

# Crop Management & Profitability

Hannah Shear, Dustin Pendell, and Kevin Herbel

Ag. Lenders  
Manhattan, KS  
October 10, 2018

**KANSAS STATE UNIVERSITY** | Department of Agricultural Economics



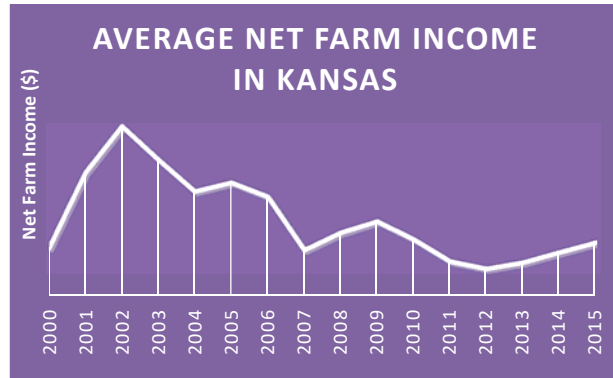
## Overview

- ✓ Justification
- ✓ Previous Report
- ✓ Data
- ✓ Data Summary
- ✓ Results & Conclusions
- ✓ Questions & Comments

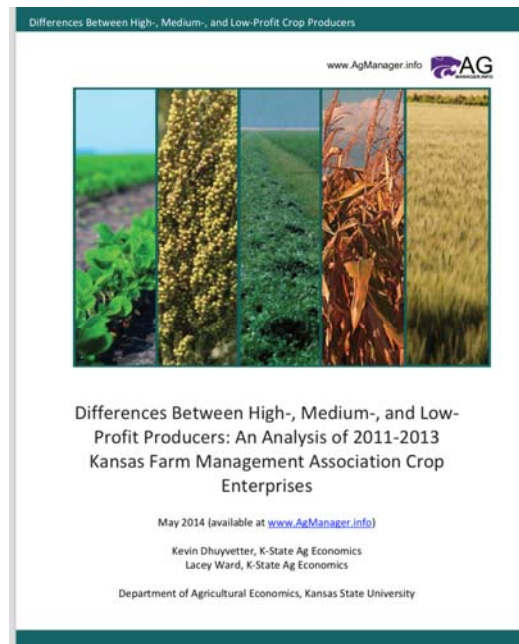


**KANSAS STATE UNIVERSITY** | Department of Agricultural Economics

- Substantial net farm income drop in 2015, some recovery since then, continue in period of tight margins and tight cash flow for many
- High variability
- Benchmarking reports for KFMA
- Assist producers in identifying areas of importance to manage profit variability



- 2011-2013 Analysis (Dhuyvetter, Ward)
- Time period characterized by high prices and low yield
- High Crop Insurance Indemnity Payments
- Machinery Cost identified as driving factor
  - Repairs & Depreciation



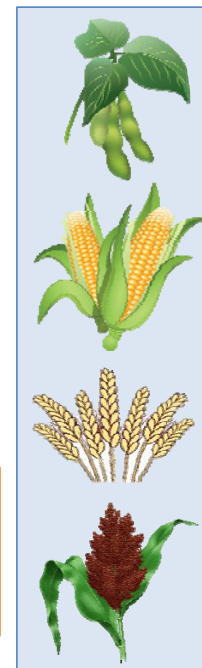
### 2011-2013

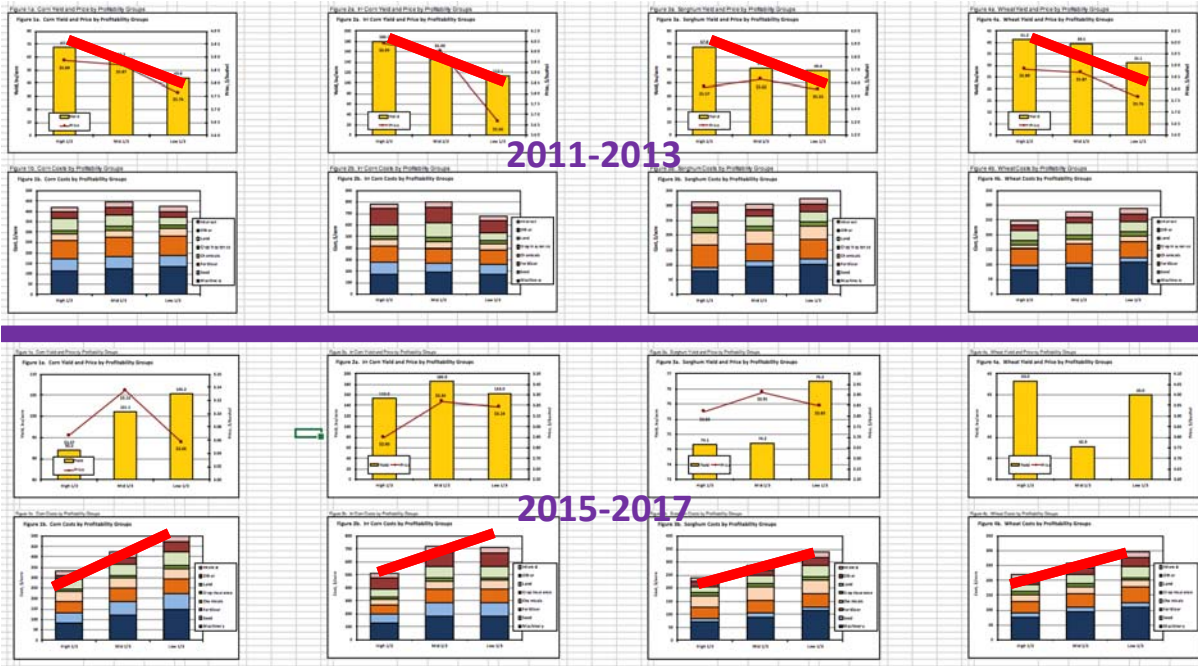
Crop	Farms
Corn	88
Irr Corn	33
Sorghum	76
Wheat	139
FS Soybeans	102
DC Soybeans	31
Alfalfa	34
<b>Total</b>	<b>503</b>

