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## A Business Newsletter for Agriculture



## Grain farming profitability headed down

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As Iowa farmers go to the fields this fall to harvest large corn and soybean crops, they will be facing tight profitability prospects. In general, rising production costs and sliding crop prices are combining to create a profitability situation that farmers have not faced in recent years.

## Corn

The situation is especially acute for corn where increased input costs like nitrogen fertilizer have pushed up the cost of production for the

## Handbook updates

For those of you subscribing to the handbook, the following updates are included.
Custom Farming: An Alternative to Leasing - A3-15 (4 pages)
Seasonal Hog Price Patterns -B2-14 (4 pages)
2008 Iowa Farm Costs and Returns - C1-10 (12 pages)
Iowa Farmland Rental Rates 1994-2009 - C2-09 (1 page) continued on page 6

2009 crop dramatically. Although production cost levels vary dramatically among farmers, it appears that costs for a typical cash rent farmer increased by about 25 percent over last year and about 50 percent over two years ago.

Figure 1 shows the increase in production costs per bushel for a cash rent farmer from the 2005 to the 2009 crop year. The various production cost components are shown to provide a visual perspective of their impact. The cost of production goes up in a stair-step fashion from one crop to the next. Also, production cost increases gradually during the year due to interest accruing on the production costs. The crop year is configured on a marketing year basis starting when the crop is harvested and extending until the following year's harvest (Sept. 1 to Aug. 31.)

Converting corn production costs per acre to costs per bushel allows us to compare the cost per bushel to the price of corn. Figure 2 shows the monthly average corn price in
relationship to the cost of production for each crop. Three farm cost situations are included. These include a farmer who owns all of the land (free of debt), a farmer who rents all of the land and a farmer where some is owned with moderate debt and some is rented.

For the 2005 crop and previous years, the margins were very tight for crop farmers, especially those with large amounts of cash rented land and high debt levels. Starting with the 2006 crop, corn price began to quickly move upward to new historic highs, peaking in the summer of 2008. Corn production costs followed this rise. Since the summer of 2008, corn price has been drifting downward and appears that it will intersect with the cost per bushel for the 2009 crop, resulting in a negative profit margin for many crop farmers.
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## Soybeans

The situation for soybeans appears to be more positive. Figure 3 shows the increase in production costs per bushel for a cash rent farmer from the 2005 to the 2009 crop year. The various production cost components are shown to provide a visual perspective of their impact. Although costs have risen substantially, soybeans have
not been hit by high nitrogen prices.
As with corn, the 2005 crop and previous year, the margins were very tight for crop farmers, especially those with large amounts of cash rented land and high debt levels, as shown in Figure 4. Starting with the 2006 crop, soybean prices began to quickly move upward

Figure 1. Cash Rent Farmer Corn Costs (cost per bu.) (2005 to present)


Crop Marketing Year
(Sept. - Aug.)

Figure 2. Corn Price and Production Costs (costs are net of govt. payments) (2005 crop to present)


Note: The cost breakeven increase for 2006 is from a reduction in government payments due to higher corn prices, not a sudden increase in corn production costs.

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to new historic highs, peaking in the summer of 2008. However, since the summer of 2008, soybean prices have stayed relative strong, dropping last winter but rebounding into this summer. Current soybean prices levels appear to provide a profitable picture for most crop farmers as they begin marketing the 2009 soybean crop.

Changes in "cost per bushel" from year to year may not correspond with changes in "cost per acre" because cost per bushel takes into account changes in yield from year to year (e.g. higher cost per acre may be offset by spreading those costs over more bushels from a higher yield, resulting in lower cost per bushel, and vice versa).

Figure 3. Cash Rent Farmer Soybean Costs (cost per bu.) (2005 to present)


Figure 4. Soybean Price and Production Costs (costs are net of govt. payments) (2005 crop to present)


Note: The cost breakeven increase for 2006 is from a reduction in government payments due to higher corn prices, not a sudden increase in corn production costs.


# Lower prices and higher costs may squeeze cash rents 

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August brings the state fair, the start of school, and sometimes hot, dry weather. It is also the season for renewing farm leases. Although many farmers have rented land from the same owners for a long period of time, the amount of cash rent paid for the land is often adjusted every few years or even annually.

