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Booming commodities: How long will it last?

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Who would have thought that we would once again see $3 corn and $10 soybeans? Iowa farmers have not seen such price strength since 1996 for corn and 1974 for soybeans. At the same time, Iowa hog prices have strengthened in recent months; egg prices have more than doubled in the last two years; and cattle prices would be at record highs if U.S. export markets had not closed down as a result of the mad cow disease scare. Even so, cattle prices have hovered around $85.

Across the board, Iowa farmers are enjoying the benefits of a commodity boom. As farmers, processors, and input suppliers adjust to this new reality of higher commodity prices, some key questions arise: Could prices go higher? How long will this price strength last? Will the rest of this decade resemble the 1970s, with high inflation rates and skyrocketing interest rates, rather than the 1990s? Of course, nobody is certain of the answers (or we'd see more people leading lives of leisure and luxury through a few well-placed trades), but some insights can be obtained by examining the economic fundamentals that we are facing today.

I focus here on corn and soybeans, because over time, changes in feed prices are the primary determinants of what happens to livestock prices. Cheap feed translates into expanded supplies and lower prices. Expensive feed eventually translates into a drop in supplies and higher prices.

Why high prices now?

Figure 1 puts the recent price strength into a historical perspective. As shown, corn and soybean prices have been moving higher since about 2000, with the sharpest increase occurring after the 2003 harvest. An examination of why we have these higher prices now will help us judge whether they will continue or

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Handbook Updates

For those of you subscribing to the *Ag Decision Maker Handbook*, the following updates are included.

2004 Corn and Soybean Loan Rates – File A1-34 (2 pages)

2004 Farmland Cash Rental Rates – File C2-10 (13 pages)

Please add these files to your handbook and remove the out-of-date material.

Inside . . .

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whether we will soon be back to the situation that existed in the late 1990s.

Soybeans

U.S. soybean prices have doubled in the last two years and are up by about 70 percent in the last year alone. There are a number of factors underpinning strong soybean prices. The first factor is that the U.S. soybean crop in 2003 was the lowest it has been since 1996, down 16 percent from its peak in 2001. With less production, prices move higher. Under reasonable assumptions, the decrease in U.S. production has led to perhaps a 20 percent price increase, holding demand constant. But demand has been growing.

Large U.S. and South American soybean crops in recent years have led to increased use, both domestically and internationally. Just as it takes time to build up use rates, once they are built up, it takes time to adjust use downward in response to higher prices. Export demand has also been enhanced somewhat by a weaker U.S. dollar, which effectively decreases the price of U.S. products in foreign markets. Strong demand growth possibly accounts for another 15 percent price increase.

Much of the increase in world demand for soybeans and soybean products since 1990 has been filled by Brazil. As shown in Figure 2, Brazil has about tripled its production since 1990. The world has come to expect dramatically increasing soybean production from Brazil, and until this year, Brazilian crops have grown faster than expected. However, the crop that was just harvested was a disappointment. Planted acreage increased by 13 percent in Brazil in 2003 but production was flat, which implies that yield decreased below trend yields by about 13 percent.

Thus, world markets have had to contend with sharply lower-than-expected production in both Brazil and the United States. The Brazilian shortage accounts for perhaps another 15 to 20 percent price increase.

Therefore, the higher U.S. soybean prices are accounted for by strong demand combined with short crops in South and North America, as well as a weaker dollar. So we would need for these factors to continue in order to see continued high soybean prices.

USDA reports that U.S. farmers expect to plant 75.4 million acres of soybeans this year. At a trend yield of 39 bushels per planted acre, U.S. production in 2004 would be about 2.94 billion bushels, or 21.5 percent higher than the 2003 crop. Brazilian soybean production is projected to increase by about 23 percent if their next crop achieves trend yield. Production in Argentina is expected to increase also, by about 10 percent. Given that the United States and South America are by far the largest soybean

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producers in the world, a return to trend yields will result in a fairly large drop in soybean prices beginning with the U.S. harvest in late August. In addition, current strong soybean prices imply that countries that produce competing oils (palm, sunflower, peanut, and rapeseed) have an incentive to expand production. If decent growing conditions return, we should see a 25 to 40 percent decline in soybean prices next year, assuming that the dollar stays at about the same level of exchange.

Of course, if we have another short crop, then we will see prices climb even higher than those that we see today. The 2003 U.S. soybean crop was about as short a soybean crop as could be expected. A repeat of this crop would mean production of about 2.4 billion bushels. This type of crop would send prices sharply higher next fall and winter, as the world waits for news about the South American crop.

Corn

Corn prices have been slowly rising since August of 2000. As shown in Figure 3, this change in price direction coincides markedly with the beginning of a decline in the world stocks-to-use ratio of corn. A decline in this ratio is perhaps the best indicator that demand growth is outpacing supply growth. By itself, a moderate decline in the stocks-to-use ratio does not signal higher prices, but a decline does signal an increase in the potential for sharply higher prices if either supply unexpectedly decreases or demand unexpectedly increases.