### 2015-2017

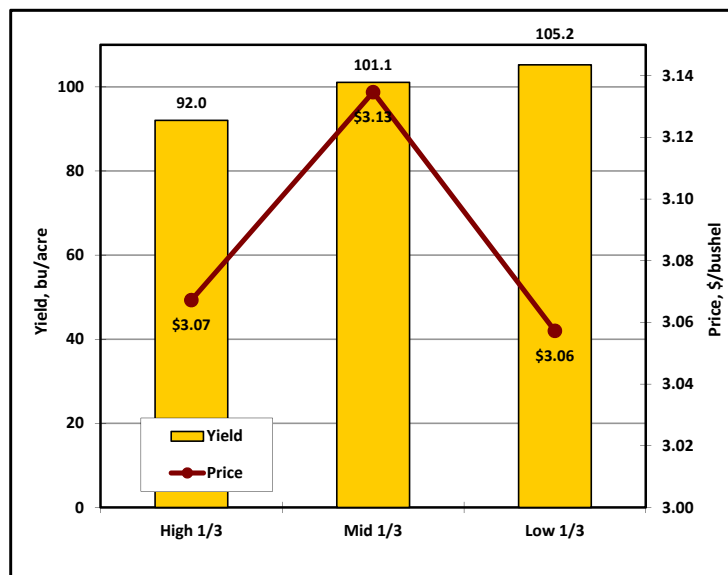
Crop	Farms
Corn	69
Irr Corn	26
Sorghum	57
Wheat	106
FS Soybeans	83
DC Soybeans	37
Alfalfa	-
<b>Total</b>	<b>392</b>

- Separated by crop type & production method
  - Tillage
  - Irrigation
- 3-year average
- Divided KFMA into profit thirds (high, middle, low) by net returns to management

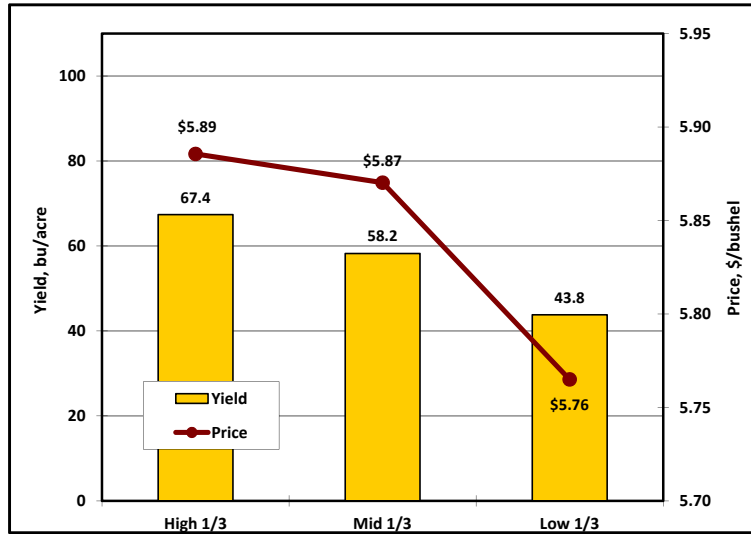




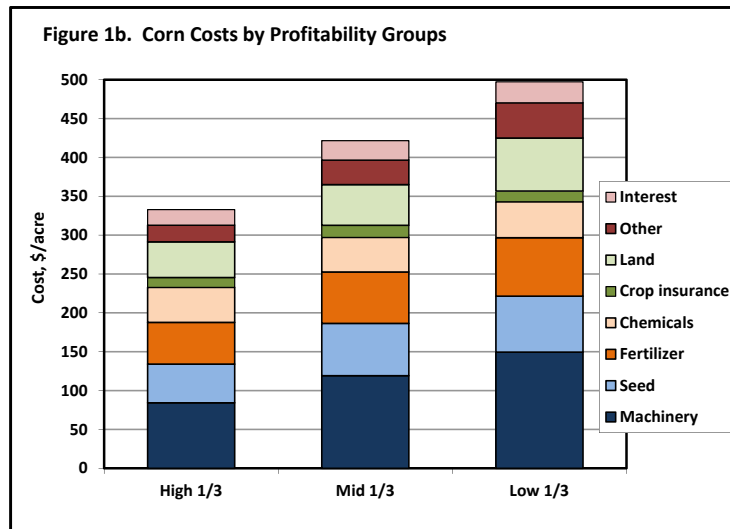
## Non-irrigated Corn Yield & Price, 2015-17



