acre lower for the high profit category relative to the low profit category. Thus, over half (51%) 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 crop insurance, with many of the differences being over 30%. The high profit farmers paid slightly more per acre for crop insurance (\$0.30) compared to 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 almost twice as many acres as the low profit farms (742 versus 386) with an average difference of 356 acres between the groups. This suggests economies of size exist which likely is a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had both the highest income and the lowest cost of the three different groups. Mid profit farms had slightly higher income than the low profit farm but substantially lower costs. 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 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 earned slightly over \$79 more profit per acre than the low profit farms and almost \$35 more profit per acre than mid profit farms. Prices received were almost identical for all three farm groups. High profit farms had higher yields compared to mid (+3 bu/acre) and low (+5 bu/acre) profit farms. These higher yields resulted in high profit farms having about \$21 per acre higher crop income than the low profit farms (over \$11/acre higher than mid profit farms). Even though there were substantial differences in income, of the \$79 per acre

difference in profitability, only about a fourth (25.9%) is income related (i.e., yield), with the other three-fourths (74.1%) coming on the cost side. Of the various cost categories, machinery costs have the largest impact on farm profitability. Machinery costs were \$26.98 per acre lower for the high profit category relative to the low profit category. Thus, close to half (46%) of the cost differences were 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 (452 versus 183). This suggests economies of size exist, which likely is a major driver of many of the cost differences.

As a summary of the three profit groups, high profit farms had both the highest income and the lowest cost of the three different groups. Mid profit farms had slightly higher income than the low profit farm but substantially lower costs. 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 \$142 per acre. The difference between high and mid profit farms was about \$74 per acre. The high profit farms received prices over \$9/ton higher than the low profit farms and over \$7/ton higher than the mid profit farms. Likewise, high profit farms had slightly higher yields than both the mid and low profit farms. Based on both higher yields and higher prices, high profit farms had \$60 per acre higher gross income compared to low profit farms. Thus, 45% of the profitability differences between high and low profit farms is due to income with the other 55% being due to costs. Of the various cost categories, machinery costs have the largest impact on farm profitability. Machinery costs were \$33.64 per acre lower for the high profit category relative to the low profit category. Thus, slightly less than half (43%) 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 fertilizer and crop insurance (crop insurance costs were less than \$0.25 per acre for all farms as alfalfa is not typically an insured crop), with many of the differences being 30% or more. Alfalfa is the one enterprise where there is not a positive relationship between enterprise size (acres) and profit category, as high profit farms were the smallest in this case. Mid profit farms had the most acres for this enterprise.

As a summary of the three profit groups, high profit farms had significantly higher income as well as significantly lower costs compared to the mid and low profit farms. Mid profit farms had slightly higher income than the low profit farm but substantially lower costs. 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 range from \$79.11 for soybeans to \$154.61 for irrigated corn (Table 7). As a general rule, the majority of these differences is due to costs as opposed to income (i.e., yield and price). The biggest 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 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 \$25.72 for grain sorghum to a high of \$42.34 for corn. As a percentage of total cost differences, machinery cost differences between high and low profit farms ranged from 38% (irrigated corn) to 51% (wheat). 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 larger than mid and low profit farms (the exception to this was alfalfa). 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, 2002-2004**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	36	37	36		
Enterprise acres	512	325	231	281	122%
Yield per acre, bu	92.8	92.4	91.0	1.8	2%
Operator percentage	75.6%	75.6%	73.7%	1.9%	3%
Price per bushel	\$2.27	\$2.23	\$2.19	\$0.08	4%
<u>INCOME (\$/acre)</u>					
Crop income	\$166.79	\$158.43	\$154.88	\$11.91	8%
Gross income	\$210.22	\$204.75	\$204.37	\$5.85	3%
<u>COSTS (\$/acre)¹</u>					
Seed	\$26.13	\$28.21	\$27.98	-\$1.86	-7%
Fertilizer	\$28.06	\$34.16	\$41.38	-\$13.32	-32%
Herbicide-insecticide	\$19.78	\$22.21	\$28.26	-\$8.48	-30%
Crop insurance	\$6.15	\$7.21	\$6.43	-\$0.28	-4%
Machinery	\$52.07	\$64.46	\$94.40	-\$42.34	-45%
Other	\$13.69	\$16.90	\$25.55	-\$11.86	-46%
Land	\$27.04	\$37.58	\$43.02	-\$15.98	-37%
Interest	\$13.61	\$16.58	\$21.44	-\$7.83	-37%
Total Cost	\$186.53	\$227.31	\$288.48	-\$101.95	-35%
Net Return to Management	\$23.70	-\$22.56	-\$84.10	\$107.80	

