

## *Production Economics – Crop and Livestock Production, Land Valuing and Leasing, Machinery Purchase and Leasing*

### **Situation**

Profitability is critical for long-term business survival and the anticipation of profits are the motivation for the entrepreneur to engage in business and take on risk. However, because agriculture is so dynamic in its various aspects (e.g., markets, technology adoption, and policy), and particularly with the continued volatility of input and output markets, producers need to constantly evaluate what enterprises and production systems are the most profitable, including the possibility of utilizing specialty crops such as canola or sunflowers, in addition to the primary Kansas crops. Technology must also be evaluated for possible adoption and machinery costs must be managed well. Cash rent values are of particular importance now as well, due to the much lower crop prices in recent years and the recent decline in land values has begun to affect solvency of some operations as incomes have dropped. Some operations will need to make decisions regarding the sale of assets (land or machinery) and perhaps make use of machinery leases or custom operations. These decisions include a variety of options that must be considered and evaluated. An additional emphasis on women involved in agriculture needs to continue to take place as well, as more women are involved in operating farms or functioning as landlords.

### **Outcomes**

#### **Short-Term (Knowledge)**

- Producer participants will learn about short-run options based on current economic conditions such as enterprise analysis, land values when considering purchase, or selecting alternative feeding programs. They will utilize farm management guides and other information in choosing between different crop enterprises or other specialty crops.
- Participants will learn how to create equitable leases for cropland and pastureland, learning to work with landlords and tenants to develop mutually beneficial relationships and sustainable leases.
- Participants will learn to better manage machinery costs and to evaluate technologies for adoption and manage equipment complements. They will learn to select appropriate technology and to better utilize the data generated by these systems.
- Participants will learn how to use Excel and make use of the more than 60 Excel decision tools available on the AgManager.info website.
- Participants will learn how to use QuickBooks in order to better track and analyze their financial situation.
- Producers will utilize the ARC-CO payment estimates in order to create more accurate cash flow projections, helping with financing and restructuring of farm loans and operating credit.

### Indicators

- What knowledge did producer participants gain about short-run economic options in the current farm economy?
- How did participants utilize the knowledge they gained regarding crop and pasture leases to negotiate appropriate rental arrangements?
- In what ways did participants evaluate machinery and technology and what did they apply?
- How are producers using the decision tools available on AgManager.info and associated K-State websites?

### **Medium-Term (Behavior)**

- Producer participants will adopt production systems that are expected to be the most profitable and sustainable over time (e.g., tillage versus no-till, beef cows versus stockers, freestall versus drylot dairy, increasingly efficient water application practices).
- Landlords and tenants will develop land and pasture leases which benefit both parties and appropriately steward the land resources they use.
- Decisions regarding machinery purchase, land purchase and rental, or new crop and livestock enterprises will take place which add to the profitability and sustainability of the operation.

### Indicators

- What changes have producer participants made to develop profitable and sustainable production systems?
- What changes did producers make regarding their cropland and pasture leases?
- What decisions are made regarding machinery, land tenure, or crop and livestock enterprises?

### **Long-Term (Change in Condition)**

- Agricultural producers will be able to sustain long-term profitability.

### Indicators

- Are agricultural producers experiencing long-term profitability?

### **Public Value**

Because of the education provided by the Farm Management team, producers, lenders and other participants will learn about and adopt short-run production systems that are based on current economic conditions of profitability and sustainability, which will lead to more competitive producers that are able to sustain long-term profitability. This will benefit other community members by increasing the viability of rural communities and their access to a safer and less expensive food supply.

### **Outputs**

- Farm Management Guides for livestock (beef, swine and dairy) as well as non-irrigated and irrigated crops – posted to [www.AgManager.info](http://www.AgManager.info)
- Custom Rates in Kansas - posted to [www.AgManager.info](http://www.AgManager.info)
- Land Values in Kansas and Land Rents in Kansas - posted to [www.AgManager.info](http://www.AgManager.info)
- World Agricultural Supply and Demand Estimates – historical USDA data posted to [www.AgManager.info](http://www.AgManager.info)

- ARC-CO estimated payment maps, providing information on expected payments for the ARC-CO program, allowing producers and lenders to include this information in cash flow projections for lending purposes.
- Bluestem pasture report based on survey of producers – posted to [www.AgManager.info](http://www.AgManager.info)
- Research papers, newsletters, factsheets, and presentations – posted to [www.AgManager.info](http://www.AgManager.info)
- Decision tools for crop and livestock production – posted to [www.AgManager.info](http://www.AgManager.info)
- Radio interviews and videos – posted to [www.AgManager.info](http://www.AgManager.info)
- Programs for women involved in agriculture, including, but not limited to, Women in Agriculture meetings
- Lease workshops, including information on cropland leases and pasture leases, with information also posted to [www.AgManager.info](http://www.AgManager.info)
- Excel workshops, to assist producers in using the Excel spreadsheet decision tools on the [www.AgManager.info](http://www.AgManager.info) site.
- QuickBooks workshops, to assist producers in using the QuickBooks financial software for bookkeeping and financial analysis.
- Presentations at Risk and Profit Conference and Ag Lenders Conferences
- Presentations at Extension multi-county meetings, including Farm Bill and marketing meetings
- Webinars on timely, relevant topics, including land values, land rental rates, budgets, etc.
- One-on-one consultations/assistance by phone and email