AGRICULTURAL ECONOMICS

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Cornhusker Economics

Your Farm's Financial Condition and Profitability Revisited

Looking at December futures contracts, corn prices may have reached a high and are tending to recede. If they stay higher, producers will likely have a good year. Still, if they tend to decline, which is possible given current carryover and supply projections, prices may stabilize or decline as we approach harvest. Those with multiperil crop insurance in areas with lower yields, e.g., drought-stricken areas with sufficiently high enough levels of coverage, will benefit from the February projected price of $5.91/bu. For the past two seasons, fall prices exceeded projected prices in the spring, making selling at harvest an attractive proposition and leading to higher farm income. In general, this is not the case. Most often, corn prices reach their low at harvest time.

The point is that profitability varies from year to year and that nationwide farm net income may be headed for a decrease that often lasts for an extended period. This year could potentially end up something like 2013, where corn prices began to decline and stayed mostly between $3 and $4/bu until the 2021 season. This comes from observing monthly prices for the last 20 or so years of the December futures contract. https://www.macrotrends.net/2532/corn-prices-historical-chart-data. If low prices become the norm for the next few coming seasons, farm income may be lower than expected and is likely to create some financial stress. If this trend stays in the market, it will create challenges for many farms. It will first occur to those with limited working capital who have significant debt, higher production costs, and limited access to short-term credit. Of course, the hope is that it will never come, but if we have learned anything from history, it always comes; sooner or later, and it is wise to be prepared, given potential instances of personal tragedy that affect the individual farm. With the advent of higher interest rates and inflation, the concept of working capital becomes one producers and business owners should consider carefully. As a liquid asset, working capital is used for many purposes, which may or may not contribute to business success. With input costs increasing and corn prices possibly declining, maintaining last year's profit levels is not as likely as the February USDA projected price indicated. If this is the case, the shrink in profit may reduce the business' ability to recharge its liquid assets, e.g., working capital. In the last downturn, some producers restructured their debt using long-term assets such as land to refinance equipment and other medium-term debt, freeing up some capital and pressure on current assets. If they have done this and have not paid off the added debt and the equipment is now older and in need of replacement, a downturn could find them in a bind. This situation could result in increased financial risk and higher interest rates from lenders.

Economic theory puts commodity-based businesses such as grain farming as a perfectly competitive business where in the long-term economic profits are forecast to be zero. This means there will be times of profitability and loss, but on average, those in these businesses will

obtain just enough of a return to keep them farming. If unchecked, the decrease in working capital can decrease an operation's stability. Without the knowledge that commodity values will not decline and when they do, when shall they rebound higher, making them unpredictable, it seems wise to prepare for the worst and hope for the best. This sentiment has been reflected in conversations with those in the ag lending business in the past few months. There has been a concern and thought that what we have just discussed will come to fruition, and they are hoping their clients are closely watching "working capital" and preparing for what might be a period of high costs and lower prices.

Agriculture in the US is a capital-intensive proposition for most farms and ranches. Knowledge and understanding of "working capital" and the related topic of "net farm income" are essential to the long-term health of each operation. These two measures do not track the same thing, but they are a measure of firm success and health and, as stated, are closely tied together. Net farm income (Profit) is the total earnings after expenses for the production year. This is reflected below as the profit relationship or equation.