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

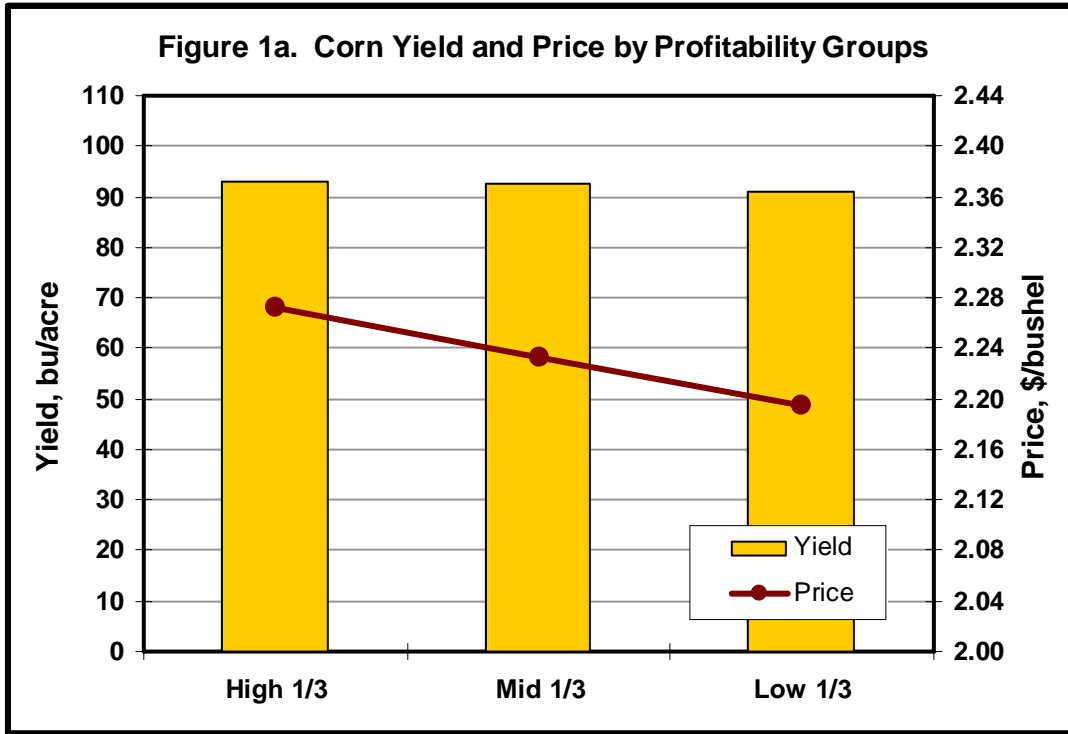


Figure 1a. Relationship between price and yields for low, medium and high profit farms – Corn enterprise.

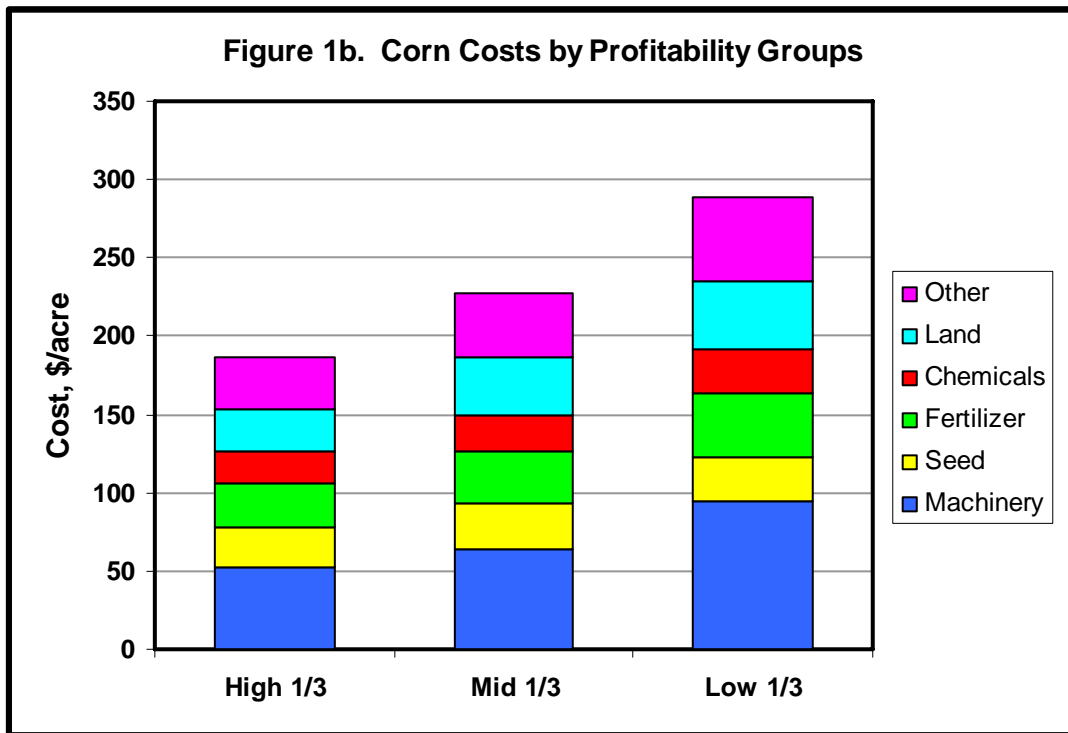


Figure 1b. Relationship of different costs between low, medium and high profit farms – Corn enterprise.

**Table 2. Kansas Farm Management Association Enterprise Analysis
Irrigated Corn -- State Averages, 2002-2004**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	12	13	12		
Enterprise acres	552	525	362	190	52%
Yield per acre, bu	188.1	181.9	174.9	13.2	8%
Operator percentage	83.6%	85.9%	88.7%	-5.1%	-6%
Price per bushel	\$2.40	\$2.36	\$2.39	\$0.02	1%
<u>INCOME (\$/acre)</u>					
Crop income	\$378.23	\$334.46	\$356.79	\$21.44	6%
Gross income	\$452.12	\$386.01	\$404.32	\$47.80	12%
<u>COSTS (\$/acre)¹</u>					
Seed	\$40.31	\$51.00	\$43.68	-\$3.38	-8%
Fertilizer	\$45.63	\$43.01	\$50.89	-\$5.25	-10%
Herbicide-insecticide	\$41.34	\$38.45	\$44.58	-\$3.24	-7%
Crop insurance	\$12.74	\$10.10	\$12.05	\$0.69	6%
Machinery	\$88.51	\$105.36	\$129.28	-\$40.77	-32%
Other	\$91.18	\$100.93	\$107.90	-\$16.72	-15%
Land	\$47.03	\$34.90	\$81.12	-\$34.09	-42%
Interest	\$32.42	\$29.15	\$36.48	-\$4.06	-11%
Total Cost	\$399.17	\$412.90	\$505.98	-\$106.81	-21%
Net Return to Management	\$52.95	-\$26.89	-\$101.67	\$154.61	

