

# Ag Decision Maker

## A Business Newsletter for Agriculture

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### Five ways to control farm machinery costs in 2016

By William Edwards, Retired Farm Management Extension Specialist

Lower grain and livestock prices decreased farm profits in 2015 and working capital reserves are disappearing. This situation is likely to persist through the upcoming year, so some belt tightening will be in order for many producers.

#### Handbook updates

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

**Historic Hog and Lamb Prices** – B2-10 (5 pages)

**Historic Cattle Prices** – B2-12 (6 pages)

**Lean Hog Basis** – B2-41 (1 page)

**Live Cattle Basis** – B2-42 (1 page)

**Feeder Cattle Basis** – B2-43 (1 page)

Please add these files to your handbook and remove the out-of-date material.

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Machinery and equipment costs are one major area where some adjustments can be made. Data from the Iowa Farm Business Association records show that high profit farms spent only \$152 per acre on machinery costs in 2014 while low profit farms spent \$189 per acre. Likewise, high profit farms had an investment in machinery of \$435 per acre compared to \$592 per acre for low profit farms.

Here are five alternatives for reducing costs during the coming year:

- Lease rather than buy equipment
- Custom hire some work done or do custom work for others
- Own machinery jointly or trade use
- Invest in used equipment
- Own machinery longer

#### Leasing equipment

An operating lease allows producers to use equipment for a period of time, usually 3 to 5 years, for a fixed annual or monthly payment. At the end of the lease period the producer can return the equipment to the dealer or lease company, or exercise a purchase option to acquire it at roughly its fair market value. Lease payments are typically around 18 percent to 23 percent of the new value of a machine, and are often lower than payments on a loan to buy the same machine would be. For example, for a new tractor with a purchase price of \$200,000 the annual lease

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payment might be about \$40,000. If the same tractor were 100 percent financed for 4 years at an interest rate of 6 percent, the payment would be \$57,718 per year, almost \$18,000 more.

Of course, when the lease expires the farmer has no equipment or equity to show for it. Conversely, when a purchase loan is repaid the farmer has full ownership and no more payments until time to trade again. Leasing can be advantageous in times of below average revenue and the payments do not show up as liabilities on the balance sheet. However, the leased equipment cannot be listed as an asset and the payments still create a cash flow obligation.

### Custom hiring

Smaller cash grain operations can lower costs by custom hiring some operations done rather than owning a full line of machinery. Cash costs are known in advance and you pay only for the number of acres actually planted or harvested. Moreover, custom operators often have newer equipment and are more skilled at operating it. Current studies have shown that a cash grain operation needs to harvest about 1,200 acres or more per year for owning a new combine to be cheaper than custom hiring harvesting done. The down side to custom hiring, of course, is some loss of control over when and how work is completed. A balance needs to be struck between economics and convenience.

Farmers with smaller acreages should also consider doing custom work for other operators. Adding more acres lowers fixed costs per acre and adds a low-risk source of income. In the corn belt, cash grain farmers can count on about 25 field days for completing tillage and harvesting each year, and about 30 field days to complete harvesting in the fall. If extra days are available, striking a deal with another operator may benefit everyone.

### Joint ownership

Some of the same advantages from custom hiring can be realized by trading the use of machinery



Saving a little bit of cost here and there will add up over time.

or owning it jointly. For example, one operator may own the combine unit and another may own the harvesting heads and grain cart. It is important to keep good records of who owns which equipment, who provides labor and who pays for fuel and repairs. At the end of the year a rental rate per acre or per hour can be calculated so that each operator pays a fair share of the costs. *Ag Decision Maker File A3-34*, [Joint Machinery Ownership](#), gives some examples of how this can be done.

A more formal arrangement can be created where some or all machinery is owned in common. This allows fuller use of the equipment resulting in lower cost per acre. Operators who have tried joint ownership often find that two or more people working together are much more efficient than each one working independently. They often find that it is possible to own larger and newer machinery with a joint agreement. Examples of how to set up a joint ownership arrangement and allocate costs fairly can be found in *Ag Decision Maker File A3-37*, [Farm Machinery Joint Ventures](#).

If jointly owned machinery is financed through a bank or dealer, it is important that the lender fully understands how the assets are owned and

Five ways to control farm machinery costs in 2016, continued from page 2

who has collateral rights. Leasing rather than owning may be more simple for joint agreements.

