IOWA STATE UNIVERSITY
Extension and Outreach

Iowa Farm Outlook

Department of Economics
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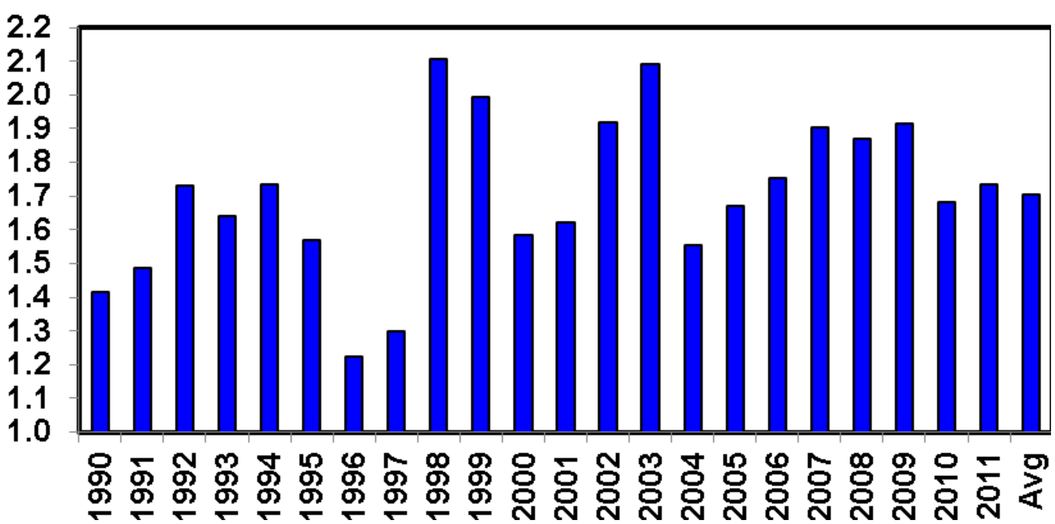
Beef and Pork Price Relationships

Historically, beef and pork prices have moved somewhat together. They are substitutes in the consumer's shopping basket and consumers tend to switch from one to the other depending on relative prices. Although there are many other factors that also influence prices for cattle and hogs this price relationship is important. One such importance is with respect to demand, which is a schedule of quantities consumers purchase over a range of prices. There was strong demand for pork in 2011. Compared to 2010 quarters, demand in 2011 increased 12% in quarter 1, increased 8% in quarter 2, increased 1% in quarter 3, and decreased 4% in quarter 4 (2010 quarter 4 was a record high for pork demand). The stronger demand for pork in 2011was likely due in part to the high cattle prices, especially in late 2010.

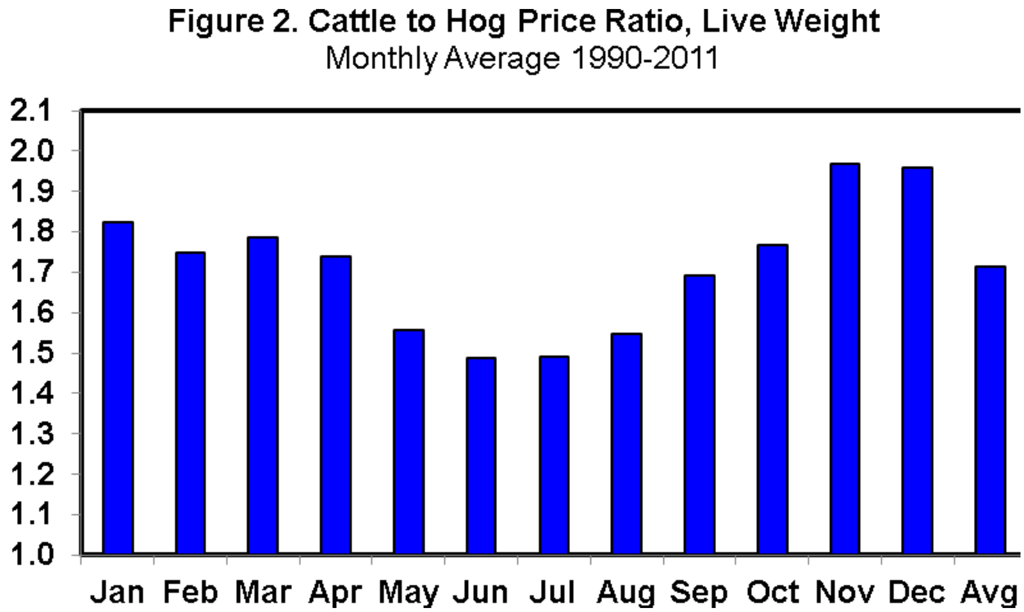
The ratio of cattle to hog prices on a live basis for 1990 through 2011 had been 1.70 meaning that the cattle price was 1.70 times the hog price on a live weight basis. However, there was a significant range in the ratio for any one month. Twenty five percent of the months were narrower than 1.50 and fourteen percent were over 2.00 during the 22 year period. There had been a trend to a wider ratio, particularly following 1996 (figure 1). During 1998-1999 with low hog prices and the 2003 high cattle prices, the ratio was over 2.0. More recently, we have seen an increase in both cattle and hog prices, negating any drastic changes in the cattle to hog price ratio.

