



# Ag Decision Maker

## A Business Newsletter for Agriculture

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### Energy agriculture - farmer investment decisions

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Seventh in a series

If I start a value-added agricultural business, will farmers invest in it? This is the uncertainty faced by many farmer entrepreneurs attempting to fund a value-added business. A long-time consultant friend of mine told me, "I can find business opportunities for farmers, but I can't anticipate if they will invest the funds needed to capitalize the business."

To shed light on this topic, the Ag Marketing Resource Center funded a study to survey farmers about their investment decisions. The Iowa Farm Business Association cooperated with us to randomly survey their farmer members. During the spring and summer of 2006, ninety completed surveys were obtained. The information below is based on the results of these surveys.

- Estimated Return on Investment

#### The importance of investment attributes

We attempted to identify various attributes of an investment and determine the importance of these attributes in the farmer's investment decision. Four general investment attributes were analyzed.

1. Location – This attribute focuses on the potential impact of the business on the local community and surrounding farms.
2. Familiarity – This attribute focuses on the farmer's knowledge and comfort level with the business and industry.
3. Control – This attribute focuses on the importance of control of the business by local farmers.
4. Profitability – This attribute focuses on financial return issues.

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#### Handbook updates

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

#### Iowa Farmland Rental Rates 1994-2007 (USDA)

– C2-09 (1 page)

#### Agricultural Measurements and Conversions – C6-84 (4 pages)

#### Energy Measurements and Conversions – C6-86 (6 pages)

Please add these files to your handbook and remove the out-of-date material.

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#### Assessing an investment

The farmer respondents ranked the importance of several factors commonly used to assess a business investment. The farmers considered all of the factors important. But some were more important than others. Management of the business rated the highest. Leadership of the project and product demand followed. Interestingly, the estimated return on equity ranked the lowest. The ranking may indicate a certain amount of investor sophistication. An awareness that the first five factors need to be in place before the return on investment will be realized.

- Management of the Business
- Leadership of the Project
- Demand for the Product
- Financial Strength of the Business
- Access to the Market

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The survey provided descriptive statements for each of the general attributes. The farmers were asked to respond to these by indicating the importance of each statement. The average response of the farmers is shown in Table 1. The respondents reported that all of the attributes were important. However, considerable variation existed among the attributes.

The farmers' past value-added investment decisions provided the following categories. The responses were categorized by farmers who invested in a value-added business and those who did not.

Respondents cited the positive effect on local crop and live-stock prices and the rate of return on investment as the two most important attributes. Improving farm profitability by increasing prices was just as important as the rate of return on the investment in the business. Moreover, combining these two factors with the positive local economic impact of an investment creates a powerful motivation for farmers to invest in local agricultural processing businesses.

The degree of familiarity with the business and its industry was also important. However, familiarity with the business does not necessarily mean an intimate knowledge of the business or the industry. Rather, it indicates a comfort level based on multiple contacts with the business and the industry.

Local control of the business was also important. However, partnering with existing businesses to access expertise and capital ranked slightly higher than local control.

Rate of return on the investment was the most important profitability attribute. Liquidity of the stock also rated very high. Because value-added businesses are usually not publicly traded, finding a buyer for your stock and getting full value for it is often difficult.

Whether the returns are paid in cash or reinvested in the business was not ranked as very important. However, my personal experience indicates that this is becoming a point of contention for farmer investors. When earnings are reinvested in the business and the stock is illiquid, farmer investors feel their investment provides little return, even when the business is doing well.

**Past investment decisions by education**

We asked the respondents about their investments over the last ten years. These results are shown in Table 2. Thirty-nine percent of the respondents reported investing in a value-added business. Much of this investment was probably made in the emerging bio-fuels industry. Fifty-two percent reported investing in their farm business.

