# **Iowa Farm Outlook**

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Department of Economics Ames, Iowa

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## **January Cattle Report**

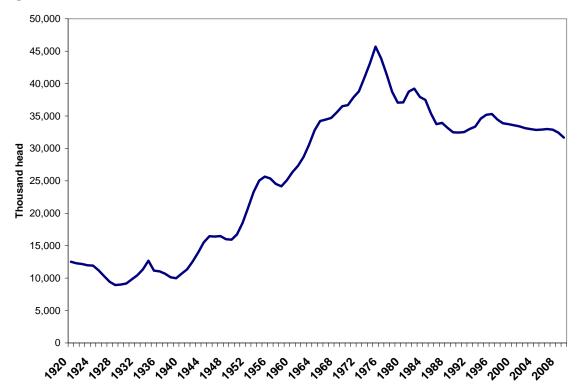
The beef industry continues to retract into 2009. First of the year national cattle inventory was down 1.6 percent from last year. While the dairy herd grew just slightly, beef cow numbers fell substantially under lighter heifer retention and larger cull cattle slaughter. The national beef cow herd is now about 31.7 million head, the lowest inventory since 1963. Beef heifer retention was also down more than 2 percent, indicating that the national herd will continue to decline into next year. With fewer feeder cattle available and dramatic losses in the cattle feeding sector it is no surprise that cattle on feed numbers declined by nearly 7 percent from a year ago. The 2008 calf crop was down nearly 2 percent as the industry reduced it production potential. Table 1 contains a summary of the January Cattle report.

Table 1. January 1, 2009 Cattle Report Summary

	US	0/ -1	Iowa	0/ -1
	Mil. Hd.	% chg.	Mil. Hd.	% chg.
All Cattle	94.49	-1.6%	4.00	-1.3%
Beef Cows	31.67	-2.4%	0.97	-4.1%
Dairy Cows	9.33	0.8%	0.22	0.0%
Beef Replacement heifers	5.53	-2.1%	0.15	-6.7%
Dairy Replacement heifers	4.41	-0.1%	0.11	18.2%
Feeder heifers	9.65	-1.5%	0.70	-14.3%
Steers	16.77	-2.3%	1.30	6.9%
Calves	14.94	-1.2%	0.49	-2.0%
Cattle on feed	13.85	-6.6%	1.35	-3.7%
2008 Calf crop	36.11	-1.8%	1.06	0.9%

Feeder cattle prices have declined in the past several years as the cost of gain has increased. Cattle feeders have started to push back on the feeder cattle prices they are willing to pay as they try to regain a margin of profitability. Cow-calf production has already been on the decline for the past two years as producers face higher production costs and reduced resources. Compounded by lower feeder cattle prices, there will continue to incentive for producers to reducer their herds to exit the business. Figure 1 tracks beef cow inventories over the past nine decades. Since the mid 1990's there has not been a significant increase in cow numbers, but instead a continuous and steady decline, that seems destined to continue for the next year or more.

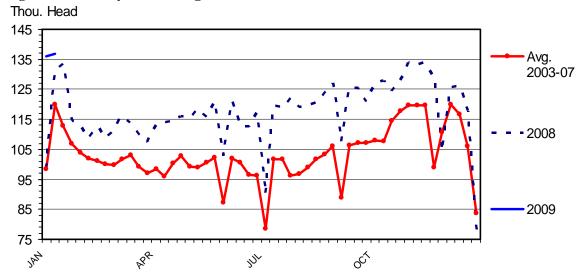
Figure 1. US Beef Cow Inventories, 1920-2009



Within Iowa beef cow numbers continued to decline in 2008 and now number less than 1 million head. Cattle on feed numbers were down 3.7 percent with a shift of more steers and less heifers in Iowa's feedlots.

The cattle industry is expected to continue to retract and produce less beef for the next three years. Beef cow numbers will continue to decline as cow slaughter remains high and profitability scare. Even when the industry again begins to expand there will be a lag period of several years before more cattle will actually be made available for slaughter. For now it would appear that cattle slaughter will remain strong into the first quarter and perhaps beyond. Figure 2 tracks weekly cow slaughter through 2008. Cow slaughter was up nearly 8 percent for all cows and up 12 percent for beef cows.

Figure 2. Weekly Cow Slaughter



### Sizing Up Biofuel and Export Demand

The January USDA reports showed demand weakness continuing across the crop sector. USDA has reduced corn demand for feed, fuel, and export. The reductions were large enough that projected use of corn over the 2008/09 marketing year is now below production, allowing projected ending stocks to surge to nearly 1.8 billion bushels. This is roughly 300 million bushels more than what was projected last month and 160 million bushels more than what we carried forward from the 2007 crop. Feed demand is projected at 5.3 billion bushels, fuel demand is projected at 3.6 billion bushels, and export demand is projected at 1.75 billion bushels. All are down at least 50 million bushels from earlier estimates.