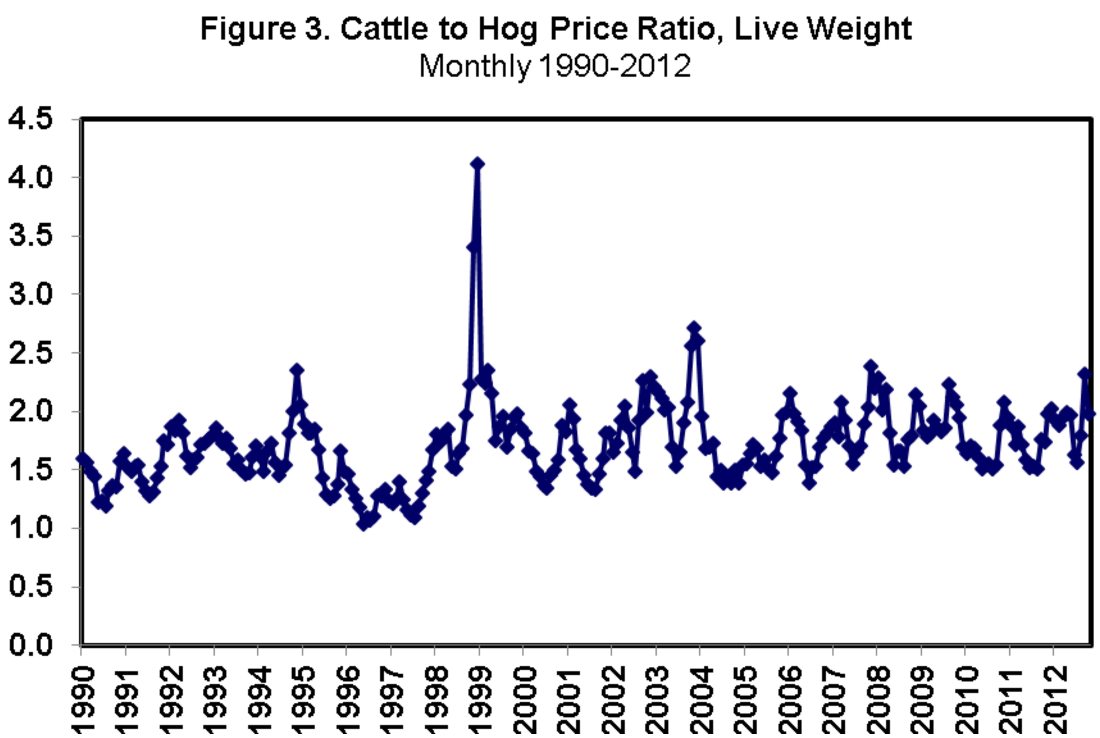
Figure 1. Cattle to Hog Price Ratio, Live Weight
Annual Average 1990-2011



On average the spread has been the widest (higher cattle prices relative to hog prices) in November and December. It is lowest in June, July, and August (figure 2). As we look at 2012 we see that the ratios have widened as of late (figure 3). Through October 2012 the ratio has averaged 1.90, above the 22 year average. The month of September averaged 2.32 and October averaged 1.98, both in the upper 20th percentile of the distribution.

