

COW/CALF CORNER

The Newsletter

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By Glenn Selk, OSU Extension Cattle Reproduction Specialist

2008 Feed Market Situation and Outlook

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Prices for all major U.S. grains and oilseeds will average 50 to 100 percent higher in the 2007/2008 crop year compared to just two years ago. Prices for energy and protein feeds, as well as forage crops, will generally be higher than producers have been accustomed to in recent years. Although all feed prices are expected to be higher, there will be relative feed bargains for producers in various regions and at various times. The beef cattle industry as a whole responds to higher feed costs by modifying production systems to take advantage of the feeding flexibility that goes with ruminant animal production. The industry will see changes in market incentives that will generally favor forage-based production and reduced use of concentrate feeds.

U.S. agriculture is operating under a new set of rules. Driven primarily by biofuel demand, competition for agricultural resources is profoundly impacting all agricultural markets, either directly or indirectly. Although it is not yet clear what the permanent impacts will be, agricultural markets will, at a minimum, be in transition for several years.

2008 will be a continuation of a massive series of impacts that will reverberate through agricultural markets for several years. 2007 was just the beginning! The sharp rise in corn prices in late 2006 prompted a 20 percent jump in corn plantings in 2007. That acreage increase, combined with good yields, resulted in a record corn crop of about 13.1 billion bushels. Ethanol demand for corn in 2007/2008 crop year, at 3.2 billion bushels, is roughly 50 percent higher than the previous crop year and almost twice the amount of corn used for ethanol just two years ago. This rapidly growing corn demand for industrial use, combined with slight increases in corn used for feed and exports, results in a projected total corn use for the 2007/2008 crop year of nearly 13 billion bushels. Because of excellent production in 2007, corn inventories at the end of this crop

year are projected at 1.4 billion bushels. For many years, this level of ending stocks would be sufficient to allow corn prices to drop significantly but that is not the case this year.

There is no relief in sight. New-crop corn futures starting in September are currently priced about \$5.20/bu. The demand driving these price levels appears likely to increase rather than decrease in the coming years. Current ethanol production capacity is about 7.4 billion gallons per year using about 2.64 billion bushels of corn annually. However, if all of the new plants currently under construction are completed in the next 18-24 months, ethanol capacity will expand to roughly 13.4 billion gallons and would use about 4.7 billion bushels of corn per year. A market for this increased ethanol production is ensured by the recently passed Energy Bill that raises renewable fuel standards to 9 billion gallons in 2009 and 15 billion gallons of corn-based ethanol by 2015. The corn market takes no comfort in the 2008 projected ending stocks because the current price levels only hold if the U.S. is able to produce a string of near record corn crops in the coming years. In order to do that the corn market must maintain planted acres and have growing conditions that produce near-record yields. There are a variety of market and production factors that suggest this will not be an easy feat.

Both current and new-crop corn prices only partly reflect underlying demand and supply conditions; the current ending stock levels suggest that there are adequate corn supplies at this time. The real question is how much corn will be planted and harvested in 2008? Much of the 15 million acre increase in corn acreage in 2007 was facilitated by a nearly 12 million acre decrease in soybeans. Such a decrease in soybean production was possible with minimal market impacts because the current crop year started with record 2006 soybean ending stocks, the result of three large soybean crops in 2004-2006.

2008 soybean ending stocks are projected to be only one-third of 2007 levels. Thus, it is imperative for more acres to return to soybeans in 2008. The market is attempting to ensure that with new-crop soybean futures prices currently trading nearly \$13.00/bu. In other words, corn, soybeans and other crops are in a bidding war for U.S. cropland in 2008. Additionally, there are several production reasons that suggest corn will not be able to maintain 2007 planted acreage. Many of the increased corn acres in 2007 were acres that followed corn in 2006 rather than the more typical 1:1 corn to soybean crop rotation. Planting corn for a third year on those acres will increase fertilizer needs without the nitrogen boost from soybeans.

Forage values are generally higher in the U.S. for a variety of reasons related to both demand and supply. Regional droughts have affected forage and cattle production significantly since 2002. The extreme drought conditions in the Southern Plains in 2005 and 2006 resulted in the U.S. having record low hay supplies on May 1, 2006. Increased hay production in 2007 provides limited improvement in hay supplies going into 2008. In 2007, the ratio of corn harvested to planted acres was higher than usual, in large part because fewer corn acres were harvested as silage, a situation likely to be repeated in 2008. There is little doubt that some annual pasture and hay acres will be used for other crop production in 2008 and beyond.

