

# Economic and Market Outlook for 2008

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## Introduction

United States agriculture is amidst the most significant transformation since the move from horses to tractors. Agriculture will now produce food AND fuel as it did when we farmed with horses and heated homes with wood. The U.S. is not alone in its energy policy that encourages, and even mandates, the use of renewable energy. At least 40 other countries are pursuing biofuel production. Disastrous world wheat production in 2007, growing food and feed demand globally, and the new demand as petroleum substitutes have driven grains and oilseeds prices to record levels. These higher prices will encourage increased production around the world but not before driving up costs to livestock producers.

The excitement and optimism in crop production is not shared by livestock producers. Feed costs are the largest single input for animal agriculture and feed costs have increased dramatically compared to the previous five year average. Omaha corn prices averaged \$2.09/bu for the 2001-2006 crop marketing years, compared to \$3.97 for the first six months of the current marketing year. Corn prices were \$5.37 in mid-March. Higher corn prices a year ago shifted acres away from soybeans and cotton and now all crops including forage and pasture are fighting for acres and the ammunition is price.

The beef industry finds itself in an interesting dilemma with increasing ethanol production. Feedlot cattle can utilize distillers grains and solubles (DGS), the coproduct of ethanol production, better than dairy and monogastrics. However, the higher corn prices have resulted in higher prices for DGS as livestock and poultry producers search for alternative feedstuffs. In the end, cost of gain is higher for feedlots limiting what they can afford to pay for feeder cattle. At the same time, competition from crop production or for

grazing acres has pushed the cost of range, pasture, and forage production higher. Beef cow herds are feeling the squeeze and are expected to further reduce beef cow inventories.

The smaller calf crops of the future are following feedlot expansion in the Plains and current expansion near ethanol plants. The U.S. entered 2008 with record cattle on feed inventories. Besides fewer calves born, feedlots will want to place heavier cattle to reduce corn feeding and the number of days on feed. As a result there is excess feedlot capacity. There is also excess packer capacity that is already declining and could drop further. The reduction in beef supplies will be tempered by heavier carcasses as feedlots place heavier cattle which lead to heavier carcasses and, as we have for many years, use technology to get more beef per carcass.

The demand side is also currently under pressure but holds longer term promise. The weaker economy has hurt beef sales more than pork or poultry. Beef is the more expensive meat and is on more restaurant menus than pork and perhaps chicken. With a weaker economy and higher gas prices, consumers are looking for a cheaper item in the center of the plate. Restaurant sales have been slower for a year or more. Hamburger sales may benefit under this scenario, but middle meats suffer. Retailers are featuring cheaper cuts and at times Select rather than Choice beef. As a result, Choice boxed beef prices have not been able to hold \$150/cwt since mid-2007.

Thus, the long term outlook is for smaller supplies of beef and rising fed cattle prices. The higher cost of gain will limit what feedlots can pay for calves, but excess bunk space will cause feedlots to pay all they can. Look for steady to lower calf prices ahead and rising cowherd costs driven by higher forage and land prices.

## Energy Policy and Implications

The December 2007 Energy Bill set a higher renewable fuel standard (RFS) for conventional, corn-based ethanol and other biofuels. The target for corn-based ethanol in 2008 is 9 billion gallons per year (bgy). Corn based ethanol production under the RFS is set to ramp up to 15 bgy by 2022. The Renewable Fuels Association (RFA) estimates that the U.S. is producing at an annual rate of 7.2 bgy in early 2008 and there is another 6.2 bgy under construction. Thus, we are approaching the 2022 mandate 10 years ahead of schedule. Plant efficiency is improving from 2.65 gallons of ethanol per bushel of corn for older plants to around 3.0 gallon/bushel for new ones. At the current levels, moving from 7.2 bgy in January to the mandated 9 bgy for 2008 is expected to use 3.2 billion bushels of corn from the 2007 crop. The 13.4 bgy operating and under construction in 2008 will use approximately 4.7 billion bushels of corn when operational. The 2007 corn crop was a record at 13.1 billion bushels.