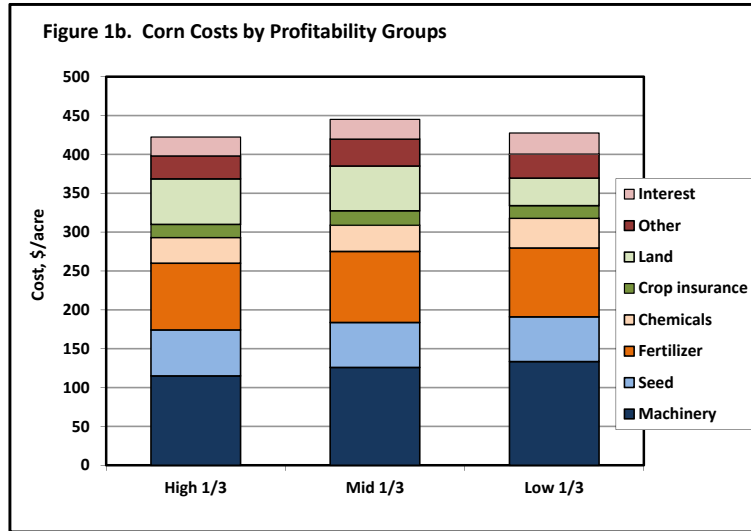
## Non-irrigated Corn Yield & Price, 2011-13