Domestic soybean demand also continued its slide as the demand for soybean meal in livestock feed shrinks. In fact, domestic crush demand is projected to be at its lowest level since 2003. Soybean export demand is the one crop demand sector showing relative strength. While USDA is still projecting a decline in exports from last year, they have raised the projection to 1.1 billion bushels. For the 2008 crop, soybean production and usage are roughly equal and stocks are not expected to build up significantly over the course of the marketing year.

### **Biofuel Shifts**

The reduction in corn demand from ethanol coincides with the shutdown of several ethanol plants. Verasun has shuttered some of its plants as it works to emerge from bankruptcy. The company will auction off seven plants by the end of March. Other ethanol companies, such Pine Lake, Pacific Ethanol, and White Energy, have also shut down plants, at least temporarily. Despite the shutdowns, the ethanol industry has continued to grow year over year. For 2008, production exceeded 8.3 billion gallons from January to November, putting production on pace to exceed 9 billion gallons for the year. The biodiesel industry has also boosted production throughout 2008. Over the first 10 months of 2008, 572 million gallons of biodiesel were produced and the industry showed its flexibility in using a variety of feedstocks.

Looking forward for 2009, the Renewable Fuels Standard (RFS) implies a target of roughly 10.5 billion gallons of conventional biofuels, the category for corn-based ethanol, and 500 million gallons for biodiesel. The biodiesel industry has produced at or above the 2009 target for the past two years. So the RFS may not insure higher levels of biodiesel production, at least over the short term, and may not induce stronger demand for soybean oil for biodiesel conversion. But the domestic ethanol industry would need to scale up to fill the conventional biofuel target in 2009. Before the plant shutdowns, the Renewable Fuels Association listed over 11 billion gallons of capacity that could be in production. This indicates that the RFS conventional biofuel target can be met with existing ethanol plants, but it also indicates that nearly all of the plants would need to be running at capacity to reach the target.

Using the RFS conventional biofuel levels as a target for corn-based ethanol, the amount of corn needed to create the targeted amount of ethanol for the 2008 marketing year would be 3.57 billion bushels. This assumes 2.8 gallons per bushel of corn. USDA has projected 3.6 billion bushels of corn are headed to the ethanol industry during the marketing year, indicating projected corn-based ethanol production during the marketing year is roughly at the RFS targets. But the economics supporting ethanol blending have changed dramatically over the last six months. Last summer, ethanol was priced between 50 to 70 cents per gallon below gasoline. This led fuel blenders to purchase ethanol to blend to create less expensive fuels. Ethanol demand was strong as it was the low cost fuel. This fall, as crude oil and gasoline prices fell, ethanol prices fell as well, but not as quickly or as sharply. Ethanol now trades at a 50 to 75 cent per gallon premium to gasoline. The financial incentives to blend ethanol have dissipated.

Under the RFS, fuel refiners and blenders are obligated to use a set amount of renewable fuels. They can meet their obligations under the RFS in a few different ways. First, they can blend biofuels directly. Second, they can purchase blending credits, known as RINs (Renewable Identification Numbers), from other companies that have blended more than their obligated amount of renewable fuels. The Environmental Protection Agency is the governmental body that tracks renewable fuel usage. They set up the RIN system to check renewable fuel

compliance. Each gallon of renewable fuel has a RIN associated with it when it is produced or imported. As refiners and blenders use renewable fuels, they accumulate RINs, which they report to the EPA. Once a company has accumulated enough RINs to cover its obligation under the RFS, it can sell its extra RINs to other companies to help them meet their requirements. As the incentive to blend ethanol has declined, the price for RINs has increased. During the summer, RINs traded for between 4 and 8 cents. Within the last two weeks, RIN prices have jumped up to 13 to 17 cents as blenders have moved away from ethanol blending and look to use excess RINs to meet the RFS requirements. RINs have a shelf life in that they can expire. A gallon of ethanol created in 2008 has a RIN associated with it that can be used to meet the RFS in either 2008 or 2009. After 2009, the RIN associated with that gallon of ethanol expires and can not be used for the RFS. So increased renewable fuel usage in one year can be used to meet the RFS in the next year, but that ability is limited to 20 percent of the standard. Up to 20 percent of the 2009 RFS requirements could be met by using 2008 RINs.

A third way refiners and blenders can cover their renewable fuel obligation is a deficit carryover. A deficit carryover is essentially a one-year "IOU." Companies are allowed to fall short on their RFS requirements in one year under the restriction that they cover the shortfall in the next year, along with full compliance on the next year's requirement. Companies are not allowed to have deficit carryovers for two years in a row, but could have them every other year. Given the RIN trading and the possibilities for deficit carryovers, it is possible for direct ethanol utilization to fall below the RFS targets. So it is possible corn demand via ethanol could fall below 3.6 billion bushels for the current marketing year. Current futures for ethanol and gasoline show that blending economics are not expected to improve much over the next year, so the use of excess RINs and deficit carryovers may continue to be attractive to fuel blenders. But heavy usage of those tools in 2009 also implies a stronger demand picture for renewable fuels in 2010 as excess RINs would be scarce and companies that used deficit carryovers will be required to cover those deficits.