By almost all measures, world corn supplies are plentiful. Total world production in 2003 was almost equal to an all-time high. U.S. corn production was its highest ever. This suggests that unexpectedly strong demand must be the reason for the strong prices.

The weaker U.S. dollar has increased demand for U.S. corn exports. This increase in demand shows up as an increase in U.S. corn prices. The other source of demand growth is the increased growth of U.S. ethanol plants. In January 2001, there were approximately 2 billion gallons of ethanol capacity either in operation or under construction in the United States. There is now 3.7 billion gallons of capacity. This added capacity represents approximately 620 million bushels of corn, or about 6 percent of the U.S. corn crop. And finally, there has been some demand growth that occurred in response to higher soybean prices, as producers adjusted their feed rations.

USDA projects that U.S. corn farmers will plant about 78 million acres in 2004. This represents another 10-billion-bushel corn crop at the trend yield. There is no reason to believe that demand growth will slow substantially, which suggests that the likelihood of a large price drop is significantly lower for corn than for soybeans. Ideal growing conditions could result in an 11-billion-bushel crop. This is the size of crop that we would have to see if we expect to see a dramatic decrease in corn prices.

The stocks-to-use ratio for corn is projected to decline to about 10 percent at the end of this marketing year. This suggests that if we have a repeat of 1988 or 1993, then corn production could decline by 20 percent or more. This would likely raise corn prices by at least 40 percent above the levels that we see today.
Current market conditions indicate that corn prices are much more likely to remain at current levels than are soybean prices. Strong demand for corn from both domestic and international sources and a shrinking stocks-to-use ratio suggests that it will take a fairly large corn and feed grain crop to cause a substantial drop in price. In the case of soybeans, a return to trend yields should result in a sharp drop in price.

Policy implications

Current federal commodity policy is designed to compensate crop farmers for low prices. Corn and soybean farmers will not receive a countercyclical payment for their 2003 crop, and few, if any, received a loan deficiency payment last fall. However, Iowa farmers will receive their direct payments because these arrive regardless of yields or prices. These

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payments will total about $512 million for Iowa farmers for their 2003 crop.

Recall that there were two justifications for moving toward decoupled payments with the 1996 farm bill. As their original name implies, Agricultural Market Transition Act (AMTA) payments were advertised as payments that would transition farmers away from government assistance toward reliance on markets. The second justification was that decoupled payments are not counted as being trade distorting under World Trade Organization (WTO) rules. Do either of these justifications hold today?

The large increase in federal assistance in the late 1990s and passage of the 2002 farm bill reveals that Congress has no intention of transitioning farmers away from government assistance. The name change in the decoupled payments from *transition* payments to *direct* payments perhaps is the best indicator of congressional intentions.

However, the WTO justification is just as valid today as ever. The European Union (EU) is moving ever faster toward use of decoupled payments as its main means of supporting farm incomes. In some areas, these payments are facilitating the consolidation of farms into more economically viable units that can make profits with lower government-guaranteed prices.

Clearly, decoupled payments will play a central role if a new WTO agreement is to be successfully negotiated. Such payments give farmers the incentive to look to the marketplace for cues about what to plant and how to grow their crops. Thus they serve to defuse the arguments that have been used successfully by developing countries and other exporters that high U.S. and EU domestic subsidies cause overproduction and lower world prices.

A potential downside of decoupled payments, however, is that they are difficult to justify when prices are good and farm income is high. How can it be equitable that Iowa farmers will receive $512 million from the government even though farm income is high? Such questions should be anticipated as Congress and the administration struggle to balance the federal books in the coming years.

Meals and lodging: Not deductible for non-employees

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Four cases, decided on November 25, 2003, have re-emphasized the importance of being able to prove employee status if attempting to claim deductions for employee benefits. The four cases all involved meals and lodging as well as medical expense deductibility but the basic message extends to all employee benefits.

Tax Court cases

In the first of the cases, *Weeldreyer v. Commissioner*, the taxpayers had formed Dreyer Farms, Inc. and conveyed all of the taxpayer's farmland (including the farmhouse) to the newly-formed corporation with the corporation assuming the mortgage on the property. The taxpayers (husband and wife) owned all of the stock in the corporation. The corporation adopted a medical reimbursement plan and also paid the premiums on a health insurance policy covering the taxpayers and their children. The corporation adopted a resolution requiring all officers and employees "…to live at the worksite of the corporation to ensure security for the corporation property and operation…[and] to supervise the care and feeding of the livestock of the corporation."

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The corporation proceeded to lease the farmland to the taxpayers under a 40:60 "share-crop" arrangement with 40 percent of the crop revenue going to the corporation as landlord and 60 percent to the taxpayers as tenants. The corporation paid for the food consumed by the taxpayers and their children; utilities, repairs and maintenance on the farmstead; and the costs of telephone service. The husband (Weeldreyer) was paid $750 per year as a corporate officer/employee in two of the years in question and $1,000 per year for the third year.