The strong cattle market looks to be a bit outpacing the hog market in November. It is likely that hog prices will begin to rise into 2013 given the seasonality in prices and the decrease in placements the experienced seen this past year. Likewise, cattle prices typically strengthen into spring, and expect this to hold true this year given the current supply situation.





New information that will help shape the hog and cattle markets in the near future include the fourth quarter Hogs and Pigs report due out December 28, the semi-annual Cattle report due out in January, and information about trade.

Feeder pig imports from Canada are tracking at par for 2012 compared to 2011. However, this may be slightly misleading because feeder pig imports have been down to the degree of 7.5% since the end of September. The last three weeks have seen a 15% average decrease compared to this time last year. What is driving this and may continue to drive this? Much like the U.S., Canada has experienced fewer sows farrowing and farrowing intentions. Slaughter barrow and gilt imports from Canada have also been significantly below year ago levels, 22% on average. U.S. pork production in 2013 is expected to decline compared to 2012. Look for slaughter hog prices to average above a year ago in the first quarter of 2013. Seasonal price increases are expected to take prices in the spring-summer to breakeven to profitable levels (Iowa State University Estimated Return Series). How much pork production changes in the second half of 2013 depends on the amount of breeding stock liquidation that happens during the next few months.

Feeder cattle imports from Mexico and Canada have offset declining U.S. feeder supplies since 2009. In the first half of 2012, Mexican imports were continuing that trend with a record pace of drought forced sales of cattle. As the industry moves into 2013, some things about the cattle supply are becoming clearer and some are still uncertain. What is clear is that two more years of liquidation have put the industry in an even tighter supply situation. The 2013 U.S. calf crop is likely to be the smallest since 1942. What is also clear is that feeder cattle imports will drop dramatically. Mexican cattle imports have decreased sharply in late 2012 and will likely decrease even further in 2013. What is unclear is the persistence of the drought. Continued drought will moderate the short-run effect by provoking more liquidation and postponing heifer retention. If drought conditions improve, herd inventories will stabilize and some heifer retention may begin in 2013. It will be increasingly difficult to find placements to follow current feedlot inventories. All in all, it looks increasingly likely that a significant decrease in cattle slaughter and beef production is unavoidable in 2013 and 2014.

Lee Schulz

Looking Into 2013

With the 2012 production season behind us, attention is starting to turn toward 2013. The drought this year created sizable reductions in the corn and soybean crops. That has led to strong prices for the 2012 and 2013 crops. With nearby futures prices hovering in the $7.50 per bushel range for corn and the $14 per bushel range for soybeans, the 2012 crops are maintaining record high prices. The futures prices for the 2013 crops indicate very strong prices, but don't maintain the record levels. At the beginning of December, the futures-based estimates for the 2013/14 national cash season-average prices are roughly $6 per bushel for corn and $12.40 per bushel for soybeans. Those prices are strong enough to offer good projected margins, over $1 per bushel for both crops, and they signal the market's attempt to maintain or even add to crop planting next spring.

Looking back at 2012, U.S. producers made some major adjustments in their land allocations. Figure 1 shows the land shifts among the major crops grown here in the U.S. A few crops, such as cotton and spring wheat, gave up some land, while others gained acreage. Corn was the big gainer with roughly 4.5 million additional acres. Soybeans captured an additional million acres. Overall, approximately 10.8 million acres were added in crop production for 2012.