The Energy Bill also begins to incorporate biofuels from other feedstocks, including biodiesel, cellulosic biofuels and “additional advanced biofuels,” with the goal of having 36 bgy of biofuels by the year 2022. By that time, it anticipates the production of cellulosic biofuel will equal production of corn based ethanol. With the exception of cellulosic ethanol from waste streams (yard waste, pulp mills), the feedstocks will compete with existing crops and pastures for land.

Something that is often overlooked in the food versus fuel debate is that the price of fuel, or at least crude oil, has increased dramatically in recent years. From January 2002 to January 2008, crude oil prices increased from \$20/barrel to more than \$80 – and at times, more than \$100/barrel. The higher oil prices have supported the growth of ethanol even without government mandates. Higher oil prices have also increased freight rates for moving feeder cattle and feed to feedlots and fed cattle to packers. For example, the rail freight charge for shipping corn from Omaha to Amarillo increased 120% from June 2003 to October 2007. Although corn prices increased in the Midwest, they increased even more in grain importing regions. The cost of shipping feeder cattle has increased from less than \$2 to over \$3 per loaded

mile or by \$2/cwt on a 1,000 mile haul.

## Implications for Prices and Inventories

U.S. agriculture has seen a significant increase in grain prices before. Most recently was the early 1970s that resulted in higher price levels throughout agriculture. Like the 1970s, it appears that agricultural prices have moved to a “new plateau.” Corn prices increased from \$1.08/bu for the 1971-72 crop year to \$3.02 for the 1974-75 crop year, nearly a \$2/bu increase. Corn acreage increased from 66.9 million in 1971 to 84.5 million in 1976 – an increase of 17.6 million acres. Beef cow inventories peaked in January 1975 at 45.7 million and declined to 37.1 million by January 1979, a decrease of 8.65 million head. While the U.S. will not likely lose 8 million more beef cows in the near future, the \$2/bu corn price increase between 2005-06 and 2007-08 crop years has triggered more corn production – the largest planted acreage since 1944 – and a shift from pasture to plow in many states.

The Cornbelt (Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Ohio) and selected states bordering the Cornbelt (Nebraska, South Dakota, Tennessee, and Kentucky) accounted for all but about 5,000 head of the decrease in the U.S. beef cow inventory and 57% of the decrease in beef heifers between January 2007 and 2008. Some of the herd decrease may be weather related, but corn acreage in these states increased by more than 10 million acres in 2007 while soybean acres decreased by less than 9 million acres. Pasture and hay acres were among the land changes made. Whether the competition for pasture and grazing is from crops, yearlings, or cellulose feedstock, the demand for forage is pushing cow-habitat prices higher. Thus, beef-cow herds are facing cheaper calves and higher forage costs in the years ahead. Given the age of the operator and ethanol economics, the U.S. calf crop – the smallest in more than 55 years – is expected to continue its decline.

The packing industry has been consolidating for several years and while the March announcement by JBS/Swift to buy National and Smithfield was a surprise, it is also a continuation of consolidation. Commercial cattle slaughter was 36.6 million in 1996

and decreased to 32.4 million in 2005. There have been several fed cattle slaughter plants close during this time:

Conagra/Swift	Des Moines, IA	April 1996
IBP/Tyson	Luverne, MN	March 1998
Hospers Beef	Hospers, IA	May 1998
Beef America	Norfolk, NE	July 1998
Conagra/Swift	Garden City, KS	December 2000
Tyson	West Point, NE	February 2004
Iowa Quality Beef	Tama, IA	August 2004
Swift	Nampa, ID	August 2005
Tyson	Boise, ID	August 2006
Tyson	Emporia, KS	February 2008

With a shrinking North American cowherd there will likely be additional plant closings in the months and years ahead. If the JBS/Swift purchase is approved, they would be the largest beef packer in the U.S. and they are already the largest in the world. The company's estimated U.S. capacity would be over 42,000 per day. Excel is second largest, and Tyson, once the largest, is now third.

While the long term forecast is for smaller cattle supplies, the outlook for 2008 is for steady to larger beef supplies thanks to record cattle on feed and increased cow slaughter. Total red meat and poultry supplies are forecast to increase 2.6% from 2007 levels. Milk and egg production are also expected to increase this year. Thus, the higher feed costs have not discouraged production yet.