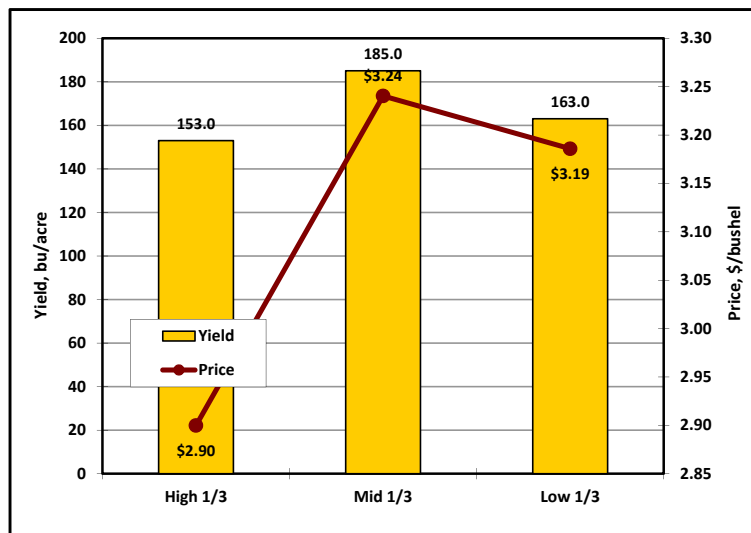
## Non-irrigated Corn Costs, 2015-17



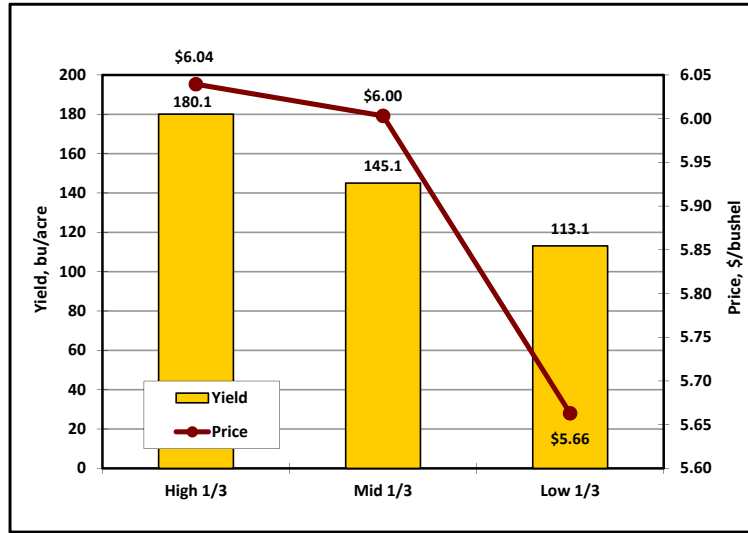
# Non-irrigated Corn Costs, 2011-13



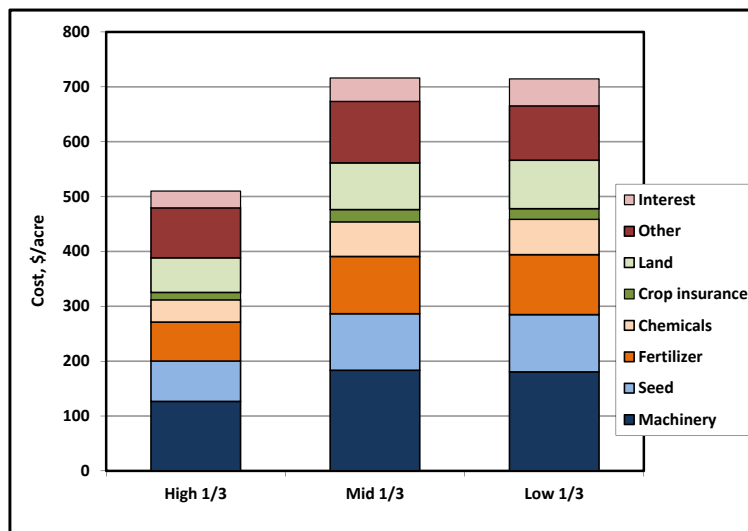
# Irrigated Corn Yield & Price, 2015-17



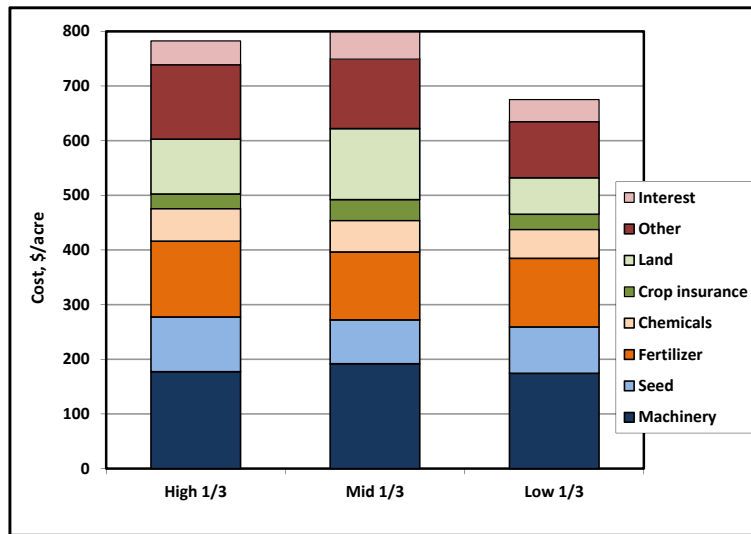
## Irrigated Corn Yield & Price, 2011-13