### Purchasing used machinery

Limited capital can be stretched and liabilities reduced by investing in used machinery rather than new items. A quick look at some used machinery websites show that a full line of 4-year-old equipment could be assembled for about two-thirds the cost of a new set. Many operators traded machinery in recent years when cash incomes were good, so inventories of used units are higher than usual. Asking prices vary widely, so a little time spent shopping online could produce significant savings. Used machinery carries a higher risk of breakdowns and repair costs, so having the tools, facilities and skills to maintain equipment is important.

### Extending ownership life

Similar to investing in used machinery, keeping machinery longer avoids the high depreciation and interest costs incurred during the first year or two of its useful life. It helps lower the

amount of intermediate debt shown on the farm balance sheet and avoids high down payments for new equipment. This is especially true for machinery that does not have a high level of annual use.

Saving a little bit of cost here and a little bit there will add up over time. Your lender will smile more, and the drain on your working capital won't be as severe.

Here are some other Ag Decision Maker information files that can help analyze machinery management decisions:

File A3-22, [Buying Used Machinery](#)

File A3-28, [Farm Machinery Selection](#)

File A3-33, [Machinery Ownership versus Custom Hire](#)

File A3-30, [Replacement Strategies for Farm Machinery](#)

File A3-35, [Machinery Leasing - Is It for You?](#)



## Extension and Outreach offers one-stop Iowa data resource center

By Sandra Oberbroeckling, Community Relations Specialist, 515-294-3721, [soberbr@iastate.edu](mailto:soberbr@iastate.edu)

Shifting through numerous websites and an immense amount of data to find local information has been a challenge for Iowans. Now, thanks to a new Iowa State University Extension and Outreach data center, anyone with access to the Internet can find, use and visualize information about Iowa with ease.

The ISU Extension and Outreach data center is currently up and running in beta version at <http://indicators.extension.iastate.edu>. It contains U.S. Census Bureau Data – 2010 Decennial Census Data and 2010-2014 American Community Survey Data – and has access to Iowa City Government Finance Data. When the

agencies release new information, it will be automatically updated on the new Iowa State site.

This one-stop shop for descriptive Iowa data organizes information into the categories of housing; population and demographics; households, families, and youth; education; income and poverty; and workforce. Users can view content, test user interfaces and provide comments and recommendations. The site provides easy-to-follow instructions for creating a free account and using the data center.

In addition, anyone with an account can create four types of custom maps — by state, Iowa

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county, Iowa zip code, and ISU Extension and Outreach region — using his or her own data and an Excel spreadsheet template provided on the site. Users will find features and tools being added or updated frequently during development. The project is funded by the Office of the Vice President for Extension and Outreach.

“The data center provides one-stop access to reliable, current data about the people of Iowa,” said Cathann Kress, Iowa State University vice president for extension and outreach.

“We’re positioning our faculty and staff to be the experts on all things Iowa and a better resource for local decision makers. With our people on campus and in every Iowa county responsible for providing education to solve today’s problems and prepare Iowans for the future — having consistently easy access to the most current data is important.”

Data for Decision Makers Reports with specific county, legislative district or extension region data are available from the data center. They

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**Data for Decision Makers - Updated!**  
County Data for Decision Makers reports are updated to reflect the newly released 2014 American Community Survey data.

**Webinar: The Extension and Outreach Indicators Project: What it is, How it Will Help You, and How to Use It**  
Update - Access the archived webinar, user guide, and PowerPoint slides.  
[Read more](#)

**First Time Portal Users!**  
Log in with your ISU Net-ID or register for an account using a non-ISU email. Before viewing Indicators, set up your Geography Settings, found under Account Settings once you are logged in. For more detailed steps follow these [directions](#) to get started using the Indicators Portal.  
Google Chrome, and Mozilla Firefox are the preferred browsers for viewing content on the Indicators Portal. If you aren't seeing content or graphics it is likely due to using Internet Explorer which does not support the new technologies used on this site.

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contain information on population, demographics and socioeconomic data. Decision makers can generate reports on demand that feature the most current data available for their county.

The data center also supports the Iowa Government Finance Initiative, a program created to help city and county governments more easily access analyses of their financial situation. This program is designed to provide local governments with a wide range of products using local finance, economic and demographic data for the previous five years.