Figure 1. Crop Acreage Shift in 2012 (Source: USDA-NASS)

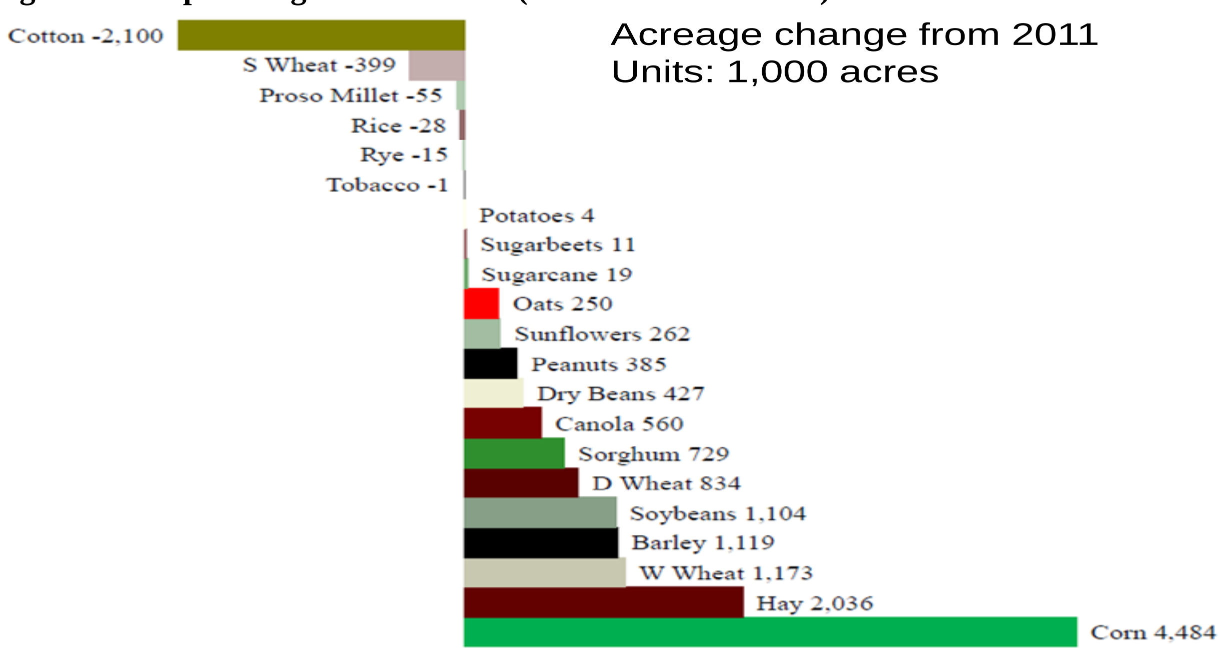
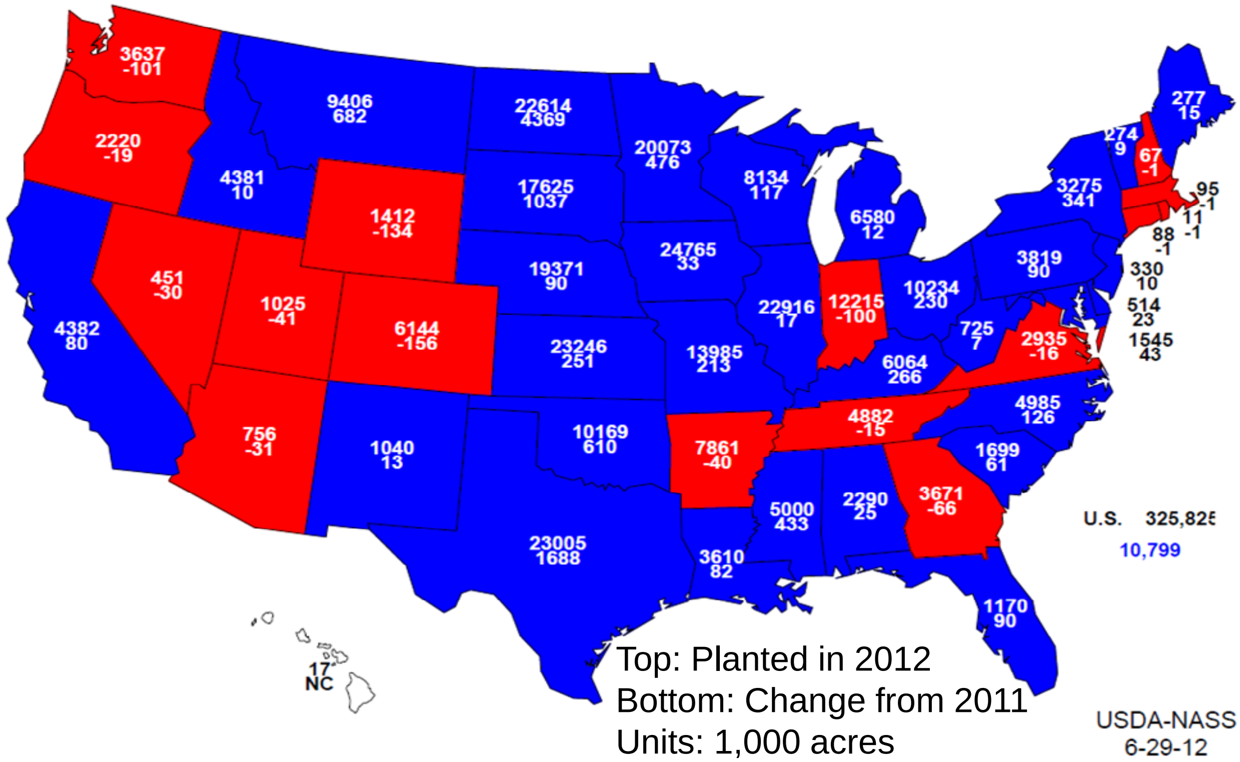


