Ag Decision Maker

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Payback for energy-related farm projects

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As spring draws near, energy prices are creeping upward. This is a great time to prepare for spring projects – especially ones that can help you reduce energy consumption around the farm.

Whether your plans include new construction, replacing motors or equipment, or upgrading lighting systems, now is the time to make decisions about where to reinvest your farm business dollars. Safeguarding yourself against rising energy prices can start with comparing the simple payback for energy-related farm projects.

"Saving money today by purchasing equipment with a lower initial cost—and higher energy demands—puts the buyer at risk when energy prices rise in the future," says Mark Hanna, ISU Extension ag engineer. "This can potentially negate the savings associated with the low purchase price."

Calculating the simple payback period for a purchase means dividing the initial cost by the projected annual energy savings. For example, if the cost for new equipment is $3600 and the projected annual energy savings at current energy prices is $900, the initial cost is repaid through energy savings after four years ($3600/$900).

Simple payback is typically helpful for comparing purchases with relatively short payback periods. However, this method does not account for continued energy savings (return on investment) after a project reaches its break-even point. To do this, you need reliable information about the equipment's useful life. Some examples that illustrate the benefits and limitations of the simple payback method are available in the latest ISU Farm Energy fact sheet, "Estimating payback for energy efficiency" (PM 2089S) at *farmenergy.exnet.iastate.edu*.

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Handbook updates

For those of you subscribing to the handbook, the following new updates are included.

Historical Costs of Crop Production -- A1-21 (2 pages)

Historic Iowa Farm Custom Rate Survey -- A3-12 (3 pages)

Historic County Farmland Values -- C2-72 (10 pages)

Please add these files to your handbook and remove the out-of-date material.

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Lighting

Initial cost to replace bulbs in a livestock facility is $400, but the projected annual electrical savings is $2000. The simple payback period is 0.2 years (= $400/$2000) with a savings of $1600 in year one and $2000 in year two. Estimated bulb life for the project is two years, so return on investment is $3600 over two years. Extra labor costs may be incurred to make the switch to new light bulbs or fixtures, but consider if the energy savings from the upgraded, energy efficient lighting will cover labor and installation costs.

10 horsepower electric motor

A 10 horsepower (hp) electric motor is being used 10 hours per week to grind feed. A new replacement motor is estimated to save one kWh of energy during each hour of operation, saving ten kWh each week or 520 kWh annually. Assuming electricity costs $0.10 per kWh, annual cost savings are $52. If replacement cost for a 10 hp motor is $1000 on average, the simple payback is 19.2 years (= $1000/$52). Therefore, if economics are the only factor considered, replacement would most likely be delayed until near the end of the motor's useful life.

Pick-up truck

The existing farm truck has an estimated fuel efficiency of 15 mpg, but a late-model truck gets an estimated 25 mpg and is available for $15,000 plus trade-in. Assuming 18,000 annual mileage, the newer truck would consume 720 gallons (= 18,000/25) of fuel versus 1200 gallons (= 18,000/15) for the existing truck. At fuel prices of $3.00/gal, the extra 480 gallons of fuel conserved equals $1440 annually. The simple payback period is 10.4 years (= $15,000/$1440). However, at increased fuel costs of $4.00/gal, the simple payback is 7.8 years (=$15,000/$1920).

As illustrated, simple payback is helpful for estimating how long it will take to recoup your investment, but it doesn't show a project's profitability. When only energy costs are considered, purchases with a long payback may not pay for themselves until they're nearly worn out. Unless your goal is to quickly recoup invested funds and put them to work again, look beyond the simple payback. Consider the variable cost, total cost, useful life, maintenance and energy savings of a purchase to determine if it's a wise investment.

Proposed regulations recognize uniqueness of LLCs and other pass through entities: passive loss rules relaxed

by Neil E. Harl, Charles F. Curtiss Distinguished Professor in Agriculture and Emeritus Professor of Economics, Iowa State University, Ames, Iowa. Member of the Iowa Bar, 515-294-6354, harl@iastate.edu

The decade-long battle to establish that members of limited liability companies, limited liability partnerships and other pass-through entities are not mirror images of limited partners in a limited partnership for passive activity loss purposes reached a new level on Nov. 28, 2011. On that date, the Department of the Treasury issued proposed regulations agreeing that members of LLCs and LLPs should not be treated the same as limited partners for passive activity loss purposes. That shift in authority is immensely important to members of LLCs and LLPs.

History of the controversy

The Internal Revenue Service (and the Department of the Treasury) started off the controversy in temporary regulations issued in 1988 by defining limited partnerships for passive activity loss purposes narrowly in allowing only three of the seven tests for material participation on a "regular, continuous and substantial basis" to be used for limited partnerships. Those tests were – (1) where the limited partner participates for more than 500 hours; (2) where the limited partner materially participated for five or more of the ten preceding years; or (3) the activity

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is a personal service activity in which the limited partner materially participated for any three preceding years. The other four tests were off-limits for limited partners.