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

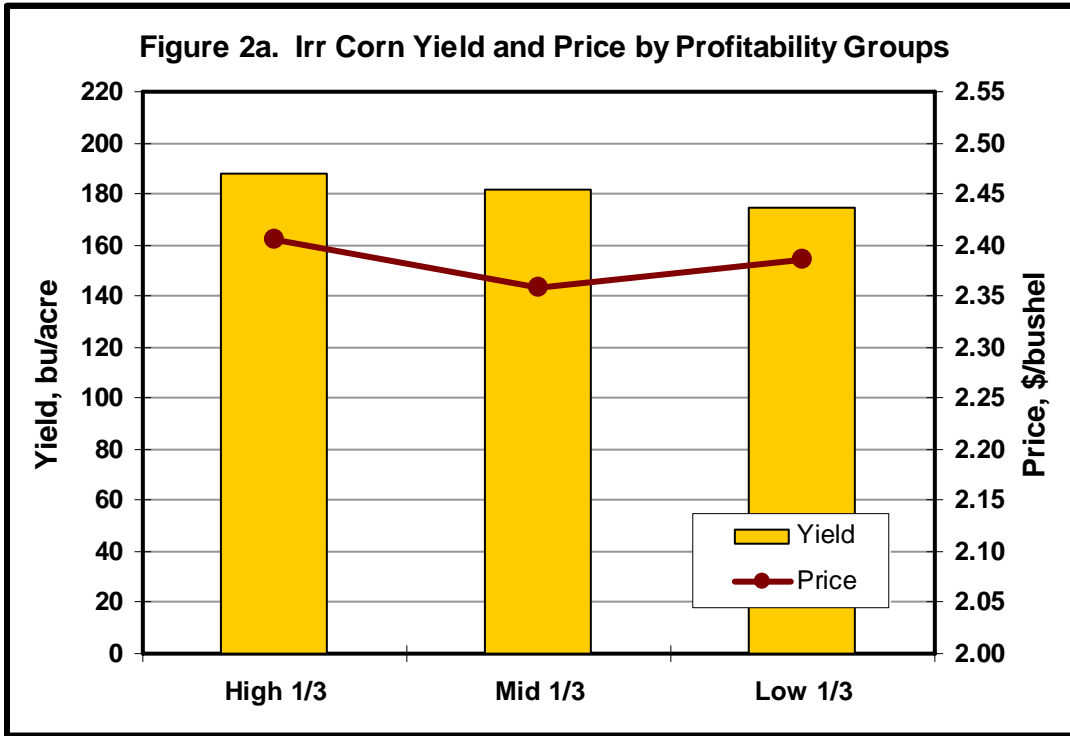


Figure 2a. Relationship between price and yields for low, medium and high profit farms – Irrigated corn enterprise.

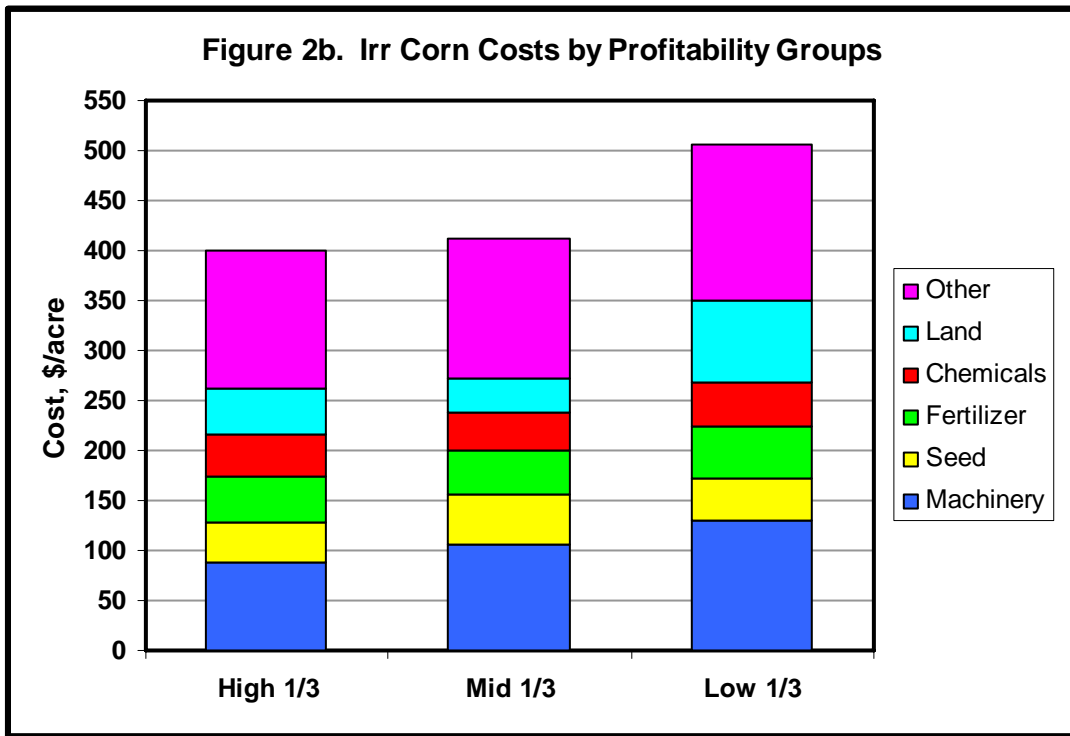


Figure 2b. Relationship of different costs between low, medium and high profit farms – Irrigated corn enterprise.

**Table 3. Kansas Farm Management Association Enterprise Analysis
Nonirrigated Sorghum -- State Averages, 2002-2004**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	57	57	57		
Enterprise acres	446	321	207	239	116%
Yield per acre, bu	63.2	64.8	59.2	3.9	7%
Operator percentage	68.5%	73.5%	76.4%	-7.9%	-10%
Price per bushel	\$2.09	\$2.11	\$2.11	-\$0.01	-1%
<u>INCOME (\$/acre)</u>					
Crop income	\$99.02	\$102.67	\$96.78	\$2.25	2%
Gross income	\$137.49	\$136.46	\$124.34	\$13.15	11%
<u>COSTS (\$/acre)¹</u>					
Seed	\$8.37	\$9.98	\$9.92	-\$1.56	-16%
Fertilizer	\$19.32	\$21.32	\$25.58	-\$6.26	-24%
Herbicide-insecticide	\$17.25	\$20.90	\$22.48	-\$5.23	-23%
Crop insurance	\$4.07	\$4.32	\$4.13	-\$0.05	-1%
Machinery	\$44.16	\$54.26	\$69.88	-\$25.72	-37%
Other	\$12.10	\$15.08	\$21.61	-\$9.51	-44%
Land	\$13.34	\$19.60	\$24.97	-\$11.63	-47%
Interest	\$9.44	\$12.86	\$15.44	-\$6.00	-39%
Total Cost	\$128.05	\$158.31	\$194.01	-\$65.97	-34%
Net Return to Management	\$9.44	-\$21.85	-\$69.67	\$79.11	