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**Table 1. The importance of various investment attributes by investment decision.**

1 = not important, 2 = somewhat important, 3 = important, 4 = very important

	Invested	Didn't invest	All Responses
<b>Location of the value-added business</b>			
· The value of the business to my local community (jobs, economic activity, etc.)	3.08	3.23	3.17
· The opportunity to deliver crops and livestock directly to the processing plant.	3.11	3.48	3.34
· The positive effect on local commodity prices of crops and/ or livestock even if I don't actually deliver to the plant.	3.56	3.57	3.56
<b>Familiarity with the value-added business</b>			
· My familiarity and understanding of the business and its industry.	3.41	3.37	3.38
· Project leaders who are known from their activities in the local community.	3.23	3.19	3.21
<b>Control of the value-added business</b>			
· Farmers own and control the business.	3.11	2.87	2.96
· Farmers partner with existing businesses to access industry expertise and capital.	3.09	3.23	3.18
<b>Profitability of the value-added business</b>			
· Rate of return on my investment.	3.39	3.63	3.54
· Returns paid in cash rather than re-invested in the business.	2.73	3.02	2.91
· Increase in the value of the stock.	3.30	3.27	3.28
· Ease of selling stock (liquidity of stock)	3.24	3.46	3.38

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**Table 2. Investment history of respondents by education**

	Education			All Responses
	High School or less	Community College	Four years or more	
Invested in a value-added business	19%	38%	58%	40%
Expanded or added new enterprise to farming operation	50%	56%	52%	52%
Fixed income investment (CDs, etc.)	48%	81%	64%	62%
Publicly traded investment in food or agribusiness stocks	13%	31%	24%	23%
Publicly traded investment in non-ag. stocks and/or mutual funds	73%	69%	79%	75%

The level of education played an important role in the value-added investment decision. Fifty-eight percent of the respondents with four years or more of college invested in a value-added business. Conversely, only nineteen percent of those with high school or less invested. Education played a smaller role in the other types of investments.

**Choosing among investment opportunities**

The survey asked respondents how they would hypothetically spend an extra \$50,000 among a specified list of investments. They were asked to allocate the money among the investments in Table 3. As expected, the largest investment (37 percent of the funds) was in their farming operation. This was followed closely by traditional investments such as certificates of deposit, stocks, mutual funds, at 35 percent. Value-added business investment ranked third, but commanded a respectable 28 percent of the total investment. So the willingness to invest in value-added ventures is quite good when funds are available.

Of greater interest was how the investment decision changes when respondents are categorized by age. Those under 50 years of age invested about half of their funds in their farm business while those over 60 invested slightly over a quarter

of their funds in their business. These results are consistent with the shorter business planning horizon of older farmers.

The results are similar for value-added business investments. Recipients under fifty invested over one-third of their funds in value-added businesses while those sixty and over invested only 17 percent. This may be caused by the longer time-frame needed to generate returns from start-up businesses versus the immediate potential returns from fixed income and stock market investments.

It may also stem from an investment attribute discussed earlier. Investing in value-added businesses to increase the local demand and price for crops and livestock increases their farm income. Because farmers under fifty years of age have a longer business planning horizon, they can take more advantage of these higher prices.

The change in the type of investment appears to occur at about sixty years of age. This occurs because the investment allocations of aged fifty to fifty nine were much more aligned with those aged less than fifty than those sixty and over.

**Table 3. Allocation of funds across alternative investments by age**

	Age of Operator			All Responses
	Under 50	50-59	60 & over	
Expansion of the farming operation	47%	40%	28%	37%
Fixed income, stock market, etc.	18%	26%	55%	35%
Value-added agricultural businesses	35%	34%	17%	28%
Total	100%	100%	100%	100%



## Shifting corn basis patterns\*

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The ethanol industry continues to reshape Iowa's agricultural economy. By the end of this summer, 28 ethanol plants will have spread across the state, capable of producing over 1.9 billion gallons of ethanol per year. Twenty more plants are being constructed in Iowa, with plans for even more. The tremendous growth of the ethanol industry has put pressure on Iowa corn producers to keep up with this growing demand for corn. Producers have responded by planting 14.3 million acres of corn, the second-largest corn area in Iowa on record. (In 1981, Iowa had 14.4 million acres of corn.) The pull on corn from the ethanol industry, combined with the push from Iowa and U.S. corn producers, has resulted in some dramatic price movements for corn over the past year. As Figure 1 shows, since September of last year, the corn market has experienced a strong run-up in prices and an increase in price variability. The growth in ethanol's demand for corn drove prices up through the harvest period last year and maintained corn prices at around \$4 per bushel over the winter. The acreage response hit the market in two waves, around the USDA acreage reports released in March and June of this year. The prospects for increased corn production have reduced corn futures prices to below \$3.30 per bushel.