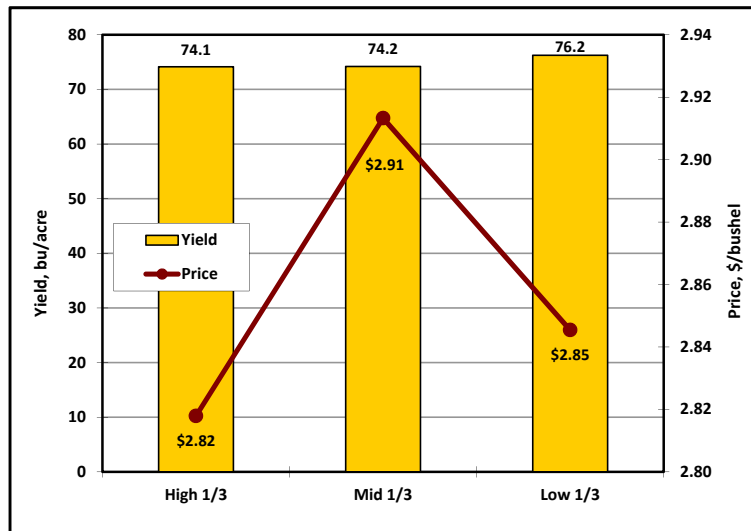
## Irrigated Corn Costs, 2015-17



## Irrigated Corn Costs, 2011-13

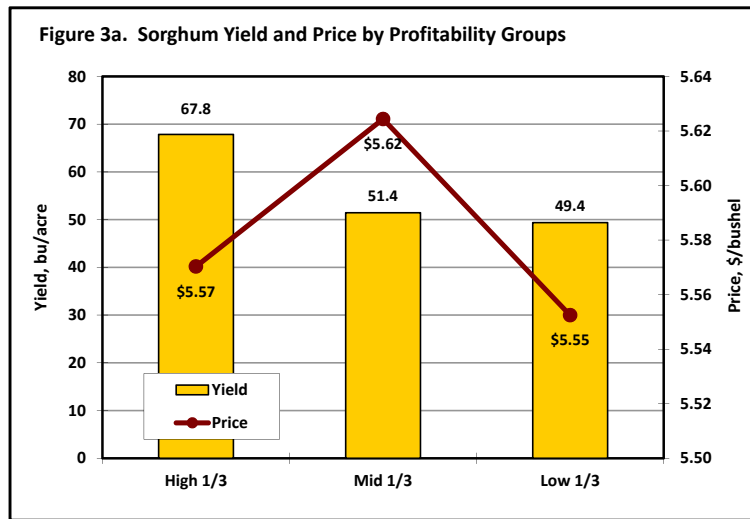


## Sorghum Yield & Price, 2015-17

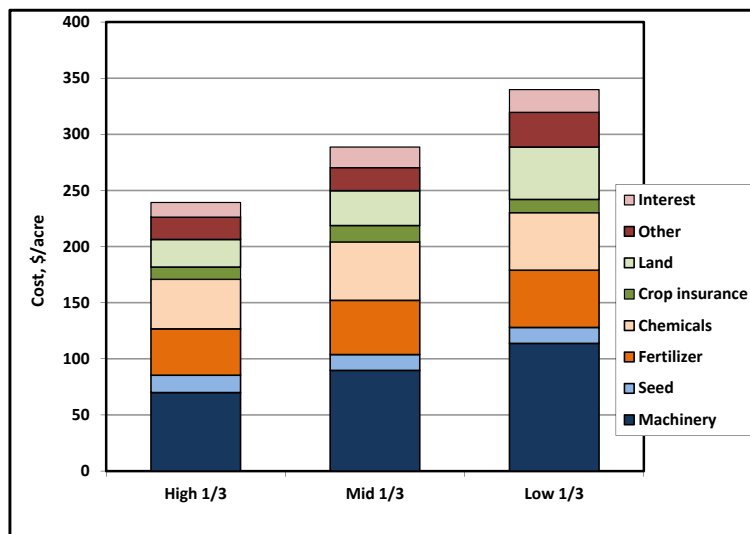




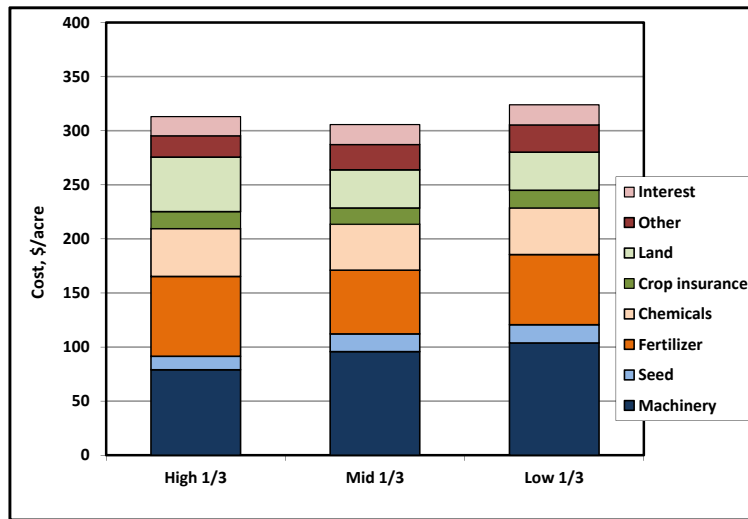