Because of the way limited partnership interests were defined in the temporary regulations, limited liability companies (LLCs) and limited liability partnerships (LLPs) were classified the same as limited partnerships. The temporary regulations defined "limited partnership interest" as an interest ". . . designated a limited partnership interest in the limited partnership agreement or the certificate of limited partnership, regardless of whether the liability of the holder of such interest for obligations of the partnership is limited under the applicable State law, or . . . the liability of the holder of such interest for obligations of the partnership is limited, under the law of the State in which the partnership is organized, to a determinable fixed amount. . . ." Inasmuch as an LLC, for example, is a hybrid entity with the structural features of a corporation but the tax treatment of a partnership, the limited liability aspect of an LLC made the entity subject to the limited partnership rules.

Reaction of the courts

The courts hearing cases challenging the IRS treatment of pass-through entities with limited liability uniformly rejected the classification of LLC members as limited partners. In Gregg v. United States, the District Court held that, in the absence of a specific regulation for LLCs, it was inappropriate for IRS to treat LLC members as limited partners. Nearly a decade later, the Tax Court in Garnett v. Commissioner, applied the "general partner" exception and allowed the LLC members to use any of the seven tests for material participation, not just the three prescribed for limited partners. The same year, 2009, in Thompson v. United States, the court held that the regulation was ". . . .simply inapplicable to membership interests in an LLC." Similar sentiments were voiced in Newell v. Commissioner and Hegarty v. Commissioner.

At the 68th Institute on Federal Taxation at New York University on Oct. 21, 2009, an IRS associate chief counsel stated that "[T]he issues in Garnett and Thompson . . . [are] legitimate and . . . IRS intends eventually to respond with guidance." A year later, at the 69th Institute, the same associate chief counsel stated that ". . . a regulations project is underway that is designed to offer taxpayers the IRS's current thinking on the matter."

The proposed regulations

So what direction did the Department of the Treasury take? On Nov. 28, 2011, the Treasury announced proposed regulations essentially adopting the reasoning of the cases of Gregg, Garnett, Thompson and Newell. The new regulations restrict the definition of "interest in a partnership" as a limited partner to situations in which the limited partner is in an entity in which the limited partnership interest is classified as a partnership for federal income tax purposes and the holder of the interest ". .. does not have rights to manage the entity at all times during the entity's taxable year under the law of the jurisdiction in which the entity is organized and under the governing agreement."

Therefore, LLCs in which the members have the right to participate in management are not to be deemed limited partnerships and the members are not to be treated as limited partners and are eligible to use all seven of the tests for determining material participation on a "regular, continuous and substantial basis," the same as other taxpayers who are not limited to the three which are available to limited partners. Of course, LLC members who are not allowed to participate in management would appear to be confined to the three tests available to limited partners.

Effective date

As to effective date, the proposed regulations state "the regulations are proposed to apply to taxable years beginning on or after the date of publication of the Treasury decision adopting these regulations as final regulations in the Federal Register."

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Risk management in 2012: what does it really mean?

by Kelvin Leibold, extension farm management specialist, 641-648-4850, kleibold@iastate.edu

We put a lot of focus on the topic of "Risk Management" and reducing risk in agriculture but it is often not well defined. Risk management in agriculture is often thought to encompass five general areas. These areas include production risk, marketing Rrisk, financial risk, legal risk and human risk. As we head towards the start of a new production cycle, it is prudent that every business review the potential impact of these different risks and what strategies are being used to manage them. Risks are rarely eliminated; the exposure to the risks may just be shifted to another party.

Production risk

The area of risk that most businesses are familiar with is production risk. The government has done a lot to provide tools to manage yield risk through the subsidization of crop insurance. Production risk includes many other areas such as land base and rental rates. A question you may have to answer is, how will you deal with landlords that die or increasingly higher rental rates? Knowing the answer now can help manage the risk later. Maintaining a land base at a reasonable cost is becoming a greater challenge as more land is owned by out-of-state landlords.

Corn hybrid selection is a good example of how production risk management has increased. Do you manage rootworms with insecticides or biotechnology? How does "green snap" impact the crop insurance I buy? How does "dry down" of various hybrids impact my corn drying costs? The decision on which hybrid you plant impacts several other areas.

Another area of production risk that is getting more attention is the area of machinery costs. Producers seem to be more interested in looking at machinery sharing arrangements. This is driven by the high cost of machinery as well as the new technology that is available. Iowa farmers tend to have higher fixed costs with machinery due to the short length of our growing season. Along with fixed machinery costs, there are operating costs such as fuel and repairs. With higher costs for fuel this summer, it will be an expense many are concerned about. To keep operating costs down, expenses may need to be cut in some areas to make up for the higher fuel prices.

