I wrote an article for this publication in June 2014 concerning low profitability projections and the potential for cash flow issues. The further shrinking of profit margins in the commodities markets make this an even more pertinent issue now. As farmers are finalizing their financials for their accountants and lenders, it is imperative that they take a serious look at their liquidity position and complete budgets for the upcoming year.

The average grain farm in the Kentucky Farm Business Management (KFBM) program ended 2014 with a current ratio of 1.79. If the USDA’s projections for 2015 are applied to the average 2014 KFBM grain farm, the current ratio is projected to drop to 0.52 for 2015. This indicates that there are almost twice as many current liabilities to be paid than current assets available to meet these obligations. This is concerning as many farmers will not be able to pay all of their current liabilities in the upcoming year and will carry a balance on their operating note from 2015 into 2016. If it were projected that 2015 was an off year and that conditions have changed for the better, this would not be as alarming.

However, 2016 prices are projected to be just as depressed as we have seen in 2015. The USDA is projecting the same low price scenarios for several years to come. This begs the question, what now? If we are already digging a liquidity hole in 2015 and 2016 only looks to be more of the same, then how low will our current ratios be in January 2017? How long can we continue with the current cost structure?

It is time that serious budgeting takes place. Each farmer will have a different cost structure and revenue potential. However, all farmers are going to feel this financial squeeze. With current prices, many producers are going to have a very difficult time covering variable costs, much less fixed costs and family living expenses. If you have not already done so, I strongly encourage you to complete, at a minimum, enterprise budgets and a cash-flow budget for the 2016 crop season. After doing so, perform some sensitivity analysis. How do your projections change if yield or prices are off 5% or 10%? What happens to your returns above costs if prices increase 5-10%? Operations that are already having liquidity issues will find it difficult to get more lending if 2016 crop projections show further negative profitability.

When completing budgets it is of paramount importance that we are honest with ourselves in the numbers that we project. Are we using actual yield history or are we plugging in yields we hope to hit? Are we allowing ourselves to think very positively about yield potential because we have had a few good years in a row? How likely is another “great” weather year? Are the prices we are using supported by the market information we currently have, or are they prices we want to get?

At least for the 2016 crop season, and most likely for a few years beyond, survival is going to depend on being a lean and efficient operation while cutting expenses to increase profitability opportunities and easing cash-flow issues. Below are some areas to think about in your operation:

1. **Cash Rents** - It is known that cash rents are “sticky” in nature. However, for many producers, cash-rents need to be renegotiated or switched to a flex or crop share-type agreement. If renegotiation is not possible, are you willing to farm that land for a loss? Sometimes letting go of unprofitable land is the best approach.
2. **Machinery Costs** - Machinery depreciation expenses for the average KFBM farm in 2014 was $71.02 per acre. This is almost $20 per acre more than the default of the University of Kentucky enterprise budgets for corn. Look at your operation. Has there been equipment purchased that is underutilized? Can you liquidate some equipment without affecting future productivity? The answer to this question will be operation specific. Please keep in mind that tax consequences may exist for assets that have been depreciated in an accelerated manner.

3. **Family Living** - What are your family living expenses? Are there opportunities to decrease those expenses and/or bring in/increase non-farm income?

4. **Debt Restructure** - Analyze your debt structure. Is it possible to restructure your debts to free up cash? Do you have the equity to do so? Have you purchased equipment or other assets with current assets (cash or operating loan proceeds)? If so, maybe it is best to term out those portions of your current liabilities to free up cash. Caution should be exercised in terming out unsecured operating debt. While this is an option, it also signals significant financial stress. In order for this to be a successful option, it is important to have a good understanding of how this problem occurred. If actions are not taken to correct the financial management issues, restructuring unsecured operating debt is only a temporary solution. If the cause is not found and fixed, you will likely find yourself in the same position in a few years.

5. **Marketing** - Knowing your cost of production allows you to seize upon pricing opportunities throughout the year. Be smart about your crop insurance and educate yourself on marketing opportunities and tools.