The other source of supply in the U.S. is imports of beef and cattle. The current weaker U.S. dollar makes it easier to export, and more costly to import. Beef imports are expected to be slightly higher than 2007 levels and approximately double the tonnage of the U.S. exports. Live cattle imports will depend in part on what is happening in Canada and Mexico. The inventory of calves under one year of age in Canada is down 1%. The number of beef cows is down 0.7% but the number of beef heifers is up 1%. USDA estimates that the Mexican cattle inventory is unchanged from the year before. Imports of Mexican feeder cattle will depend largely on grazing conditions in Mexico and demand for feeder cattle in the U.S.

## Beef Demand Factors

Beef demand grew steadily between 1998 and the peak of the Low-Carb Craze in 2004. Its growth has stopped and may be retreating according to the Demand Index maintained by Kansas State University. The recent slowdown in the U.S. economy has hit beef demand more than pork or poultry. There is also more pork and poultry on the market. Domestic pork production posted year-over-year increases of 10% in the fourth quarter of 2007 and will be up 8% or more in the first quarter of 2008. Poultry production increased 3% or more in recent quarters. Cost conscious shoppers have cheaper alternatives at the meat counter. Restaurants have had reduced sales over all. Beef is often a feature item on these menus.

Beef exports continue to slowly rebuild from the closed borders in late 2003. At that time, analysts that predicted it would be 2008 before we returned to 2003 levels were considered heretics, but today they look like optimists. Exports to Mexico and Canada have returned to pre-BSE levels. Exports to Japan grew steadily throughout 2007 and early 2008. Exports to South Korea are more sporadic, but are increasing. These important Asian markets have a ways to go to regain the lost exports.

## Emerging Issues

Iowa State University recently hosted a Food Chain Summit that brought together retailers, processors, and farmers in the same room to discuss issues that impact them all. The discussion was focused on two topics: food safety (from farm to fork) and animal welfare. A few take-home messages became clearer during the discussion that has implications for cattle producers and the long-term outlook for the beef industry.

First, the role and perception of science is changing. Historically, production agriculture has relied on "sound science" when introducing, using, and defending a new technology. If it was proven safe and it reduced costs, then it should be used. A segment of today's consumers are asking moral and ethical questions rather than scientific questions. They are asking, "Should it be used?" and we are answering "It

can be used.” One of the challenges is that there is a very large number of consumers that are more concerned with sufficient nutrition than how farmers farm. The world cannot feed its 6+ billion and growing population without technology to make more efficient use of resources. Where is the balance between affluent wants with human needs?

Second, non-commodity products are a growing segment. Specifically, expect growth in natural, organic, local, sustainable, and green defined products including food items. For example, Walmart has made public its plan to be a greener, more sustainable company. As noted above, safe, wholesome, affordable meat products will continue as the mainstream, but the other segments are growing. These labels provide opportunities for farmers that can produce them at costs which are economically viable at the premiums offered. They may also pose a risk, if anything not carrying one of these descriptors is seen as inferior and therefore discounted.

Third, the rules of the game are changing. Traditionally, the production and marketing decisions were governed by government regulations that were vetted through the legislative process with opportunities

for agriculture to have input on the regulations and rules that resulted. Increasingly, brands are the new regulators. The government rules are the minimum standard, but individual companies are requiring additional inspections (often by their own staff) or production requirements (seldom grounded in science). It is not always transparent how companies make their decisions, but it is more likely to be influenced by consumer perceptions and NGOs than research and science.

These emerging issues will grow in importance rather than fade away. Where they may hit close to home is in the form of market access. Producers may need additional documentation to sell into certain markets. USDA has proposed the Process Verified Program (PVP) to qualify for grass-fed beef and “naturally-raised” livestock. It is the one used for age verification for Japan. Having a single recognized standard such as PVP can simplify and reduce the cost of market access compared to each individual company having their own program with a separate set of paper work and audit for each market. The fact that claims are documented means that the commodity world has changed, regardless of whether it is a single standard or many different standards for documenting claims.

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