Figure 2 shows where that 10.8 million acres originated. The states in blue increased crop acreage, while the states in red decreased crop plantings. Roughly half of the acreage increase occurred in the Dakotas. North Dakota added 4.37 million acres and South Dakota added just over 1 million acres. North Dakota actually set records for both corn and soybean plantings in 2012. Wet conditions had limited crop plantings in the Dakotas during 2010 and 2011. That was not a problem in 2012. In this case, the beginnings of the drought in the Northern Plains helped increase planted area. And the slight recovery from the drought in the Southern Plains allowed Texas to also increase crop acreage substantially.

Figure 2. Acreage Shift This Year (Source: USDA-NASS)

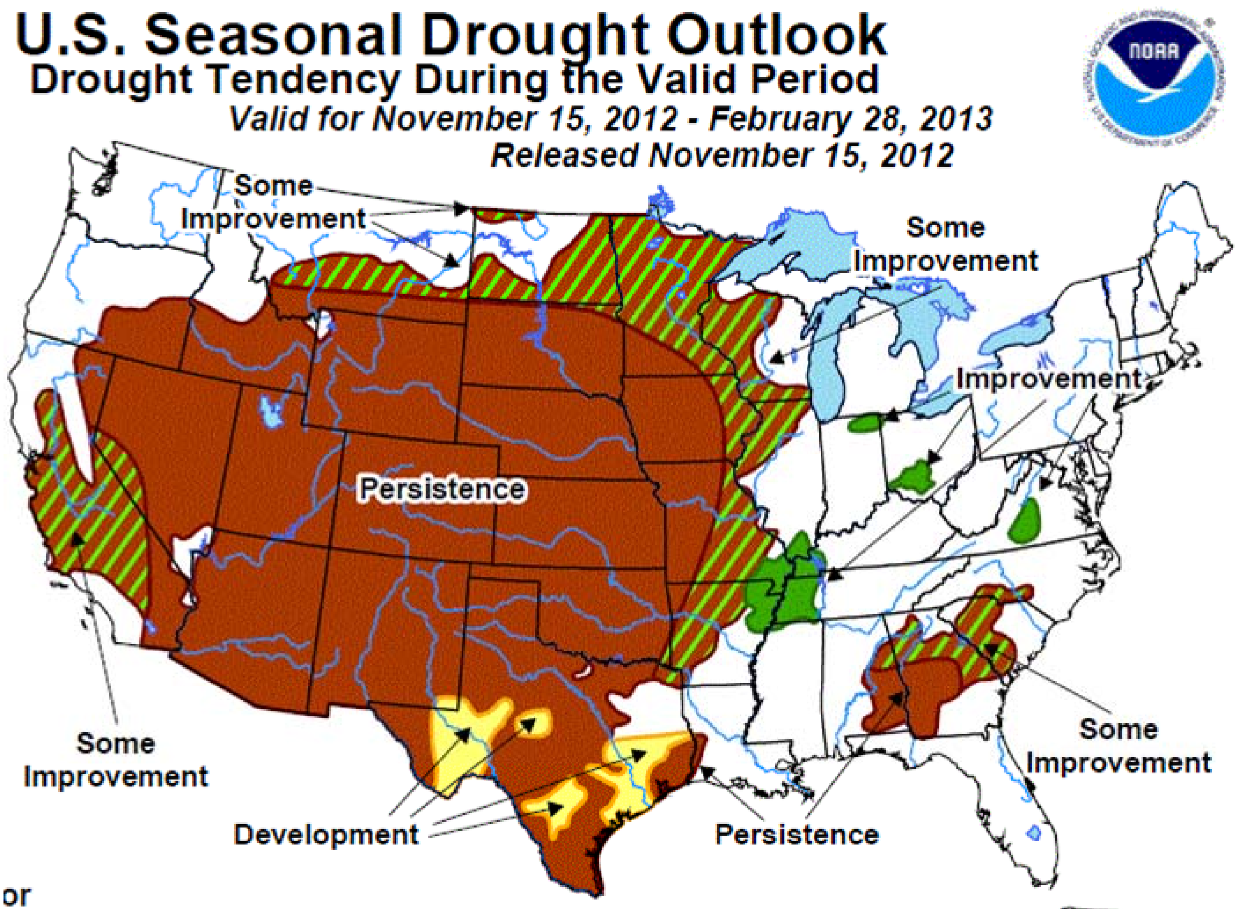


As we look forward to 2013, one question is will the U.S. be able to maintain all of the gains in crop plantings from 2012 and possibly add even more acres. The answer to that question hinges on weather conditions this spring. Crop prices are already high enough to maintain plantings. But we will likely need fairly dry conditions again to hold the acreage. So we are caught in the following dilemma. If we hold the acreage we gained in 2012, it means that we have not received the moisture we need to recharge the soils after the drought. If we get the moisture we need to recharge the soils, then the U.S. will probably see a decline to crop plantings.