This is a multifaceted problem that will take an individualized, strategic response by each farmer for his/her operation. Be honest with yourself concerning your financials. Sometimes there is a desire not to look behind the curtain. With the potential of the financial situation only to worsen in 2016, this willful neglect could be disastrous. Unsecured operating note deficiencies can easily balloon to unmanageable amounts in a couple of years. If you are concerned about your financial situation, reach out for a third party opinion. Be sure to take your record keeping and your financial projections seriously. Have an honest conversation with your lender. If you need help analyzing these decisions, or find that you have liquidity concerns, contact your local Kentucky Farm Business Management Specialist and see what the Kentucky Farm Business Management Program has to offer. The KFBM website is www.uky.edu/Ag/KFBM.

*Jonathan D. Shepherd, JDShepherd@uky.edu*
The 49th year of the UK Income Tax Seminars wrapped up in January 2016. Total registrations for the 2015 season were 1,606, down from 1,670 in 2014.

UK Ag Economics partnered with the Kentucky Department of Revenue and the Internal Revenue Service to deliver seminars at locations from Paintsville to Paducah. Seven of the seminars had over 100 participants, and the Lexington downtown location had 240 in attendance.

Two teaching teams staffed by an accountant, retired IRS and Department of Revenue agents, Kentucky DOR employees, IRS staff, and KFBM area specialists delivered fourteen, 2-day seminars between November 4, 2015 and January 7, 2016. This was two fewer locations than in 2014.

UK Ag Economics is a member of the Land Grant University Tax Education Foundation, a consortium of 26 universities which produces a 700+ page workbook used in the seminars. Registrants received over 1000 pages of educational materials and updates, a completion certificate, and Continuing Education Units for their participation.

The targeted audience was accountants/CPAs; certified financial planners; enrolled agents; attorneys; financial, insurance, farm management, and real estate professionals; and registered tax return preparers. CPAs are the largest professional category accounting for 39% of participants. Enrolled agents were 12%, and "other tax return preparers" were 31% of attendees.

The two-day seminars were designed for preparers with at least one year of experience and covered individual taxpayer and small business issues and included one session dedicated to agricultural topics. New legislation, rulings and cases, retirement topics, and ethics were also covered. The two-day seminars were approved for Continuing Education Units by the IRS, the KY State Board of Accountancy, the KY Department of Insurance, the Certified Financial Planners Board of Standards, the National Association of State Boards of Accountancy and the KY Bar Association.

Planning is underway for the 50th season of tax seminars to be delivered this fall. For additional information contact Kathy Roe, Program Coordinator or see the UK Income Tax Seminar website at www.uky.edu/uktax/.

Steve Isaacs, sisaacs@uky.edu

2015 Tax Seminar Season
The Blinking Game

There used to be a game played in grade school that went something like this: Two boys would stand face to face out on the playground and stare each other down. The one that blinked first lost. In hindsight, the stakes were not large, but at the time seemed like serious business with bragging rights on the line.

Today, there is a different version of this game being played out in our grain producing areas. It is more intense and with potentially serious consequences. After several years of historically high grain markets, cash rents got bid up to $250-350/acre on the more productive ground in areas with intense competition. However, in the last two years grain markets have collapsed. Figure 1 shows the 2015 CME harvest-time futures price from 2012 to November 2015. Notice that until early summer 2014 this contract was predicted to be mostly in the $5-6/bu range but then steadily decreased until it went under $4/bu. Futures markets are now predicting corn prices near or just under $4/bu for corn and $9/bu for soybeans for the 2016-2018 fall contracts.

Profitability given these expected prices is headed south. Table 1 shows projected costs for 175 bushel corn and 51.5 bushel soybeans. This cost structure would be for western Kentucky using anhydrous as the nitrogen source and a 25 mile one-way trucking distance. Other major assumptions include $2.00 diesel fuel, maintenance levels of P and K, and a $10 per planted acre for ARC payments. The costs listed also include machinery depreciation/overhead and a base labor wage (as if you were hiring all of it). For machinery, depreciation/overhead is estimated at $52/acre ($15/acre increase over pre-2010 levels).