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

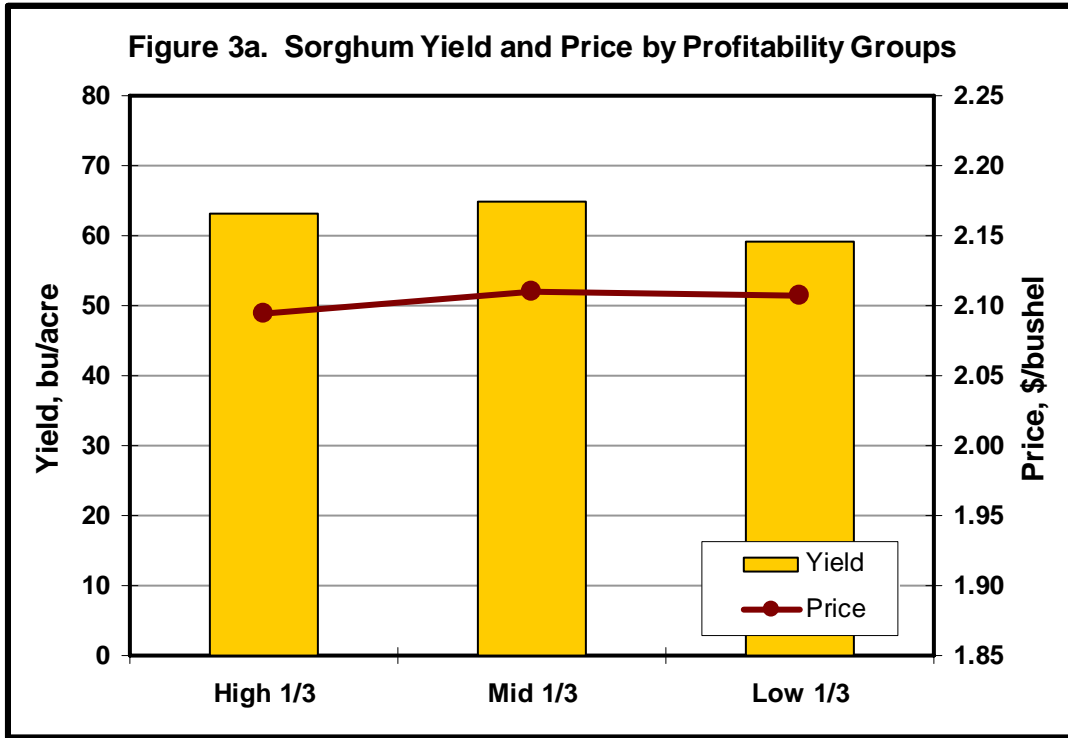


Figure 3a. Relationship between price and yields for low, medium and high profit farms – Sorghum enterprise.

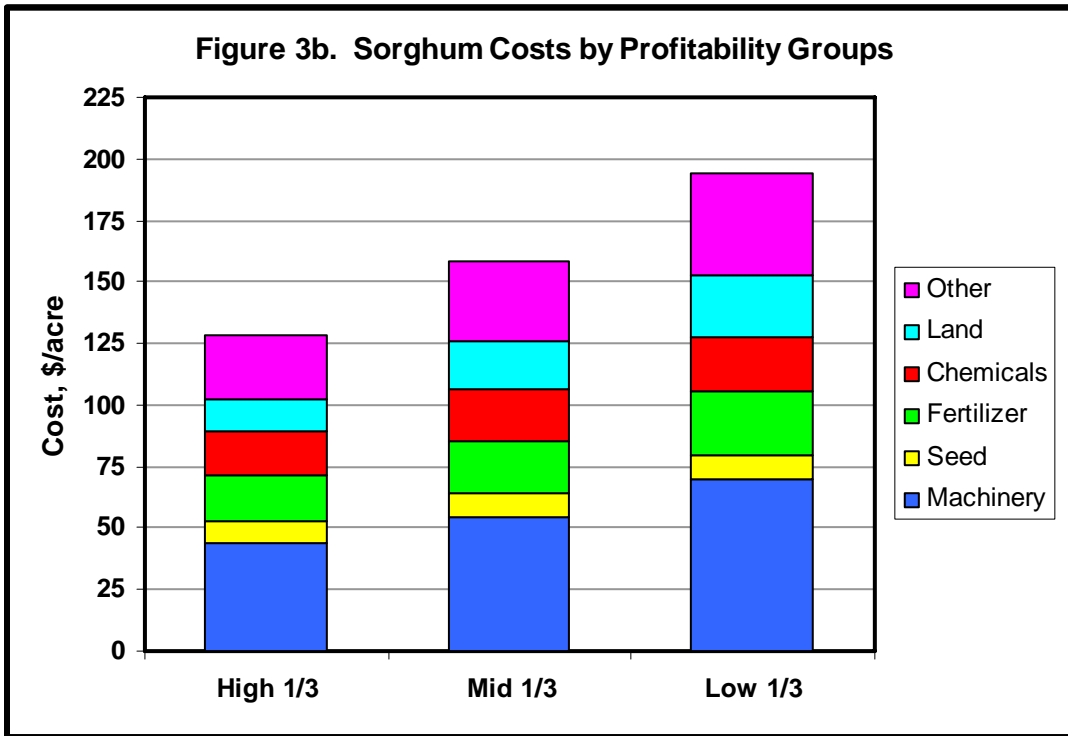


Figure 3b. Relationship of different costs between low, medium and high profit farms – Sorghum enterprise.