The past few years have seen some wild gyrations in crop prices and input costs. Much of this has been related to volatile energy markets, a world wide recession, and movements in exchange rates of international currency. The end result has been a great deal of uncertainty about what a fair cash rent is for Iowa farmland.

Iowa State University surveys tenants, landowners, farm managers and agribusiness professionals each year to learn the typical cash rental rates in the counties.The table on the next page shows what the average responses have been for various regions in Iowa for the past five years. The impact of sharply higher grain prices since 2007 is obvious. The big question now is, "Has the bubble burst for 2010?"

## Price prospects

Let's look at grain prices first. Many cash rents are set in late summer for the following crop year, so futures market prices being offered for the next year's crop give some indication of potential profits. Keep in mind that the actual cash prices that farmers realize at harvest are typically $\$ .30$ to $\$ .40$ per bushel lower than the futures prices.

The tables on the next page show the average futures prices that were available during the summer months of 2008 and 2009 for the following year's crops at harvest time, using the December contracts for corn and November contracts for soybeans. A year ago the futures markets were offering prices over $\$ 6$ per bushel for corn and $\$ 14$ per bushel for soybeans. It is no wonder that renters were aggressively bidding for more acres.

Since then fuel prices have dropped, which impacts prices offered by biofuel producers, livestock numbers have begun to drop, and grain prices have tumbled.

Subtracting a $\$ .40$ basis from July futures prices leaves only about $\$ 3.40$ for corn and $\$ 8.30$ for soybeans in 2010. Even with relatively good production prospects for the 2009 crops, gross income and profits will be lower this year than for the 2008 crop, and prospects for 2010 are less than rosy. For expected yields of 170 bushels for corn and 50 bushels for soybeans, plus $\$ 20$ for direct payments, gross revenue would be about $\$ 598$ for corn and $\$ 435$ for soybeans.

## Input costs

Are there bright spots? Costs for the major crop inputs, at least those related to energy, will likely be lower in 2010. The big shock for 2009 was nitrogen fertilizer, especially anhydrous ammonia. Some producers paid over $\$ 1,000$ per ton for it last fall, but prices varied dramatically depending on when and where the product was purchased. Since then nitrogen prices have decreased to more traditional levels, and prices for diesel fuel and LP gas for drying corn are actually lower than a year ago. Costs for seed and pesticides will likely continue to gradually increase, though it is too early for firm estimates. The table shows some typical production costs for 2009 and some guesses for 2010. Even if production costs are lower in 2010, the estimated decreases of $\$ 57$ per acre for corn and $\$ 16$ per acre for soybeans will not offset expected lower revenues. Subtracting the estimated nonland costs from the estimated gross revenues per acre would leave only $\$ 174$ per acre for corn and $\$ 164$ per acre for soybeans for rent and profit.

## Safety nets

For the 2008 crop many producers received checks from their crop insurance companies, due mostly to a large price decrease from February, when insurance coverages were established, to harvest. The initial prices used to set guarantees for revenue insurance in 2009 were quite a bit lower though, $\$ 4.04$ for corn and $\$ 8.80$ for soybeans. Assuming producers purchased coverage at 75 percent of expected revenue (the most popular level), and obtain average yields, the effective price guarantees at harvest are $\$ 3.03$ and $\$ 6.60$ per bushel. Since crop insurance is based on futures prices,
a typical basis value would have to be subtracted to arrive at a local price.

The new ACRE program from the U.S. Department of Agriculture will add another safety net for grain farmers. The state level revenue guarantees for the 2009 crop under ACRE should be about $\$ 635$ per acre for corn and about $\$ 457$ for soybeans. This translates to price guarantees of about $\$ 3.65$ for corn and $\$ 9.12$ for soybeans, with average yields. Guarantees can drop no more than 10 percent for the 2010 crop, which would result in price guarantees of at least $\$ 3.28$ and $\$ 8.21$, depending on actual yields for this year and next. These are about in line with current futures prices for fall of 2010, adjusted for basis.

Tenants and landowners need to put together these potential prices, expected yields for their own farms, and possible costs of production to estimate how much income is available for cash rents for 2010. Don't forget to add in direct payments from FSA, which will be 20 percent lower if the farm is enrolled in ACRE. The worksheets available under "Leasing" on the Ag Decision Maker website (www.extension.iastate.edu/agdm) are useful for this.