Table 2 shows an example of expected gross return for this situation using cash prices of $3.75/bu for corn and $8.75/bu for soybeans for a 2016-2018 average.

The gross return takes the total projected revenue and subtracts out all costs except land rent (but includes non-cash costs such as family labor and depreciation/overhead). Assuming $3.75/bu corn and $8.75/bu soybeans the gross return would be $190/acre for corn and $170/acre for soybeans, or an average of $180/acre for a 50-50 rotation. The difference between gross return and land rent would be a return to management\(^1\). Thus with a $280/acre land rent, this farm would be projected to have a negative return to management of $100 (lose $100 per acre over all costs). With a $200/acre land rent, this farm would be projected to have a negative return to management of $20/acre.

\(^1\) For central Ky, the gross profit with those same yields will be lower ($10-50 per acre) due to the reliance on urea for the nitrogen source, as well as increased transport distances to the elevator in most situations. The lower number would be for those situations where trucking distance is under 30 miles & the higher figure would be in areas like southcentral Ky that regularly haul over 100 miles one-way.

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**Table 1 – Projected Costs (per acre)**

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Corn 175 bu</th>
<th>Soybeans 51.5 bu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seed</td>
<td>$100</td>
<td>$70</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>$67</td>
<td>$0</td>
</tr>
<tr>
<td>P, K, and Lime</td>
<td>$55</td>
<td>$41</td>
</tr>
<tr>
<td>Fertilizer</td>
<td>$55</td>
<td>$45</td>
</tr>
<tr>
<td>Total Inputs</td>
<td>$277</td>
<td>$156</td>
</tr>
<tr>
<td>Machinery and Labor</td>
<td>$134</td>
<td>$95</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drying Grain</td>
<td>$17</td>
<td>$0</td>
</tr>
<tr>
<td>Crop Insurance</td>
<td>$20</td>
<td>$15</td>
</tr>
<tr>
<td>Misc.</td>
<td>$20</td>
<td>$20</td>
</tr>
<tr>
<td>Land Rent</td>
<td>Variable</td>
<td>Variable</td>
</tr>
<tr>
<td>Operating Interest</td>
<td>$7</td>
<td>$4</td>
</tr>
<tr>
<td>Total Other</td>
<td>$64</td>
<td>$39</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$476</td>
<td>$291</td>
</tr>
</tbody>
</table>

*Note: Assumes 25 mile one-way trucking, $2.00/gal fuel*

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**Table 2 – Summary Gross Return 2016-2018 (per acre)**

<table>
<thead>
<tr>
<th>Yield and Price:</th>
<th>Corn</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Yield (rotation)</td>
<td>175</td>
<td>51.5</td>
</tr>
<tr>
<td>Expected Price</td>
<td>$3.75</td>
<td>$8.75</td>
</tr>
<tr>
<td>Grain Revenue</td>
<td>$856</td>
<td>$451</td>
</tr>
<tr>
<td>Gov’t Payments</td>
<td>$10</td>
<td>$10</td>
</tr>
<tr>
<td>Crop Insurance Payments</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$856</td>
<td>$461</td>
</tr>
<tr>
<td>Total Costs (Less Land Rent)</td>
<td>$476</td>
<td>$291</td>
</tr>
<tr>
<td>Gross Return (Less Land Rent)</td>
<td>$390</td>
<td>$170</td>
</tr>
</tbody>
</table>

*Note: Does not include land rent. Subtract land rent to get net return*
Table 3 shows this same analysis but with 150 bushel corn and 45.5 bushel soybeans (both slightly above the long-run Kentucky averages). Here, the gross return that includes all costs except land rent would be $114/acre for corn and $122/acre for soybeans, or an average of $118/acre for a 50-50 rotation. With a $200/acre land rent, this farm would be projected to lose $82 per acre over all costs. A land rent of $118/acre would be breaking even ($0/acre return to management).