**Table 4. Kansas Farm Management Association Enterprise Analysis
Nonirrigated Soybeans -- State Averages, 2002-2004**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	56	56	56		
Enterprise acres	452	329	183	269	147%
Yield per acre, tons	30.2	27.4	25.2	5.0	20%
Operator percentage	80.2%	79.6%	78.1%	2.1%	3%
Price per ton	\$5.93	\$5.94	\$5.92	\$0.01	0%
<u>INCOME (\$/acre)</u>					
Crop income	\$140.74	\$129.10	\$119.77	\$20.97	18%
Gross income	\$171.62	\$157.78	\$151.02	\$20.60	14%
<u>COSTS (\$/acre)¹</u>					
Seed	\$21.31	\$24.59	\$24.93	-\$3.62	-15%
Fertilizer	\$4.28	\$2.80	\$5.43	-\$1.14	-21%
Herbicide-insecticide	\$14.28	\$16.48	\$19.05	-\$4.77	-25%
Crop insurance	\$5.28	\$4.86	\$5.47	-\$0.20	-4%
Machinery	\$50.73	\$61.04	\$77.71	-\$26.98	-35%
Other	\$14.08	\$16.58	\$23.84	-\$9.76	-41%
Land	\$28.21	\$29.61	\$32.65	-\$4.44	-14%
Interest	\$10.75	\$13.78	\$18.62	-\$7.87	-42%
Total Cost	\$148.91	\$169.76	\$207.69	-\$58.78	-28%
Net Return to Management	\$22.71	-\$11.98	-\$56.67	\$79.38	

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

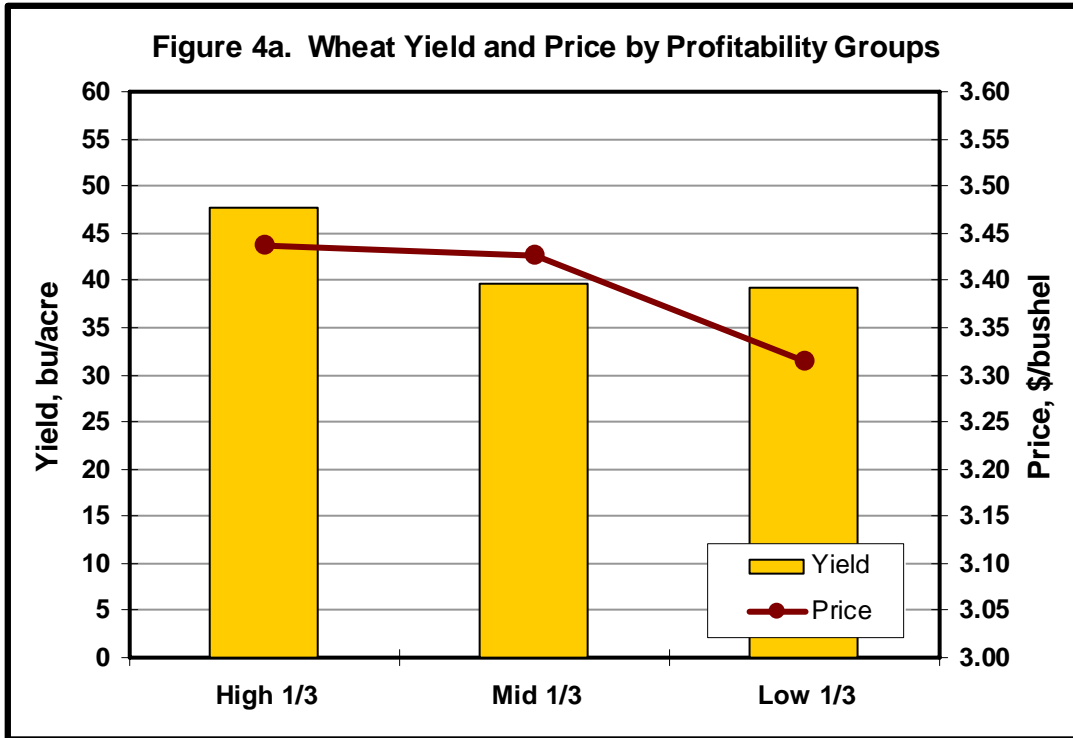


Figure 4a. Relationship between price and yields for low, medium and high profit farms – Wheat enterprise.

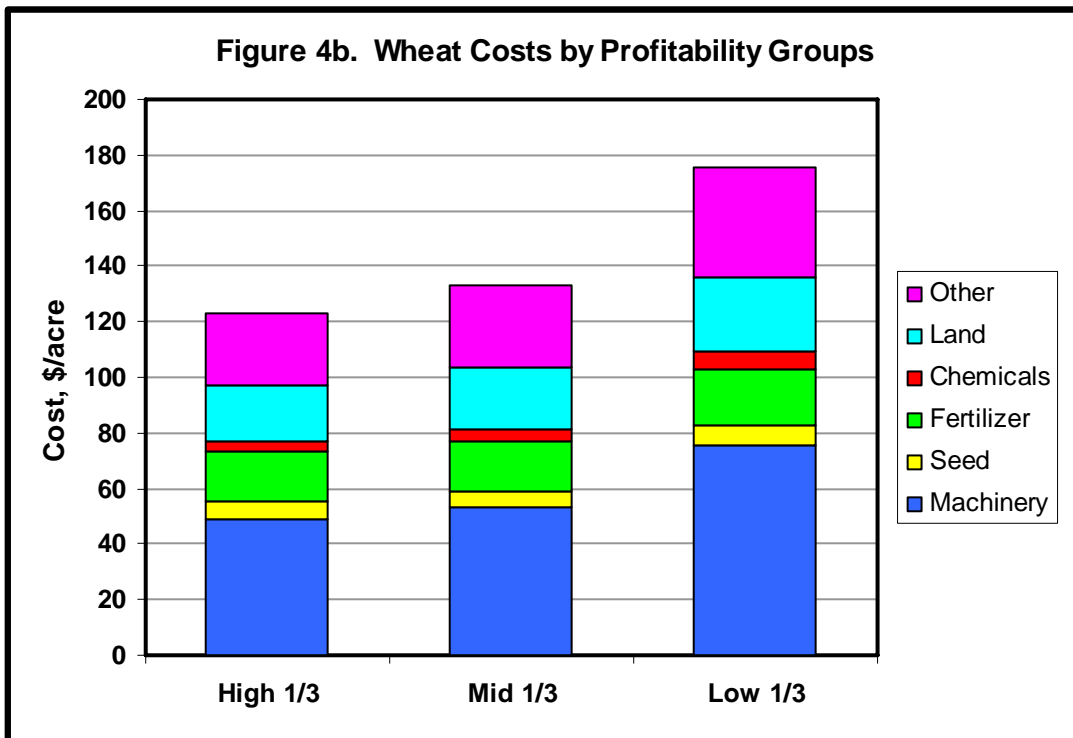


Figure 4b. Relationship of different costs between low, medium and high profit farms – Wheat enterprise.