The 2015 Annual Fiscal Reports for all 947 Iowa communities are available from the IGFI website. Project faculty and staff are in the process of creating reports for the county level.

The data center is located at <http://indicators.extension.iastate.edu>. Users are encouraged to send feedback, data requests and error reports to <http://indicators.extension.iastate.edu/data-and-feature-request-poll>. Keep up to date on new project features by following the twitter account [@ISUExtensionIP](https://twitter.com/ISUExtensionIP) or clicking on the "Subscribe to our newsletter" link on the site homepage.

## Research briefs from the ISU Department of Economics

### Award recipients

#### Schulz wins CALS award



Lee Schulz, assistant professor, received the Early Achievement Extension and Outreach Award given by the College of Agriculture and Life Sciences.

Since joining the faculty in 2012, Schulz has provided leadership and extension-focused programming on the critical issues facing Iowa's livestock and meat industries, such as animal identification and traceability, market analysis, consumer demand, animal disease economics and risk management.

#### Artz wins Outstanding Service award



Georgeanne Artz, assistant professor, received the College of Agriculture and Life Sciences' Outstanding Service in Student Recruitment and Retention Award.

Artz is an academic adviser for the Agricultural Business Club. Under her guidance the club has continued its string of outstanding club awards. She coaches teams to prepare for academic quiz bowls and fosters undergraduate research that has led to award-winning submissions.

#### Edwards and Jolly to receive award



Emeritus Professors William Edwards and Robert Jolly have been selected to jointly receive the 2016 Faculty/Staff Inspiration Award.

The Faculty/Staff Inspiration Award is partially funded by earnings from the Nancy and Richard Degner Alumni Association Endowment. The Alumni Association established this award in 2011 as a way for former ISU students to recognize current or former ISU faculty or staff members who had a significant influence in their lives as students at ISU.

Edwards and Jolly will be honored and recognized at the ISU Alumni Association Board of Directors' annual meeting and reception held on the evening of May 20 at the ISU Alumni Center.

#### Harl receives honors



Emeritus Professor Neil E. Harl was elected to the Board of Governors, Iowa State University Foundation (a lifetime appointment) on Oct. 2.

On Oct. 11, Harl was honored as an outstanding alumnus at the University of Iowa, Iowa City, at the 150th anniversary of the founding of the University of Iowa College of Law.

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## Department research

### Lade receives grant



Gabriel Lade, assistant professor, has been awarded one of three \$25,000 grants for seed money for the E2e energy efficiency research design competition.

The E2e Project is interested in producing research that contributes to new academic knowledge and that also produces insights on the real-world impacts of energy efficiency policies. [More information](#)

### Nutrient Research Center funds third year of water quality projects



The Iowa Nutrient Research Center has funded 11 new projects related to water quality. The projects address critical needs or gaps in nitrogen and phosphorus research identified in the science assessment that was part of the Iowa Nutrient Reduction Strategy.

The center's director is John Lawrence, the associate dean for Extension and Outreach in Iowa State's College of Agriculture and Life Sciences and director of Agriculture and Natural Resources Extension and Outreach. [More information](#).

### Survey shows farmland value drop



Wendong Zhang, lead researcher of the 2015 Iowa Land Value Survey, released results December 14, 2015, that show the statewide average farmland value fell for the second consecutive year.

Dropping by \$310, the average per acre price for ag land in the 99 Iowa counties is now \$7,633.

[Read more about the survey.](#)

### Kling featured in STORIES article



A story about Catherine Kling's work in natural resource and environmental economics is featured in the latest issue of STORIES magazine, CALS' alumni magazine. The edition focuses on research and extension on soil and water.

[See the story.](#)

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## Internet Updates

The following Information Files and Decision Tools have been updated on [www.extension.iastate.edu/agdm](http://www.extension.iastate.edu/agdm).

Feeder Steer-Heifer Price Spread – B2-45 (1 page)

## Current Profitability

The following tools have been updated on [www.extension.iastate.edu/agdm/info/outlook.html](http://www.extension.iastate.edu/agdm/info/outlook.html).

Corn Profitability – A1-85

Soybean Profitability – A1-86

Iowa Cash Corn and Soybean Prices – A2-11

Season Average Price Calculator – A2-15

Ethanol Profitability – D1-10

Biodiesel Profitability – D1-15

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