Thus cash rents that may have been reasonable with $5-6/bu corn would be expected to lose considerable money with corn under $4/bu and soybeans under $9/bu. The typical rental length in Kentucky is probably three years in duration. So it would be fair to say that probably about half of rental agreements would have come up for renewal since corn prices were at or below $4/bu in late summer 2014. However, rents do not seem to have come down significantly over that time period. Reports are that the highest rents (around $300/acre) have dropped $20-50/acre, but that the majority of them have not changed much.

Why haven’t rents come down further given this apparent disconnect between gross profit and land rents? The answer can be found in the Blinking Game. Most grain farmers do not want to give up control of land and are willing to ride out at least a year or two at a loss to keep it. They are hoping that other farmers will blink first (walk away from high rent farm), so that when rents start coming down they can renegotiate at an appropriate level. Compounding this problem is that many farmers accumulated significantly more machinery capacity over the boom years (in many cases to reduce taxes) and thus desire to farm more land, not less, to pay for this increased capacity. The end result in many areas with intense competition is that if you walk away from a lease you are paying $250/acre on that you can only afford to pay $150/acre long-term, there will be another farmer willing to pick that ground up at the original rent or something close to it.

In mid-December I had a 45 minute phone conversation with a well-respected agricultural lender in the state. He was in the process of meeting with clients to review their finances for 2015 and plan for 2016, and was more worried about the situation than I had originally expected. Not necessarily for the upcoming year (mildly worried), but for the following year if the situation doesn’t improve (very worried). His two biggest concerns with profitability were land rents and equipment costs that were out of balance with production and markets.

Table 3 – Summary Gross Return 2016-2018 (per acre) West KY

<table>
<thead>
<tr>
<th>Yield and Price</th>
<th>Corn</th>
<th>Soybeans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Yield (rotation)</td>
<td>150</td>
<td>45.5</td>
</tr>
<tr>
<td>Expected Price</td>
<td>$3.75</td>
<td>$8.75</td>
</tr>
<tr>
<td>Grain Revenue</td>
<td>$563</td>
<td>$398</td>
</tr>
<tr>
<td>Gov’t Payments</td>
<td>$10</td>
<td>$10</td>
</tr>
<tr>
<td>Crop Insurance Payments</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>$573</td>
<td>$408</td>
</tr>
<tr>
<td>Total Costs (Less Land Rent)</td>
<td>$459</td>
<td>$286</td>
</tr>
<tr>
<td>Gross Return (Less Land Rent)</td>
<td>$114</td>
<td>$122</td>
</tr>
</tbody>
</table>

Note: Does not include land rent. Subtract land rent to get net return.

None of this should be news or a shock to those involved in agriculture. The signs have been there since late summer in 2014 that we would likely be in this predicament. See the following link for an example from September 2014: [http://www.uky.edu/ag/agecon/pubs/extbluesheet14-0953.pdf](http://www.uky.edu/ag/agecon/pubs/extbluesheet14-0953.pdf)

Unfortunately, when things are going well it is human nature to hope it will continue and many did not want to believe the greatest agricultural party in a generation was in the process of ending. There are still some that are in partial denial of the severity of the situation.

**What Won’t Help**

Unfortunately, there are no silver bullets that will remedy the situation other than a return to $5 corn. Will the current Farm Bill help a grain farmer that is upside down by $100/acre between cash rents and gross returns? If we stay near $4/bu corn and $9/bu soybeans, expect very little government payments in 2016-2018. The PLC program won’t begin to pay until the national average marketing year price falls below $3.70/bu for corn and $8.40/bu for soybeans. The ARC program was front loaded (majority of payments were expected in the first two years) for most Kentucky grain counties and revenue guarantees are going down quickly. It won’t likely be of much help in the next 2-3 years with current predicted prices.

Will crop insurance help out? While not discounting crop insurance in overall risk management, it is a safety net that only works when revenue falls significantly from where it was predicted in late winter. In other words, it only helps when projected crop revenue drops within the current year. Where prices are projected to be low and stay low, it will not be of much assistance. Will forward contracting help? With the same disclaimer that forward contracting can be of great help with overall risk management, forward contracting will not get us out of this current predicament. You can’t forward contract $5/bu corn today.
What Can Help?