# Sorghum Yield & Price, 2011-13



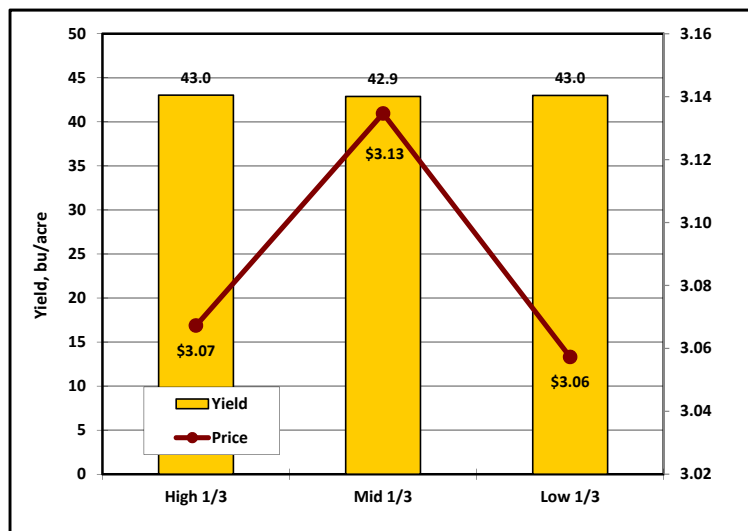
# Sorghum Costs, 2015-17



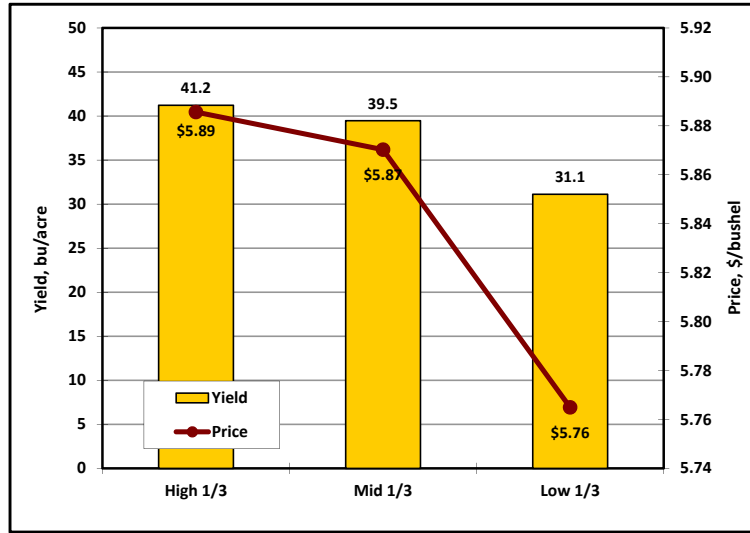
## Sorghum Costs, 2011-13



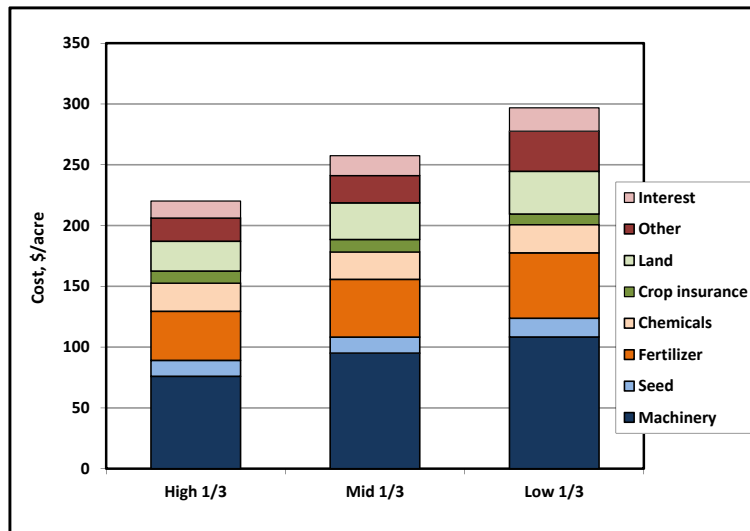
## Wheat Yield and Price, 2015-17



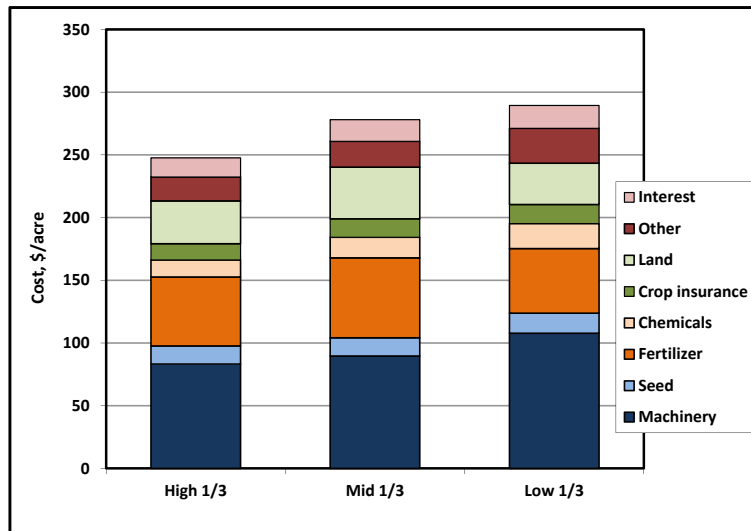
# Wheat Yield and Price, 2011-13



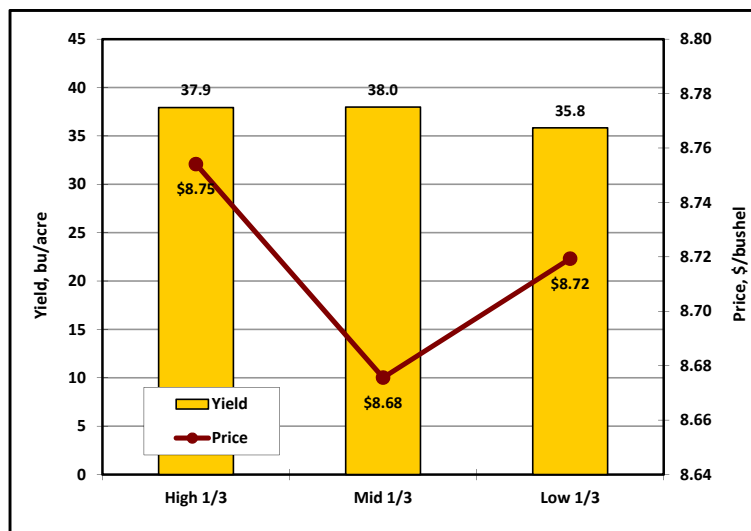