Other areas of production risk might include specialty crops, livestock production, and grain drying, handling and storage. With the unusual winter we have had we are noticing an increase in both grain spoilage and insect damage. Weekly monitoring of grain quality and temperature along with aeration will help reduce the risk of grain losses.

Marketing risk

This leads us into the next area of risk to review and that is marketing risk. Again the government has done a lot to help us manage price risk under the current Farm Bill. We have revenue crop insurance and items such as Loan Deficiency Payments or Marketing Loans are still available though not currently viable with current market prices. The highly subsidized crop insurance products offer a wide array of choices that can make finding the right one time consuming. In addition, marketing has become more difficult as we face significant volatility and potentially very wide swings in prices.

Marketing will continue to be a major factor in the overall profitability of farms. A key starting point is to know what your break-even costs are and look for opportunities to market above those costs. If your break-evens are so high that you have little opportunity to market at a profit it indicates that you have to reanalyze and find what options there are for you. *Decision Tools* and *Information File,*

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A1-20, **Estimated Costs of Crop Production** are available from the Ag Decision Maker website can help you find your breakeven price for different crop rotations.

Financial risk

Financial risk ties back into marketing risk. The areas of financial risk include strategic planning, business planning, financing, credit analysis, record keeping, retirement planning and estate planning to name a few. To begin managing financial risk, start by looking at the trends in your net worth statement. A *Decision Tool* is available to help you in analyzing your net worth statement at: *www.extension.iastate.edu/agdm/wholefarm/xls/c3-21networthanalysis.xls*.

Look at several years of operating profits to see what the trend looks like. How is your "working capital" changing over time and in what direction? This will help you get started looking at some of the strategic planning that every firm needs to set aside time to do. What changes are occurring in the industry and how will they impact you? Think about the changes that you may need to make to keep up with technology and similar operations to remain competitive. *Information File C1-10*, **Iowa Farm Costs and Returns**, includes data from the Iowa Farm Business Association and can serve as a bench mark to compare your financial analysis.

Legal risk

Another area of risk to review is legal risk. This topic ties in with various points of the other areas. Many contracts are signed without the individual obtaining any legal review of the document. In grain marketing, grain is often sold over the phone without even a signature. Misunderstandings can often be avoided down the road by having a written lease contract that has been reviewed by a legal expert, see *Information File C2-01*, **Improving Your Farm Lease Contract**. All the various insurance policies such as life, disability, long term care, medical, liability and property, should also be reviewed. Having good legal expertise is imperative when planning and executing an estate plan. For more on **estate planning**, visit *www.extension.iastate.edu/agdm/wdbusiness.html#evaluating*. Taking a little extra time now could save you time and money in the future.

Human risk

The area of human risk in agriculture is often overlooked, but gaining attention with the increased use of hired labor. How would the operation be impacted if you were injured or disabled? How would the labor and management of the operation be handled? Is the rest of the family knowledgeable about the operation? Do you use hired help? Do you provide training and help in learning new skills? Are you complying with all of the legal requirements? Planning ahead can make dealing with an illness or injury much easier on the individuals and the business that is affected. Find resources on hiring and managing farm labor at: *www.extension.iastate.edu/agdm/wdcostsreturns.html#labor*.

I have touched on just a few of the many issues related to risk management. Many of these are tied together. Hopefully you will spend some time thinking about how these risks impact your business and what you can do to reduce your risk. For more in-depth information visit the following websites.

Ag Decision Maker www.extension.iastate.edu/agdm/ has a multitude of resources for farm and business management decisions, including current outlook, historic prices, lease information, as well as information on beginning the Estate Planning process.

Ag Risk Library, *www.agrisk.umn.edu/Library/Topics.aspx?LIB=AR*, at the University of Minnesota has hundreds of articles from Universities across the U.S. organized by the five risk management areas.

Agricultural Marketing Resource Center, *www.agmrc.org/*, also has a lot of information on alternative crop resources and business risk management.

Updates, continued from page 1

Internet Updates

The following information files and tools have been added or updated on www.extension.iastate.edu/agdm.

Farmland Value Survey (Realtors Land Institute) -- C2-75 (2 pages)

Estate Planning Attorneys: Finding One Who Can Work For You -- C4-61 (3 pages)

Current Profitability

The following tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html.

Corn Profitability -- A1-85

Soybean Profitability -- A1-86

Season Average Price Calculator -- A2-15

Ethanol Profitability -- D1-10

Biodiesel Profitability -- D1-15

Returns for Farrow-to-Finish -- B1-30

Returns for Weaned Pigs -- B1-33

Returns for Steer Calves -- B1-35

Returns for Yearling Steers -- B1-35

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