profit = total revenue – total cost

Profit is most directly influenced by commodity prices, productivity, and costs. Working capital is the capital "liquid assets" an operation has available to the business after subtracting the current 12-month liabilities from all the current assets. Liquid assets refer to cash on hand, cash in the bank, and assets that can be quickly and easily converted to cash, e.g., stocks, bonds, certificates of deposit, etc. It is easier to think of capital as money that can be used for many things, e.g., supplies, equipment, vehicles, buildings, personal withdrawal, labor, etc. Note that the list of uses has items that may help the operation grow or become more efficient or profitable, business investment, used as inputs seed, feed, fertilizer, etc., and items and things that may not be needed directly by the business, such as increased farm income, personal vehicles, family housing, etc. The availability of working capital is a way to measure an operation's ability to meet its short-term obligations and handle risks. It is the first line of defense against business failure or stress. When profits are high, working capital is often increased by prepaying for the coming year's materials and supplies, seed, feed, fertilizer, paying off current debts, and having additional cash available to the business. Using profit for other purposes, such as purchasing a new combine, will reduce working capital. Still, it will also increase net worth and supply the business with a needed tool to stay in business. The purchase of new equipment is a tricky proposition. If made properly, a purchase will increase productivity, lower costs, or at least keep costs where they currently stand and provide a return on investment. A poor purchase will increase costs, lessening profit and not having sufficient return on investment. When profits are used personally, income increases, new vehicles, toys, etc., working capital will be reduced. This is not inherently bad if it does not adversely affect the future survivability and health of the business. Working capital is generally measured as a ratio of current assets divided by current liabilities. Owners and operators of agricultural businesses should understand and know that a working capital ratio of 1 is marginal, and a ratio near 1.5 to 2 is considered healthy. Each expenditure we have discussed here has its pros and cons and should be weighed carefully in context to the decision maker's personal and business goals.

In thinking about this issue and in discussions with colleagues, farm management experts, bankers, and producers, five topics related to maintaining working capital are considered here. Up to a point, the more working capital you have, the more able the operation can withstand unexpected events, low profitability, and unfortunate happenings. An excess amount of working capital may indicate an opportunity to use it somewhere where it may earn a higher return.

The five topics:

1. Have long-term interest rates as low as possible.
2. Extend/restructure debt repayment periods.
3. Reduce overhead and family living expenses.
4. Reduce cost/bushel to increase profitability.
5. Increase annual average prices received for commodities.

Looking forward when transitioning from a prosperous period and entering one where margins are expected to be much lower or even temporarily negative, profit will

shrink, disappear, or become losses, which will result in unsatisfactory levels of working capital if the burn rate of capital is not carefully and quickly adjusted to match the change in the farm economy. Think of your working capital as a bathtub full of water. When the inflow from the faucet is reduced, and the drain is left open, the water "capital" begins to go down the drain with no hope of returning without increasing the inflow. There are some temporary fixes to a shortage of working capital, such as restructuring debt (Topics 1 and 2 from above). Annual cash needs are reduced by transferring intermediate debts to long-term debt, i.e., borrowing from land assets to pay off equipment loans. Restructuring is done with the idea that the business will decrease the annual outflow of some of the current assets to lower annual expenses helping to keep cash flow sufficient to support the business until profit can be restored. This strategy is not an ongoing, repeatable solution, or at least it is limited by the owner's equity position and the operation's future profitability. This type of solution should be viewed as an opportunity that provides breathing room to solve the real problem. Hopefully, this breathing room will allow management changes that will result in increased profit, allowing the business to pay off the added debt and increase working capital. This type of restructuring can be compared to using a battery. The land assets can be seen as a power source (capital source) to keep the business running while the real power source *profitability* is restored.

To clarify restructuring debt, let's use a simple example (Table 1) where your equity in land is used to refinance an intermediate debt, a combine you purchased last year and still need to make the payment. This is being considered because the firm lacks the money to make the full payment without hurting its working capital ratio. (This is where Topics 1 and 2 from above play a role). Long-term borrowing extends the repayment period from 3 to 7 or 10 annual payments, reducing the annual cash requirements, and thus helping the current year's assets, working capital, and cash flow. Borrowing presently may be advantageous, especially if interest rates are expected to increase substantially in the near future. While the amount of overall interest paid has increased, it is locked in at a lower rate versus the potential future costs of a short-term operating note that will likely be at a higher interest rate. From Table 1 below it is easy to see the result of the restructured debt by extending the repayment of the $300,000 debt for a combine purchase. The seven-year extension reduces annual cash needs by about $45,000 in the first year, and the ten-year extension reduces annual cash needs by $55,000 for the same year.