For Iowa, the supply, demand, and price shifts have also affected the pattern of corn prices across the state. One way to view these impacts is to examine the basis patterns across Iowa. Basis is the difference between the prices listed on the Chicago Board of Trade (CBOT) futures for corn and the prices being paid in Iowa for corn. Since February 2005, CARD has tracked basis levels across Iowa for corn and soybeans (visit our Web site, [http://www.card.iastate.edu/ag\\_risk\\_tools/basis\\_maps/](http://www.card.iastate.edu/ag_risk_tools/basis_maps/), for the latest information). Figures 2 through 5 show historical basis patterns, based on price data from 1998 to 2005, and the basis patterns over the last year and a half. Figure 2 shows the basis patterns for Webster County, Iowa. Webster County has seen a sizable surge in ethanol production in the county with the opening of new ethanol plants in Fort Dodge and Gowrie. And since January 2006, the basis for Webster County has been above historical levels—sometimes well above. Late last year, Webster County's basis ran 20 cents per bushel above historical levels, and it is currently doing so. The ethanol demand for corn in the county has strengthened the basis situation in the county. Historically, corn prices in Webster County run from 28 to 43 cents per bushel below the CBOT prices. Currently, they are 16 cents below.

This pattern is not specific to Webster County. For many counties, especially those in north central and northwest Iowa, recent basis patterns have been stronger than the

historical averages. Figure 3 shows the basis patterns for Plymouth County in northwest Iowa. Here, local prices for corn have been within 5 cents of the CBOT prices for the last couple of months. Normally, corn prices are 30 to 40 cents per bushel below the CBOT prices.

In Kossuth County, recent basis patterns are 10 to 25 cents above historical averages, as shown in Figure 4. A tighter stock situation for corn and the ethanol boom have strengthened corn prices across a wide swath in Iowa. However, not all Iowa counties have experienced a stronger corn basis. As Figure 5 shows, Clayton County in northeast Iowa has actually had a weaker basis pattern over the last year and a half. Whereas local corn prices are typically 15 to 30 cents per bushel below the CBOT prices, since January 2006, the corn prices have been 30 to 50 cents below CBOT in Clayton County.

Figure 6 displays the typical basis pattern for Iowa corn in July, based on prices from 1998 to 2005. Eastern Iowa tends to have the strongest basis, between 0 and 15 cents below CBOT. North central and western Iowa tend to have the weakest basis, between 35 and 50 cents below CBOT. The current basis pattern is almost the inverse of the historical

Figure 1. Chicago Board of Trade nearby corn futures prices

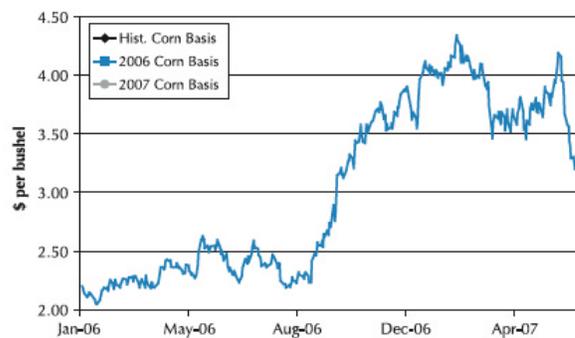
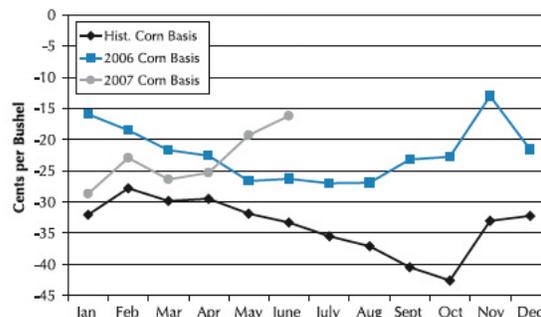


Figure 2. Basis levels for Webster County, Iowa



Shifting corn basis patterns, continued from page 4

pattern. Northwest Iowa has a very strong basis currently, while northeast Iowa's basis is weak, as illustrated in Figure 7. Arguably, the growth of the ethanol industry in Iowa has served to flatten the basis across Iowa, with many of the major corn-producing counties in Iowa seeing an improved basis.