Soil moisture cores from northwest Iowa indicate that much of the area there is drier than it was last fall. The drought limited soil moisture and the 2012 crops grabbed what they could from the soil. So this drought is not over yet for Midwestern agriculture. Figure 3 shows the 3-month drought outlook for the nation. While we have seen improvement in moisture conditions across the eastern Corn Belt, things remain dry in the western Corn Belt, including much of Iowa. North Dakota is also seeing higher precipitation totals, but that could need to additional prevented planting like they saw in 2010 and 2011. So the weather conditions will be a major key to the 2013 crop markets, even more so than usual.

During my outlook talks, I have often said “For 2013, I have a good $4 corn story and a good $9 corn story. My problem is that I don’t know which story to tell.” Timely rains and a bumper crop (or another bout of recession) would bring on significantly lower prices. Continuation of the drought would drive 2013 prices higher. The markets for the moment have sort of split the difference between these two stories and provided profitable pre-planting prices for both corn and soybeans. I think now is a good time to think about price protection. The drought created strong prices, opening up the opportunity to put in some profitable price floors either through some early sales, combined with possibly call options to capture prices if they do go higher, or through put options. When prices dissipate, they tend to decline quickly. Think back to 2008, the $7 corn prices in July gave way to $3.50 corn in December. Having some price protection in place removes some of the worry about that happening again.

Figure 3. Seasonal Drought Outlook (Source: NOAA)



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