# Wheat Costs, 2015-17



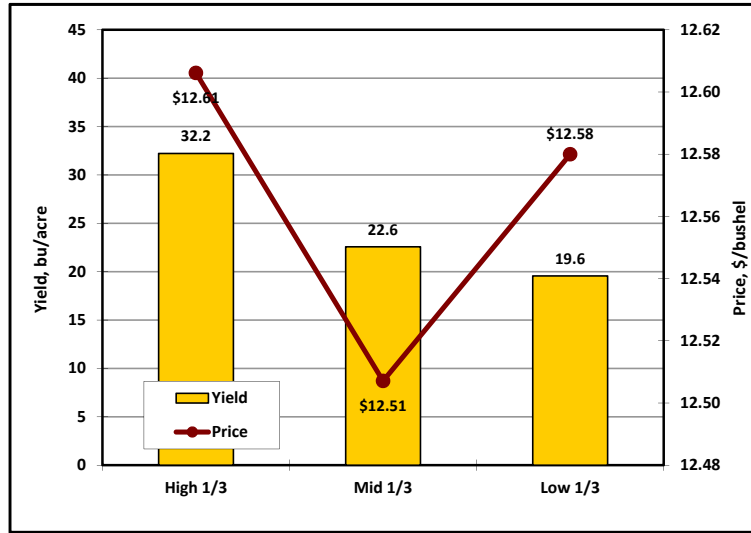
# Wheat Costs, 2011-13



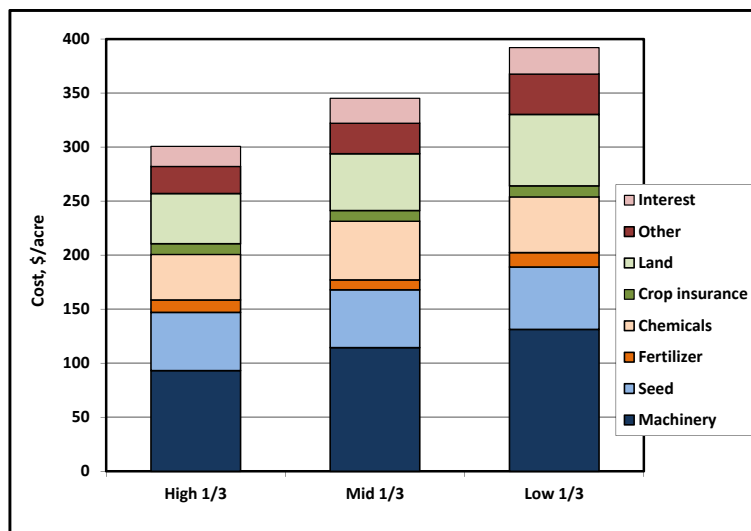
# Soybean Yield & Price, 2015-17



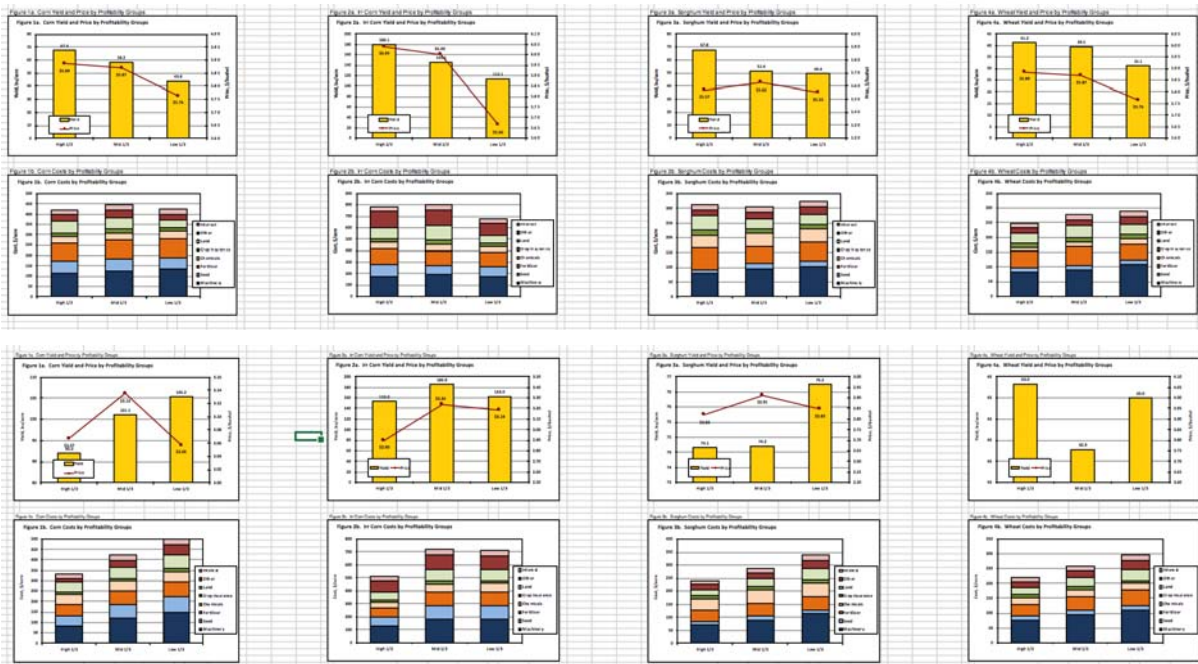
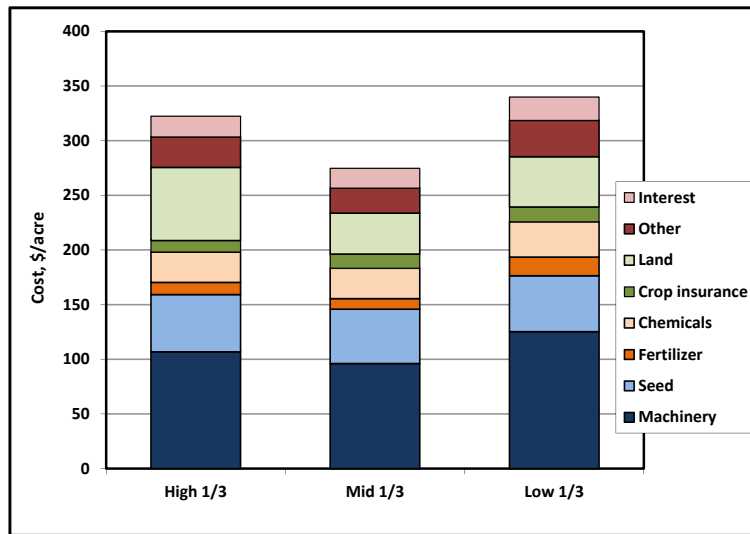
## Soybean Yield & Price, 2011-13