**Table 5. Kansas Farm Management Association Enterprise Analysis
Nonirrigated Soybeans -- State Averages, 2002-2004**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	56	56	56		
Enterprise acres	452	329	183	269	147%
Yield per acre, tons	30.2	27.4	25.2	5.0	20%
Operator percentage	80.2%	79.6%	78.1%	2.1%	3%
Price per ton	\$5.93	\$5.94	\$5.92	\$0.01	0%
<u>INCOME (\$/acre)</u>					
Crop income	\$140.74	\$129.10	\$119.77	\$20.97	18%
Gross income	\$171.62	\$157.78	\$151.02	\$20.60	14%
<u>COSTS (\$/acre)¹</u>					
Seed	\$21.31	\$24.59	\$24.93	-\$3.62	-15%
Fertilizer	\$4.28	\$2.80	\$5.43	-\$1.14	-21%
Herbicide-insecticide	\$14.28	\$16.48	\$19.05	-\$4.77	-25%
Crop insurance	\$5.28	\$4.86	\$5.47	-\$0.20	-4%
Machinery	\$50.73	\$61.04	\$77.71	-\$26.98	-35%
Other	\$14.08	\$16.58	\$23.84	-\$9.76	-41%
Land	\$28.21	\$29.61	\$32.65	-\$4.44	-14%
Interest	\$10.75	\$13.78	\$18.62	-\$7.87	-42%
Total Cost	\$148.91	\$169.76	\$207.69	-\$58.78	-28%
Net Return to Management	\$22.71	-\$11.98	-\$56.67	\$79.38	

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

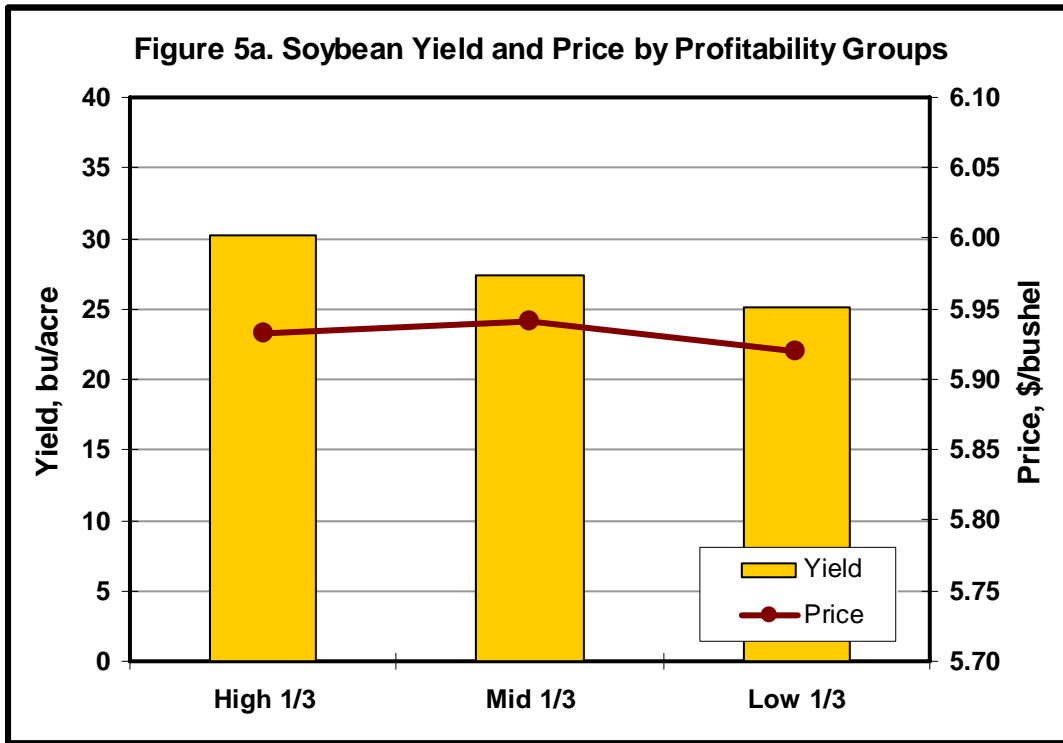


Figure 5a. Relationship between price and yields for low, medium and high profit farms – Soybean enterprise.

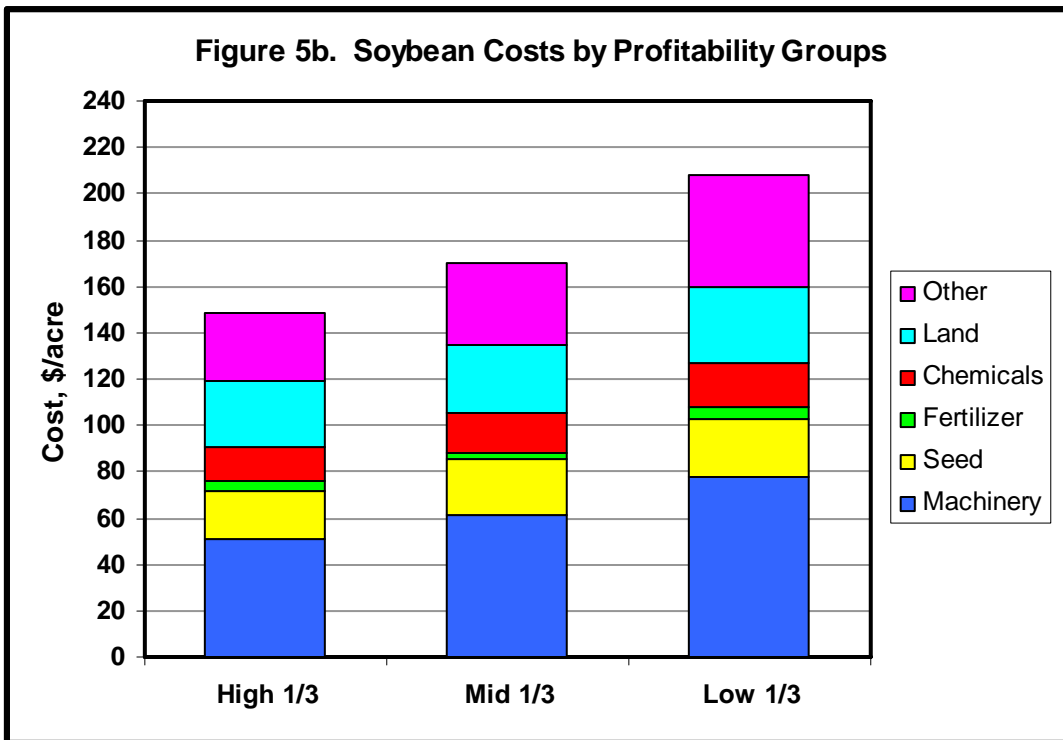


Figure 5b. Relationship of different costs between low, medium and high profit farms – Soybean enterprise.