However, the strength in the basis across Iowa is likely to be short lived. With the dramatic shift of acreage to corn, both in Iowa and nationwide, and the relatively good condition of the corn crop (63 percent in good to excellent condition for both Iowa and the United States), possible record corn production will likely soften the basis patterns across Iowa. Iowa would produce a record corn crop if yield is 161 bushels per acre or higher, surpassing the 2004 corn crop when the state average yield was 181 bushels per acre. Above-average yields would lead to record production and would put a strain on corn handling and marketing systems. This sets

up a scenario for weaker basis patterns across Iowa. Figure 8 shows there is already weakness building into basis patterns across Iowa as we look at forward contracting new-crop corn. Where the current basis shows most of the state having corn prices within 35 cents per bushel of the CBOT price, the new-crop basis across Iowa is below 35 cents for almost all of Iowa. Roughly half of the state has a current new-crop basis below 45 cents per bushel.

As the ethanol industry continues to grow and evolve, the corn market will continue to adjust. This is translating into more variable price and basis patterns for Iowa corn producers. We will likely see additional swings in Iowa's basis patterns as more Iowa ethanol plants come online and as Iowa farmers shift acreage to meet various crop demands. Increased volatility looks to be the wave of the future both locally and on the CBOT.

Figure 3. Basis levels for Plymouth County, Iowa

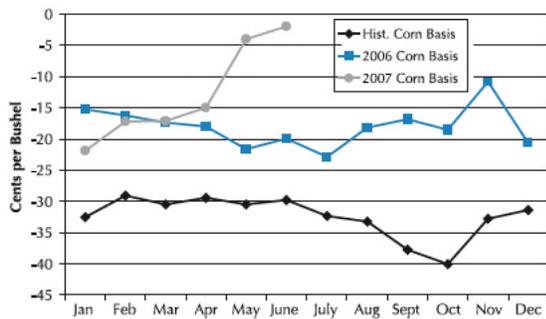


Figure 3. Basis levels for Plymouth County, Iowa

Figure 4. Basis levels for Kossuth County, Iowa

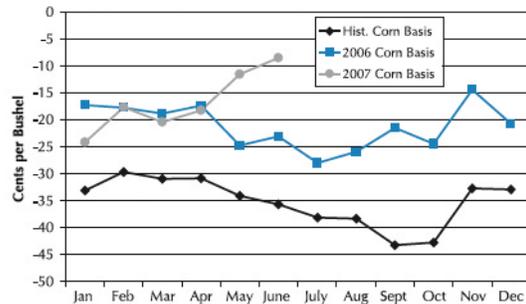


Figure 4. Basis Levels for Kossuth County, Iowa

Figure 5. Basis levels for Clayton County, Iowa

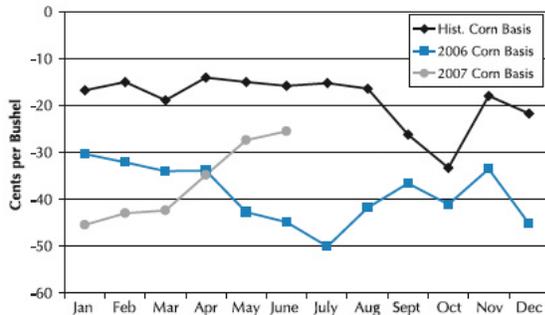


Figure 5. Basis levels for Clayton County, Iowa

Figure 6. Historical basis, average 1998-2003

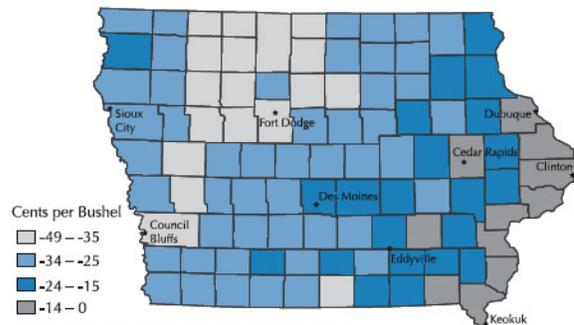


Figure 6. Historical basis, average 1998-2005

Figure 7. Basis for old-crop corn, July 2, 2007

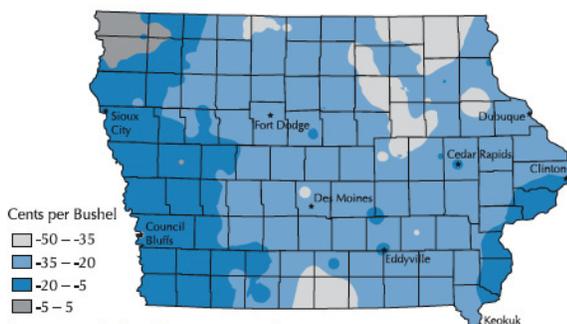


Figure 7. Basis for old-crop corn, July 2, 2007

Figure 8. Basis for new-crop corn, July 2, 2007

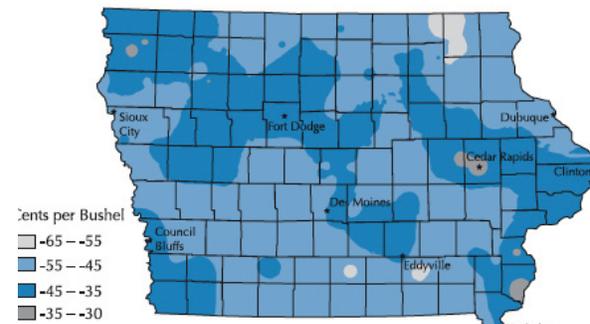


Figure 8. Basis for new-crop corn, July 2, 2007



## Crop insurance and excess moisture

by William Edwards, extension economist, 515-294-6161, [wedwards@iastate.edu](mailto:wedwards@iastate.edu)