## Soybean Costs, 2015-17

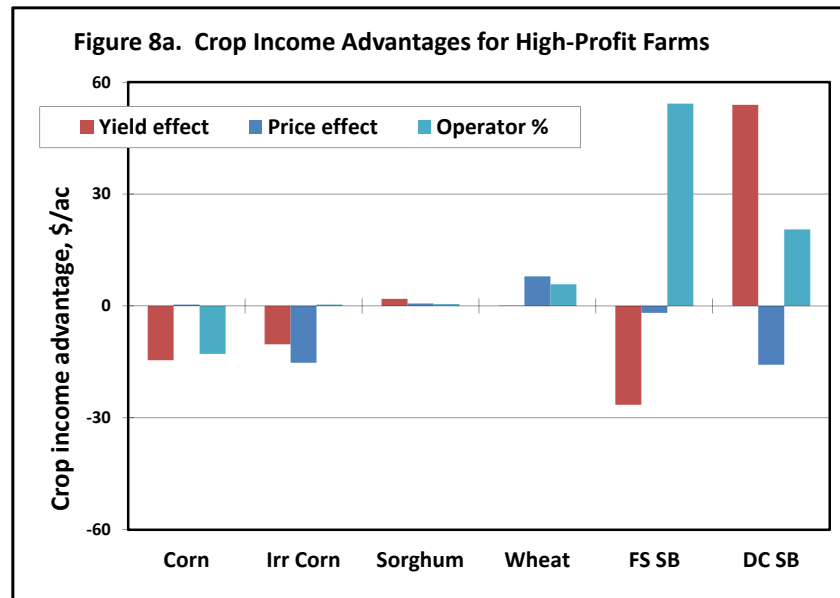


# Soybean Costs, 2011-13



**Kansas Farm Management Association Crop Enterprises Analysis**  
**State Averages, 2015-2017**

	Corn	Irr Corn	Sorghum	Wheat	FS SB	DC SB	
Number of Farms	69	26	57	106	83	37	
Average Acres	604	528	396	634	425	250	2,836
<b>Costs, \$ per Acre</b>							<b>Wtd Avg</b>
Seed	15.0%	14.3%	5.0%	5.4%	15.9%	23.6%	12.8%
Fertilizer	15.5%	14.4%	16.0%	18.3%	3.3%	0.6%	13.3%
Herb-Ins	10.7%	8.7%	16.8%	8.8%	14.2%	14.3%	11.1%
Crop Ins	3.3%	3.1%	4.3%	3.7%	2.9%	0.3%	3.2%
Machinery	28.2%	25.3%	31.9%	36.2%	32.7%	34.9%	29.8%
Other	7.8%	15.7%	8.5%	9.6%	8.9%	9.0%	10.9%
Land	13.8%	11.9%	11.7%	11.7%	15.9%	10.3%	12.7%
Interest	5.8%	6.6%	6.0%	6.4%	6.4%	6.9%	6.3%
Total Cost	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Machinery, \$/ac	\$121.13	\$172.08	\$94.60	\$94.53	\$114.38	\$73.97	\$115.82



- In both 2011-2013 and 2015-2017 the driving factors are costs, yields, and prices
- Cost management is especially important during times of low-prices
- Farms tend to remain in their profit groups from year-to-year
- Understanding the resources available (machinery, land, labor, management ability, sources for inputs) and managing appropriately, significantly impacts profitability

- Interested in looking at results from early- to mid-2000's (similar prices as today) to determine if the driving factors in profitability are the same
- Expanding research to explore impact of various tillage and irrigation practices and other factors over time



## Questions & Comments