**Table 6. Kansas Farm Management Association Enterprise Analysis
Alfalfa -- State Averages, 2002-2004**

	Profit Category			Difference between High 1/3 and Low 1/3	
	High 1/3	Mid 1/3	Low 1/3	Absolute	%
Number of farms	17	16	17		
Enterprise acres	87	192	79	9	11%
Yield per acre, tons	3.3	3.0	2.8	0.5	16%
Operator percentage	95.1%	92.8%	91.8%	3.4%	4%
Price per ton	\$77.07	\$69.65	\$67.91	\$9.16	13%
<u>INCOME (\$/acre)</u>					
Crop income	\$235.31	\$177.41	\$169.58	\$65.73	39%
Gross income	\$246.37	\$189.25	\$182.60	\$63.77	35%
<u>COSTS (\$/acre)¹</u>					
Seed	\$7.42	\$4.80	\$7.72	-\$0.29	-4%
Fertilizer	\$9.79	\$8.69	\$8.39	\$1.39	17%
Herbicide-insecticide	\$8.39	\$11.06	\$12.18	-\$3.79	-31%
Crop insurance	\$0.25	\$0.31	\$0.16	\$0.09	54%
Machinery	\$64.04	\$80.62	\$97.68	-\$33.64	-34%
Other	\$14.63	\$18.67	\$32.27	-\$17.64	-55%
Land	\$41.01	\$34.89	\$57.29	-\$16.28	-28%
Interest	\$11.72	\$14.99	\$19.72	-\$8.00	-41%
Total Cost	\$157.25	\$174.04	\$235.41	-\$78.16	-33%
Net Return to Management	\$89.12	\$15.21	-\$52.81	\$141.93	

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

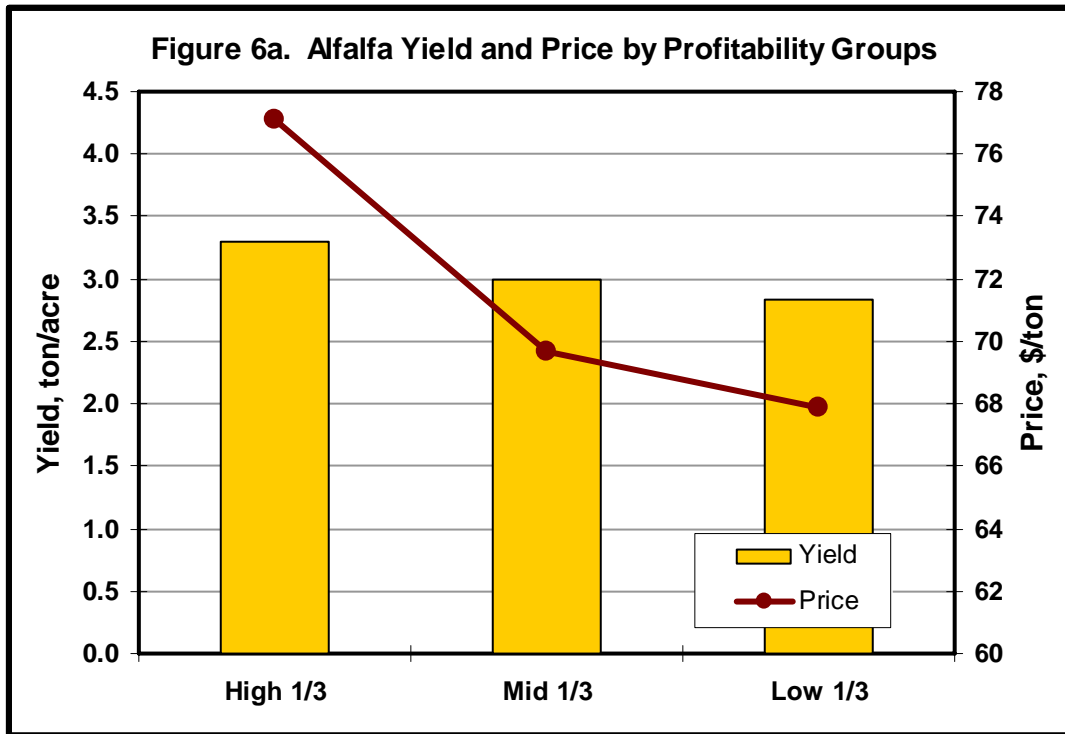


Figure 6a. Relationship between price and yields for low, medium and high profit farms – Alfalfa enterprise.