Table 1. Example of debt restructure

Equipment Refinance

Last year a combine was purchased for: $325,000 (25,000 down [cash]) under the conditions of scenario 1, from the manufacturer

Scenario 1: 0% interest, 3 annual payments
Scenario 2: 4.25% interest, 7 annual payments
Scenario 3: 5% interest, 10 annual payments

Scenario 1: Requires $0 interest payment, but a $100,000 annual principal payment for three years for a total cost of **$300,000 plus the down payment of $25,000, equaling $325,000.**

Scenario 2: Requires the addition of interest payments, has an annual principal payment of just over $42,857 with total annual payments starting in year one of **$55,607 and decreasing to $44,679 in year seven for a total payback of $351,000 plus the down payment of $25,000, equaling $376,000.**

Scenario 3: Requires the addition of interest payments, has an annual principal payment of $30,000 with total annual payments starting in year one of **$45,000 and decreasing to $31,500 in year seven for a total payback of $382,500 plus the down payment of $25,000, equaling $407,500.**

*This example is a modified version of one produced by Michael B. Jacobson, President and CEO of NebraskaLand National Bank

This decrease in the annual cash flow may or may not seem trivial. The reduced flow can mean the difference between the business being able to meet annual credit requirements from a lender for working capital and giving the business the needed cushion of current assets to be considered viable. This makes the firm more able to absorb some common risks it faces or other cash costs, including the operator's family living needs. While this might solve the working capital issue for the time being,

it does not come without a cost. You will note that the seven-year loan comes at an additional interest cost of $51,000, and the ten-year note costs an additional $82,500, which will come out as added interest over time.

Due to the added costs incurred by this restructuring, this is not something you would choose to do often as it increases long-term expenses. To use a phrase, it is a lot like *kicking the can down the road*, and this is especially concerning if future net income does not increase. As a one-time or emergency fix, this may be a solid strategy, but as a repetitive solution, it jeopardizes the owner's equity and wealth position and threatens the continuation of the farm or ranch business. It could be argued that a shift in the business cycle created the current working capital shortage and diminished incomes. Still, if working capital shortage becomes a perennial problem and its cause remains unresolved, the question becomes: why is the business not adapting? This is where paying attention to the profit equation becomes paramount (Topics 3, 4, and 5). Working capital can only be sustained over time if profits exist and appropriate amounts of capital are retained. To have positive profit requires revenues to exceed costs. This implies that either cost per unit produced must decline, revenues must increase, or both. Personal draws may also need to adjust with changes in profitability.

There are other options that could accompany restructuring, such as delaying capital expenditures, equipment purchases, change to generic pesticides, etc., which in turn may help increase available cash in the short term (related to Topic 4). This may or may not help increase working capital for the future, depending on how the savings generated from the delay are used. However, delaying such investments will only go so far and depends on the length, size, and type of delayed investments since the business must remain productive for long-term sustainability. Another option is to sell/ trade some assets to reduce debt. This is an option to consider if losing or replacing that asset does not cause issues that make the business more vulnerable to failure and if the benefit of the loss or trade exceeds its costs. The effect is much like Topic 3 from above, a reduction in family expenditures which frees up cash to be used for other purposes in the business.

Working capital is a sign of the health and resiliency of the farming or ranching business and may require some thought in terms of debt restructuring. While restructuring may fix the problem, for now, the question every owner should ask about their business is, what can I do to increase profits in the future? This may require some thinking and planning e.g., offering custom services to neighbors to utilize over-capitalized equipment, reducing the bells and whistles in your seed technology, optimizing fertilizer application, optimizing irrigation, using generic pesticides when possible, eliminating marginal practices or inputs where possible, etc. Consider seeking out others with expertise you may not have or wish to improve in; for instance, some operators might benefit from hiring a marketing specialist or consultant. A $0.10/bu average increase in price for a 1,000-acre corn farm with a 250,000-bushel production (250/bu/acre) is a $25,000 increase in revenue; even if you paid the consultant $10,000, that is a $15,000 increase in net revenue. There are no simple or *right* solutions that will work for everyone, but it is worth the effort to consider alternatives. Just like making good production choices, it is just as critical to an operation's success to use good business practices and make wise financial choices.

*This work is an adaptation of a work created in 2017 inspired and partly based on a presentation prepared by Michael Jacobson which he shared with the author.

Matt Stockton
Professor
Department of Agricultural Economics
University of Nebraska-Lincoln
West Central Research and Extension Center
mstockton2@unl.edu

Shannon Sand
Associate Extension Educator
Department of Agricultural Economics
University of Nebraska-Lincoln
West Central Research and Extension Center
ssand2@unl.edu