Kentucky grain farmers, especially in the most competitive areas, need to have a multi-year strategy for the distinct possibility of long-term markets of sub $4/bu corn and sub $9/bu soybeans. It may make sense in the short-run to bid up rents far above what is profitable if that means keeping control of the land in case corn comes back up to $5/bu in 1-3 years. But realize it is a gamble, and one that the market odds are not currently favoring. It may also make sense in the short-run to pay rents that are not profitable so that you have that land if rents come down to reasonable levels in 1-3 years. But realize that you will be playing the Blinking Game. If no one blinks for three years and all your cash reserves and liquidity are drained in that time period, will you be better off? That is a question that grain farmers will need to assess carefully and have a contingency plan for.

Assess all rented farms and identify those with the highest projected losses. If you need to walk away from any of your leases, start here. To do this you will need to have good cost and production estimates on those individual farms. You can use enterprise budgets from the University of Kentucky to help structure this process: http://www.uky.edu/Ag/AgEcon/halich_greg_rowcropbudgets.php

Know at what point (both in time and/or in red ink) you need to walk away from a farm and let someone else have it. If you do walk away, do so respectfully. Chances are if the next farmer pays a rent that you know is not sustainable, they may not be on that farm in a few years. If you left on good terms there is a good chance you will get the first call from that landowner when they are looking for a new tenant.

If you feel you have to pay the current rental rate or something close to it, consider renegotiating the terms of the least for one year. This will buy you another year of control (at a cost) and allows you to re-assess the situation a year later.

Consider negotiating a flexible cash lease with landowners that are willing to share part of the revenue risk. This means that you would have a base lease that is below the current cash lease, but where the landowner would get a bonus if revenue is higher than your current predictions. Yes, this will mean that if we return to $5/bu corn you will pay more rent than an equivalent cash lease. But if we stay at $3.75/bu corn it may buy a few years of liquidity. See the following links for publications and a spreadsheet on flex leases:

www.extension.iastate.edu/agdm/wholefarm/xls/c2-21flexiblerentanalysis.xlsx

Assess your machinery needs. The majority of Kentucky grain farms probably have more equipment today than they need for the acres that they are covering. As hard as it may be to sell off a piece of machinery that would have brought 20% more a year ago, and that you wrote off fully with a Section 179 depreciation allowance and will need to pay capital gains taxes on, it still may be a good choice (discuss with your tax advisor to understand your options). I have already spoken with farmers that did this for cash flow purposes in the last six months. As much as large used machinery has dropped in the last year, you need to be realistic about the market for it in 2-3 years. Who will be buying it? If we stay at or near $3.75/bu corn chances are the market for that machinery will not improve and may continue dropping.

If you got into grain farming after prices started increasing in 2006 this will be your first experience with a major market downturn. You have been farming in the boom times and the shift to the current situation can be a hard one to make psychologically. There is a good chance that your cash flow and equity situations will not be as strong as more experienced farmers. You will want to have a good working relationship with your banker with open communication to make sure temporary cash flow problems will not put you out of business. Be proactive to let them know about potential cash flow problems before they occur, not after. Possibly the best single action you can take is to find a mentor who made it through the 1980’s farm crisis intact.
New Website for the New Year

For 2016, the Center for Crop Diversification - formerly the New Crops Opportunities Center - has unveiled their newly redesigned and restructured website. Check it out: www.uky.edu/ccd

You'll find all the fruit, vegetable, and specialty crops resources you and your clients have come to expect, including:

- Farmer’s Market & Produce Auction Price Reports
- Crop, System, and Market Profiles
- Budgets
- Webinars
- Plus much more!

New features include:

- Attractive, Organized, Mobile-friendly design
- Enhanced Searchability (try the search bar!)
- All crop-related resources included in one place
  - For example: Our blueberry page contains links to all our blueberry resources in one convenient place
  - Check out the “resources and links” section for the original crop profile and much more

You can also find us on facebook (make sure to click “like!”), and you can check out and sign up for our monthly electronic newsletter.