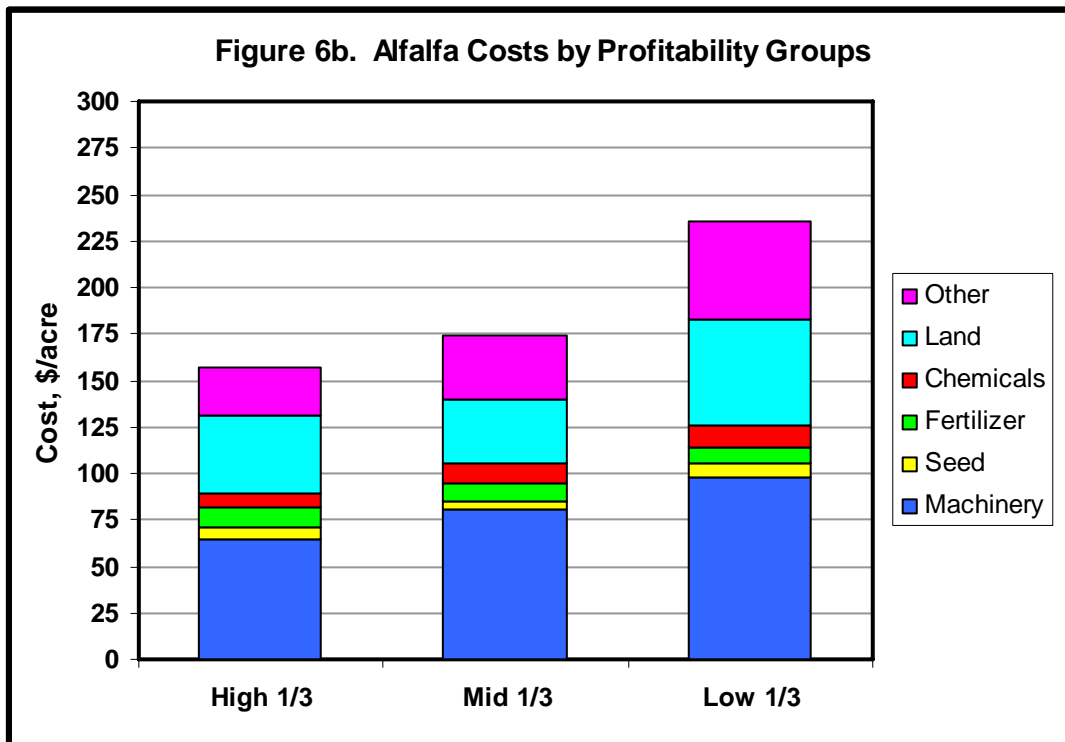


Figure 6b. Relationship of different costs between low, medium and high profit farms – Alfalfa enterprise.

**Table 7. Kansas Farm Management Association Enterprise Analysis
Nonirrigated Crops -- State Averages, 2002-2004**

	Corn	Irr Corn	Sorghum	Wheat	Soybean	Alfalfa
Number of farms	109	37	171	307	168	50
Enterprise acres	281	190	239	356	269	9
Yield per acre, bu	1.8	13.2	3.9	8.4	5.0	0.5
Operator percentage	1.9%	-5.1%	-7.9%	2.7%	2.1%	3.4%
Price per unit	\$0.08	\$0.02	-\$0.01	\$0.12	\$0.01	\$9.16
INCOME (\$/acre)						
Crop income	\$11.91	\$21.44	\$2.25	\$24.41	\$20.97	\$65.73
Gross income	\$5.85	\$47.80	\$13.15	\$27.38	\$20.60	\$63.77
COSTS (\$/acre)¹						
Seed	-\$1.86	-\$3.38	-\$1.56	-\$0.48	-\$3.62	-\$0.29
Fertilizer	-\$13.32	-\$5.25	-\$6.26	-\$1.93	-\$1.14	\$1.39
Herbicide-insecticide	-\$8.48	-\$3.24	-\$5.23	-\$3.33	-\$4.77	-\$3.79
Crop insurance	-\$0.28	\$0.69	-\$0.05	\$0.30	-\$0.20	\$0.09
Machinery	-\$42.34	-\$40.77	-\$25.72	-\$26.98	-\$26.98	-\$33.64
Other	-\$11.86	-\$16.72	-\$9.51	-\$9.63	-\$9.76	-\$17.64
Land	-\$15.98	-\$34.09	-\$11.63	-\$5.85	-\$4.44	-\$16.28
Interest	-\$7.83	-\$4.06	-\$6.00	-\$4.95	-\$7.87	-\$8.00
Total Cost	-\$101.95	-\$106.81	-\$65.97	-\$52.86	-\$58.78	-\$78.16
Net Return to Management	\$107.80	\$154.61	\$79.11	\$80.24	\$79.38	\$141.93

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

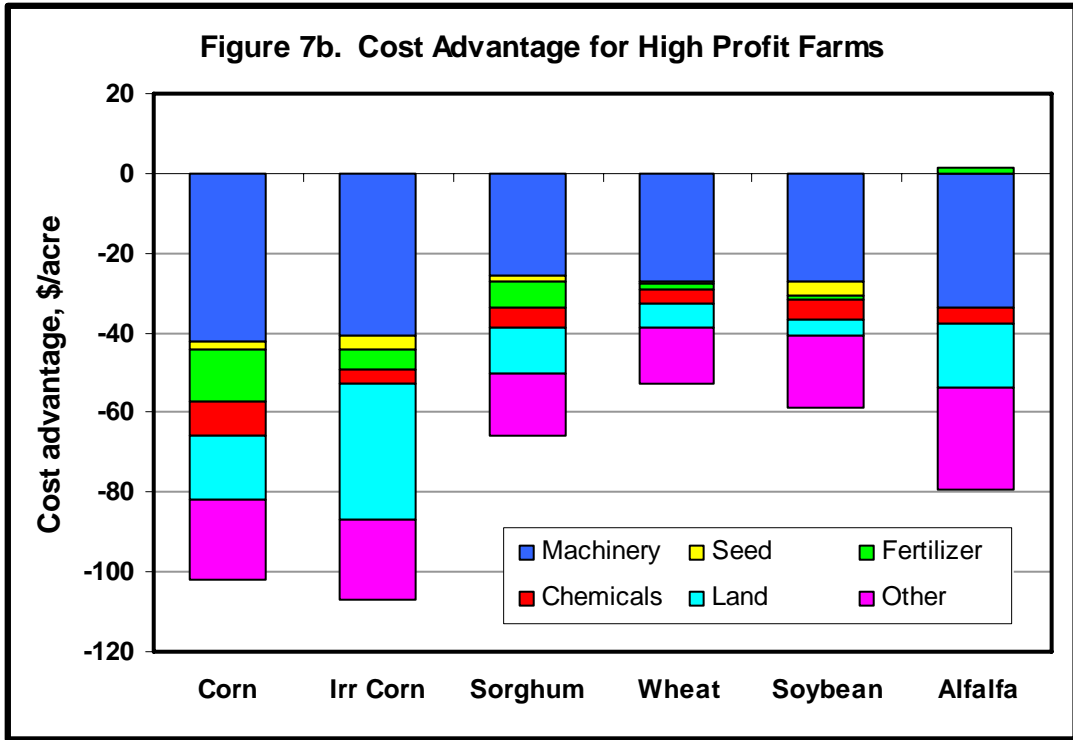


Figure 7b. Cost advantage of high profit farms for different crops analyzed.