The Internal Revenue Service disallowed the deductions for medical costs, utilities, telephone and food as well as depreciation on the farmhouse and treated the amounts as constructive dividends to the taxpayers as shareholders of the corporation. The taxpayers argued that the medical costs were deductible to the corporation and excludible to the employee and that the food and lodging expenses were employer-provided "meals and lodging" under I.R.C. § 119 and were deductible by the corporation and excludible from income by the employee.

The Tax Court concluded that the medical expenses were deductible to the corporation as a plan for employees and excludible from the employer's income. However, because the taxpayer farmed the land in question as a tenant and not as a corporate employee, the food and lodging were not furnished to a corporate employee "for the convenience of the employer" so the meals and lodging were not eligible for deductibility to the corporation as employer and for excludability on the part of the tenant. The Tax Court also disallowed the deductions for repair, maintenance, remodeling and landscaping of the farmhouse. The Tax Court also disallowed the claimed deductions for utilities and telephone expenses but allowed a deduction for depreciation on the farmhouse. The amounts involved, other than for medical costs, were taxable to the individual taxpayer. The portion of the rent attributable to the farmhouse was includible in the taxpayer's income.

Interestingly, the Tax Court imposed the accuracy-related penalty although that penalty is rarely imposed if the taxpayers rely on the advice of an independent, competent professional tax advisor. The attorney who set up the business plan also represented the taxpayers in the Tax Court proceeding but the taxpayers did not claim reliance on their attorney or other tax professional.

The second case, *Schmidt v. Commissioner*, involved facts similar to *Weeldreyer v. Commissioner* except that the taxpayer agreed to pay $6,000 per year for the use of the building site and improvements; the corporation leased the farmland to the taxpayer and received all of the crop proceeds and government payments. The outcome was the same as in *Weeldreyer*.

In the third decision, *Tschetter v. Commissioner*, the common stock of the newly-formed corporation was owned by the taxpayer and the taxpayer's mother. The land, initially owned by the individual taxpayer was conveyed to the corporation and leased back for 30 percent of the calf crop and 40 percent of the crop produced. The taxpayer's compensation from the corporation was $400 in the first year in question, $1,000 in the second year and $2,000 in the third year. Again, the outcome was similar to the outcome in the other two cases.

In the fourth case, *Waterfall Farms, Inc. v. Commissioner*, the individual taxpayers owned all of the stock of their newly-formed corporation with the corporation leasing the farmland back to the taxpayers under a "share-crop" arrangement with the individual taxpayer making a cash payment in two of the years in question as well as giving the corporation as lessor a portion of the crop. Again, the outcome was similar to the outcome in the other three cases.

The message of the cases

It is clear that deductions based on employee status of the recipient are not claimable if paid to a farm tenant for services even though the same individual may be a corporate officer. The fact situations in the four cases could have been structured in such a way as to have assured employee status. That was not done.

Short-term price spikes often have long-term consequences

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While it is important to look at the factors driving the current high prices in the soybean market, it is also important to look at the impact of those higher prices.

In the short-run, higher prices are beneficial to all producers. For those whose soybean yields were below average, the higher prices go a long ways toward compensating for the reduced harvest, unless of course there was nothing to harvest. After several years of prices in the cellar, it's nice to see something above the cost of production.

The high prices have generated a positive response among farmers who indicate that they will plant an additional 2 million acres of soybeans. The largest increase in soybean plantings is expected to come from North Dakota, Louisiana, Mississippi, and Minnesota as farmers arbitrage their acreage to maximize expected net farm income. As in most years, the mix of crops will shift some, but the impact on total crop acreage in the United States will likely be small.

More foreboding than domestic adjustments will be the international response to the current high prices. The high prices are likely to induce changes among both importers and exporters of grains and seeds.

These prices undoubtedly will encourage soybean exporters like Brazil to focus more resources on soybean production. Even when faced with several years of low prices, Brazil did not slow down its expansion of soybean production. On average, over the last 14 years Brazil has increased its soybean acreage by about a million acres a year. If the current high prices continue for any length of time, they may accelerate that trend. And once these acres are in production they will remain in production, even in the face of lower prices.

Importers will undoubtedly respond as well. Given the fact that food for many nations is a matter of national security akin to military security in the U.S., it would not be surprising to see them intensify their natural tendency to produce as much locally as possible, as a means of feeding their populace and reducing the outflow of currency.

An examination of crop prices over the long-term reminds us that this peak will not last for long and when it ends, the drop will probably be rather steep. And what will things look like then? Production will have increased in response to this price spurt, bringing additional resources into production, and once they are in they will remain for a long time.

Five years from now we will probably be in worse shape for this price spike, than if it had never happened.