High grain prices are an incentive for the cattle industry to use less grain and more forage to the extent possible. The primary means for the beef cattle industry to use less grain is to place cattle into feedlots at bigger weights, which means that feeder cattle must be grown longer as stocker

cattle and thus represents an increased demand for forage. These same conditions may also be an incentive for cow-calf producers to retain calves to bigger weights through the stocker phase. Cattle producers must be aware of changing market conditions for both feed and cattle and be prepared to consider a wider range of production alternatives. It is not business as usual for the foreseeable future and while there are significant challenges and potential threats, there are also new opportunities in the current situation. It is imperative to remain vigilant and to be prepared to adjust to a very dynamic feed market environment.

Most Passive Immunity Occurs in the First 6 Hours

By Glenn Selk, OSU Extension Cattle Reproduction Specialist

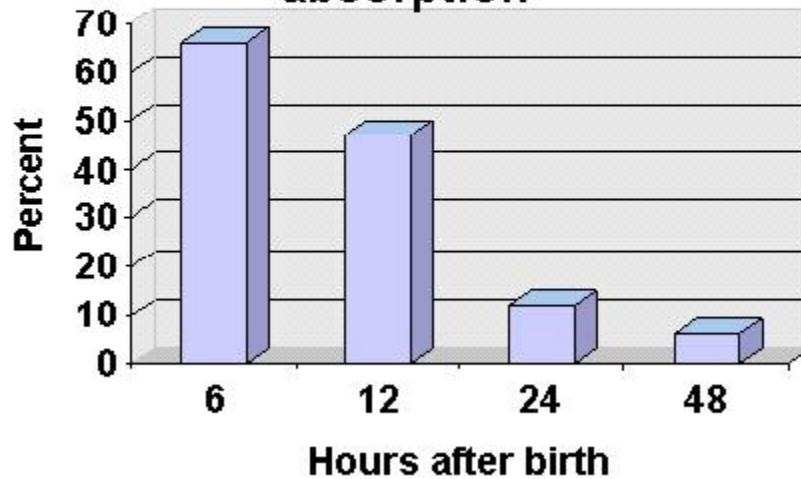
Despite our best efforts, a few calves will be born via a long, hard delivery. They may be sluggish or weak at birth and slow to find the cow and nurse. These calves are more prone to scours or pneumonia as babies and “poor-doers” later in life.

Resistance to disease is greatly dependent on antibodies or immunoglobulins and can be either active or passive in origin. In active immunity, the body produces antibodies in response to infection or vaccination. Passive immunity gives temporary protection by transfer of certain immune substances from resistant individuals. An example of passive immunity is passing of antibodies from dam to calf via the colostrum (first milk after calving). This transfer only occurs during the first few hours following birth. Research from the USDA station in Nebraska has indicated that successful transfer of passive immunity (during the first day of life) enhances disease resistance and performance even through the feedlot phase.

Timing of colostrum feeding is important because the absorption of immunoglobulin from colostrum decreases linearly from birth. "Intestinal closure" occurs when very large molecules are no longer absorbed into the circulation and this occurs because the specialized absorptive cells are sloughed from the gut epithelium. In calves, “closure” is virtually complete 24 hours after birth, although efficiency of absorption declines from birth, particularly after 12 hours. Feeding may induce earlier closure, but there is little colostrum absorption after 24 hours of age even if the calf is starved. This principle of timing of colostrum feeding holds true whether the

colostrum is directly from the first milk of the dam, or supplied by hand feeding.

Effect of time of colostrum feeding on percent immunoglobulin absorption



Provide **high risk** baby calves (born to thin first calf heifers or calves that endured a dystocia) at least 2 quarts of fresh or thawed frozen colostrum within the first 6 hours of life and another 2 quarts within another 12 hours. This is especially important for those baby calves too weak to nurse naturally. Thaw frozen colostrum slowly in a microwave oven or warm water so as to not allow it to over-heat. Therefore denaturation of the protein does not occur. If at all possible, feed the high risk calf natural colostrum first, before feeding commercial colostrum substitutes.

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