Please don’t hesitate to contact me if:

- You have feedback or suggestions
- You are hosting a specialty-crops event and would like help with promotion
- You have or know of a publication that fits well with our site
- You would like to work with us to develop materials (video, publications, etc.)

How Will this End?

Unfortunately, I don’t see how this will end well (unless we have a return to $5/bu corn). No, I don’t think this will be anything like the 1980’s farm crisis that forced so many farm liquidations. On average, grain farmers have much lower debt loads and are not leveraged to the degree they were 30 years ago. Interest rates are nowhere near, and are unlikely to go anywhere near, where they were in the 1980’s. All that said, we are still going to have some tough times in our grain sector in the next few years. For many, the upcoming years will likely be the worst they have ever seen. Some will be forced out of business, others will voluntarily leave. The extent to which this occurs will of course be driven somewhat by where grain prices end up, but will also be driven by how farmers plan for this downturn today.

Greg Halich is an Associate Extension Professor in Farm Management Economics for both grain and cattle production. He also raises corn and soybeans in southern Woodford County.

Greg Halich, Greg.Halich@uky.edu
859-257-8841.
Anyone associated with U.S. agriculture certainly knows that this sector has experienced a considerable amount of volatility in recent years. According to USDA’s latest estimates, U.S. net farm income fell 38.2% in 2015, following a 26.7% decline in 2014. This was preceded by a 31.7% run-up in net farm income in 2013 to an all-time record high. While the unique characteristics of agricultural supply and demand have historically led to wide swings in the agricultural sector, it does appear that this industry has experienced greater volatility in recent decades.

The figure below shows the annual percentage change (in absolute value) in U.S. net farm income during the decades of the 1950s through 2015. Annual changes in the national aggregate farm income were relatively stable during the 1950s and 1960s. The export boom during the early 1970s followed by the financial crisis in agriculture, volatile government payments and various weather events contributed to several large swings in agricultural income during the 1970s and 1980s. The 1990s reverted back to a more stable period for U.S. farmers but greater annual variability in farm income has occurred during the first decade of 21st century and has escalated since 2010.

Greater dependence on global markets is likely one factor that has contributed to the increased volatility of U.S. agriculture since the 1950s. Currently, around 1/3 of the value of U.S. agricultural production is exported compared to 10% during the 1950s.

As a result of the increasing role that trade plays in U.S. agriculture, global events such as political instability in the Middle East, monetary policy changes in Europe, weather events or trade policy changes in South America, disease outbreaks in Canada or Mexico, or macroeconomic conditions in Asia affect global agricultural supply and demand, and thus impact U.S. farm prices and incomes.

A very recent example has been the news out of China of a slowing economy which has caused not only havoc on global financial markets but remains a significant concern for U.S. agriculture. In recent years, China has become our largest export market for U.S. agriculture, accounting for around 17% of our agricultural trade. However the weakening Chinese economy contributed to a 12% drop in U.S. ag exports to China in FY 2015 and another 20% decline projected in FY 2016. As a result, China is expected to slip behind Canada as the largest foreign customer for U.S. agriculture.

Another major factor impacting U.S. agricultural income and trade has been the strengthening U.S. dollar. While gaining around 10% against a market basket of major world currencies, the
The U.S. dollar has nearly doubled against the all-important Brazilian currency (real) which significantly impacts the competitiveness of our grain and tobacco markets. Anticipated action by the Federal Reserve to tighten the U.S. money supply (and thus increase U.S. interest rates) along with a depressed economic outlook in other parts of the world is expected to boost the value of the U.S. dollar more in 2016 which will continue to affect the dwindling U.S. agricultural trade balance (see ERS article below).

A third factor that may impact ag prices, incomes, and trade flows is the radical change in trade and monetary policy adopted in Argentina following the recent election of Argentina’s new president, Mauricio Macri. Last month, the new market-oriented president eliminated export taxes on wheat, beef and corn and reduced them for soybeans. In addition, export quotas were lifted and monetary policy actions led to a dramatic devaluation in the Argentine currency. Collectively these changes could have noticeable short-term and possibly long-term impacts on global ag markets.

Will Snell, wsnell@uky.edu