Heavy rains, strong winds, flooding, and saturated soil across Iowa have raised questions about crop insurance coverage. Damages from such events are insurable losses under standard multiple peril crop insurance policies, including both APH (actual production history) and revenue policies. They are not covered under most companion policies, which generally address just hail and fire damage. Some add-on policies may have "green-snap" provisions, but that may not apply to downed corn from recent high winds.

Group risk policies such as GRP (group risk plan) and GRIP (group risk income plan) are based on county average yields, so individual crop losses are not relevant. However, it is possible that an entire county could have enough crop damage to bring county average yields down to a level that would trigger an indemnity payment.

Final indemnity payments will be determined by the actual yields submitted to the insurance agent after the crop is

harvested. Remember that potential payments are based on the average yield for the crop on the entire insurance unit (acres insured under a single policy), not isolated areas. For revenue insurance policies, the actual revenue is the product of the actual yield and the fall harvest price. Current December corn futures prices are below the February average of \$4.06 per bushel.

Producers who have experienced severe losses from flooding or wind damage should call their insurance agents so they can view the damage or contact an adjustor. Taking pictures of affected areas will provide documentation for later. If corn is harvested as silage instead of grain, producers should leave a check strip so an adjustor can estimate the grain yield.

Iowa State University Extension has a Web site with presentations and supplemental information on excess moisture and wet field conditions available at: <http://www.extension.iastate.edu/ag/hottopicswetfields.html>.

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#### Internet Updates

The following updates have been added to [www.extension.iastate.edu/agdm](http://www.extension.iastate.edu/agdm).

**Grain Storage Alternatives: An Economic Comparison – A2-35**

**Price Determination for CSA Share Boxes – C5-19**

**Choosing Among Alternative Agricultural Enterprises – C5-152**

**Metric Conversions – C6-80**

#### Voice Media Presentations - NEW

The following voiced presentations have been added to [www.extension.iastate.edu/agdm](http://www.extension.iastate.edu/agdm). This new addition to Ag Decision Maker provides an audio and visual presentation of the information available in the Information File.

**Custom Rate Survey**

**Custom Farming: An Alternative to Leasing**

**Lease Termination and Other Legal Considerations for Lease Contracts**

**Cash Rental Rates**

**Computing a Cropland Cash Rental Rate**

**Flexible Farm Lease Agreements**

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