If a flexible or variable cash lease agreement is already in place, rents will automatically reflect most of these factors. For fixed rents, though, adjustments will need to be made for current and future conditions.

| December Corn Futures Prices, Monthly Averages, \$ per bushel |  |  |  |
| :--- | :---: | :---: | :---: |
| Calendar | $\begin{array}{c}\text { December 2009 Contract } \\ \text { Price During 2008 }\end{array}$ | $\begin{array}{c}\text { December 2010 Contract } \\ \text { Month }\end{array}$ | $\$ 6.00$ | $\left.\begin{array}{c}\text { Price During 2009 }\end{array}\right]$


| November Soybean Futures Prices, Monthly Averages, \$ per bushel |  |  |  |
| :--- | :---: | :---: | :---: |
| Calendar | November 2009 Contract <br> Price During 2008 | November 2010 Contract <br> Price During 2009 | Price <br> Donth |
| Day | $\$ 13.20$ | $\$ 9.50$ | $\$ 3.70$ |
| June | $\$ 14.50$ | $\$ 9.60$ | $\$ 4.90$ |
| July | $\$ 14.00$ | $\$ 8.70$ | $\$ 5.30$ |

Potential Production Costs for Corn and Soybeans (example)

|  | Corn (after corn) |  | Soybeans |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\underline{2009}$ | $\underline{2010}$ | $\underline{\mathbf{2 0 0 9}}$ | $\underline{2010}$ |
| Seed | $\$ 94$ | 100 | 54 | 57 |
| Fertilizer | 170 | 127 | 97 | 87 |
| Pesticides | 38 | 38 | 22 | 25 |
| Insurance, interest, misc. | 43 | 39 | 31 | 28 |
| Machinery, drying, labor | $\underline{136}$ | $\underline{120}$ | $\underline{83}$ | $\underline{74}$ |
| Total nonland costs | $\$ 481$ | $\$ 424$ | $\mathbf{\$ 2 8 7}$ | $\mathbf{\$ 2 7 1}$ |


| Overall Average of Typical Cash Rents for Row Crop Land in Iowa |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
|  | 2005 | 2006 | 2007 | 2008 | 2009 |
| Area 1 | $\$ 134$ | $\$ 135$ | $\$ 150$ | $\$ 174$ | $\$ 186$ |
| Area 2 | 136 | 137 | 150 | 180 | 201 |
| Area 3 | 135 | 139 | 155 | 182 | 194 |
| Area 4 | 131 | 135 | 144 | 174 | 173 |
| Area 5 | 139 | 143 | 153 | 185 | 198 |
| Area 6 | 138 | 139 | 149 | 173 | 189 |
| Area 7 | 146 | 144 | 156 | 190 | 198 |
| Area 8 | 148 | 147 | 164 | 188 | 192 |
| Area 9 | 155 | 161 | 172 | 198 | 198 |
| Area 10 | 122 | 121 | 135 | 160 | 169 |
| Area 11 | 115 | 118 | 129 | 159 | 147 |
| Area 12 | 124 | 124 | 144 | 160 | 169 |
| State | $\$ 135$ | $\$ 137$ | $\$ 150$ | $\$ 177$ | $\$ 185$ |

Updates, continued from page 1
Please add these files to your handbook and remove the out-of-date material.

## Internet Updates

The following updates have been added on www.extension.iastate.edu/agdm.
Natural Resources Custom Rate Survey - A3-11 (2 pages)
Machinery Leasing - Is it for you? - A3-35 (2 pages)
Farm Machinery Joint Ventures - A3-37 (4 pages)
Do I Need a Written Lease ? - C2-03 (2 pages)
Introduction to Governance - C5-70 (2 pages)
The Role of the Board of Directors - C5-71 (3 pages)

## Current Profitability

The following profitability tools have been updated on www.extension.iastate.edu/agdm/info/outlook.html to reflect current price data.
Corn Profitability - A1-85 Returns for Farrow-to-Finish - B1-30
Soybean Profitability - A1-86
Returns for Weaned Pigs - B1-33
Ethanol Profitability - D1-10
Biodiesel Profitability - D1-15
Returns for Steer Calves - B1-35
Returns for Yearling Steers - B1-35

[^0] 20250-9410 or call 202-720-5964.
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