

Finding Ways to Save on Production Costs by Analyzing Enterprise Budgets

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By now you are keenly aware that crop prices are down and, without a corresponding decrease in production costs, profitability for many Kansas crop producers is likely to be negative for the next couple of years. We have seen commodity prices like the ones we are facing before, but the biggest difference this time is the inflation of production costs that we have experienced over the last 10 years (see Table 1). Since 2005, the variable (cash) costs of growing an acre of wheat have grown from approximately \$95 per acre to \$180 per acre. It is going to be key for producers to find ways to cut costs of production, without adversely affecting production targets, to regain a profitable position with today's market prices.

Year	Wheat
	Variable Cost
2015	\$180
2014	\$172
2013	\$182
2012	\$183
2011	\$158
2010	\$148
2009	\$160
2008	\$153
2007	\$117
2006	\$98
2005	\$95

Table 1. KFMA Non-Irrigated Wheat Costs of Production in Kansas (\$/acre)

Where to start?

The most effective way to cut costs is to know exactly what your costs are and this is only possible with detailed farm records that go back for several years. Without your operation's records in a format that can be analyzed, you will be guessing what to cut and by how much. Detailed records will not only tell

you where you can cut costs, but also the areas you are extremely efficient in that shouldn't be the focus of your efforts.

I wasn't sure how best to recommend cost cutting strategies without looking at the KFMA enterprise reports to see which cost categories differed the most between the highest-third profitable farms and the lowest-third profitable farms. When looking at the 2015 corn enterprise data, it became clear that a few cost centers were really driving the overall profit differences between the two categories of farms. The variable cost categories with the biggest differentials were fertilizer, chemicals, and hired machinery (shown in Table 2).

Corn - 2015	High 1/3	Mid 1/3	Low 1/3
	\$/acre	\$/acre	\$/acre
<u>Returns</u>			
Yield	124.70	109.00	117.00
Price	3.49	3.46	3.40
Total Returns	435.20	377.14	397.33
<u>VARIABLE COSTS</u>			
Fertilizer/Lime	64.26	79.38	103.22
Seed	59.72	60.03	72.85
Chemicals	38.84	43.50	61.63
Machinery - hired	5.95	7.65	18.25
Other variable costs	87.32	106.81	125.27
Total Variable Costs	256.09	297.37	381.22
Returns over Variable Costs	179.11	79.77	16.11

Table 2. KFMA 2015 All-Tillage Corn Enterprise Costs by Profitability Third

Application Efficiencies for Fertilizers and Chemicals

The temptation to cut the use of fertilizers and chemicals as a response to low commodity prices is understandable, but will simply result in lower levels of crop production and end up hurting the revenue side of the profit equation. How do we maximize the efficiency of every unit of fertilizer applied to keep costs as low as possible without hurting yield? One answer is soil testing. By doing soil tests on your fields and determining exactly what your fertility needs are, you can avoid unnecessary application. In many soils, nitrogen leaches down the soil profile and accurate measurement of the nitrogen that is actually available to plants can't be determined without a 2-foot depth soil test. Similarly, soil tests to determine pH levels and lime application recommendations can have significant benefits to yield outcomes.

Chemicals are something we don't want to apply unnecessarily from both a cost and resistance perspective. So why would we ever make additional chemical applications? A common reason is late application relative to the optimum recommendations. If weather conditions are not right, we may end of having to wait to apply chemicals, allowing some diseases, pests, and weeds to increase their foothold. Another reason for late chemical application is waiting for custom spraying. If you don't own your own sprayer, which usually lets you get into the field as soon as the weather permits, you are likely on a list for custom work. The further down the list you are, the longer you may have to wait for chemical application. For weed suppression, this can mean only knocking down those weeds rather than killing them and an additional spray may be warranted. It is worth noting the correlation between higher dollars spent on hired machinery by the lowest-third profit farms and the higher chemical costs for the same group. The extent to which timing of chemical application affects costs of production is likely to depend on weather conditions and other factors, but it is interesting to think about how sprayer ownership affects costs of production in terms of both acres and timing.

Input Pricing Strategies

When looking across producers at the costs per unit spent on inputs like fertilizers and chemicals, it is striking the amount of variability that exists. It is commonly assumed that the producers with the largest acreages are able to achieve pricing discounts from suppliers simply as a function of volume. However, their timing of purchase may also affect price. For example, many suppliers offer discounts on inputs purchased by a set date in the fall (e.g. November 1st) and paid for in full with cash. By looking ahead to next year's input needs and using available cash to make early purchases, discounts between 10% and 15% can be achieved. It is also possible that, by working with your neighbors, you could offer an input supplier the opportunity to service a larger numbers of acres. If your group can agree on the products you all need, there are likely to be additional volume discounts above those for early purchasing.

Sweating the Small Stuff

These suggestions are not all-inclusive of the strategies you could employ to cut production costs. Bringing down costs to get back to a profitable position is going to require looking at all your cost centers and determining how much can be cut without adversely affecting yields. No one cost category is big enough or inefficient enough to do the trick. You will have to think broadly and look for small savings in many places to achieve greater cost savings.

If there was ever a time to ignore the advice of "don't sweat the small stuff", this would be it. Go back to your records and spend some time in your office analyzing the actual costs you incurred for each crop enterprise over the past several years. If you don't have this system in place, start keeping detailed records immediately. It will be worth your time.

Moving Forward

As I was traveling around the state this winter, I met several people who experienced the hardships of the 1980's and remember how it changed them. There are two common themes people talk about in retrospect. First, farming through the 1980's forced them to become highly efficient farm managers. They had to keep good records to avoid overspending, they kept family living expenses as low as they could, and they bought used equipment that they worked on it to keep it going as long as possible. By maintaining these habits, they are still here in the 2010's farming. The second thing I heard often was to remember that opportunity lies on the other side of a significant economic downturn. While some

farmers may not be able to survive a sustained period of low or negative profitability, some will be able to and those are the people who will have the opportunity to grow their acreage base when things finally turn around. If you can learn from their experience, you stand a better chance of being in the farming business 30 years from now.

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