### **Sifting through the Export Numbers**

While prices have fallen from this summer's highs, the export outlook has been down given the strengthening of the dollar and the global economic slowdown. Current projections have corn exports falling 661 million bushels and soybean exports falling 61 million bushels. But it has been a tale of two trends. Over the past three months, USDA has been revising corn exports downward and soybean exports upward. For corn, the export picture has weakened due to the dollar and increased availability of feed wheat. Some of the shifts in corn demand have been dramatic. Table 1 shows U.S. corn exports for last year and this year. So far, corn exports are off 41 percent from a year ago and we have seen sizable cuts in some of our biggest markets. But the largest shift has occurred in the smaller markets. By this time last year, Turkey, Iran, Morocco, and Chile had all made significant U.S. corn purchases. This year, none of those countries have received U.S. corn exports. Exports to Peru, Ecuador, Israel, Algeria, and Tunisia are off by more than 90 percent. Japan remains our largest market for corn and corn demand has held relatively stable there. One factor helping there is that the Japanese yen is one of the few world currencies that continued to strengthen versus the dollar.

Table 1. Accumulated Export Sales for Corn

	Last Year	This Year	Change	
	(million bushels)			
Japan	241	238	-1%	
Mexico	150	117	-22%	
South Korea	107	55	-49%	
Taiwan	57	41	-29%	
Rest of the World	480	164	-66%	
Total	1,035	615	-41%	

Source: USDA – Foreign Agricultural Service

For soybeans, the strength showing up in the export market can be attributed to one key player. As Table 2 shows, China continues to pull in U.S. soybeans. Soybean exports to China are up over 100 million bushels so far this marketing year. In fact, China currently represents 60 percent of our soybean export market. Soy exports to our other major markets are down between 10 and 25 percent. But, on balance, the Chinese surge has been large enough to offset these drops and our current export pace is actually ahead of last year.

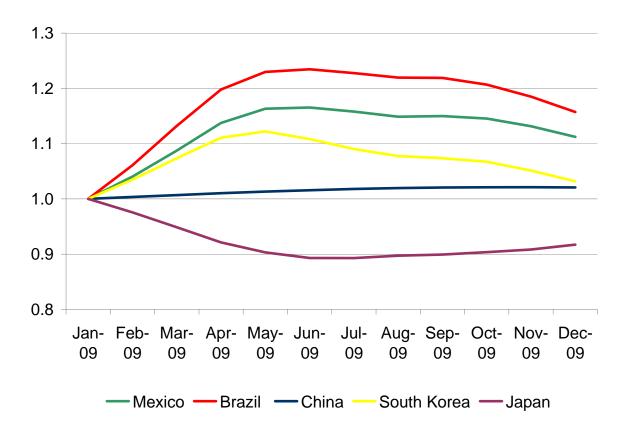
**Table 2. Accumulated Export Sales for Soybeans** 

	Last Year	This Year	Change	
	(million bushels)			
China	264	378	43%	
EU	79	61	-23%	
Mexico	51	45	-12%	
Japan	43	37	-14%	
Rest of the World	121	103	-15%	
Total	559	625	12%	

Source: USDA – Foreign Agricultural Service

Two big factors that will influence the export outlook are the movements in the dollar and the crop production coming out of South America. USDA provided their projections for the dollar over 2009, shown in Figure 1. The dollar is expected to continue strengthening against most major currencies, but there are a couple of key exceptions, Japan and China. And as these countries are our top export markets for corn and soybeans, that's good news.

Figure 1. U.S. Dollar Exchange Rates (Jan. 2009 = 1)



Source: USDA – Economic Research Service

The recent news about South American crop production has also been supportive of U.S. crop exports and crop prices. Drought conditions have hampered crop production in southern Brazil, Paraguay, and northern

Argentina. In 2007, these three countries represented over half of the world's soybean exports and over 20 percents of the world's corn exports. So a significant decline in their production can have impacts around the world. Early estimates by USDA reflected some crop stress, but the latest reports from those countries indicate the dry conditions have truly limited production. In USDA's latest update for Argentina, they estimated corn production would be down 21 percent and soybean production would be up 7 percent from 2007 levels. Estimates from the Buenos Aires Cereal Exchange put corn production down 35 to 41 percent and soybean production down 17 to 25 percent. If the estimates from the Cereal Exchange hold up, then U.S. crops have an opportunity to fill in some export markets that normally would target South American production.

Chad Hart

### The 2007 to 200? Recession: Just How Bad is it in Iowa?

Though already evident to most of us, it was officially determined by the National Bureau of Economic Research (NBER) in December, 2008, that the U.S. had been in a recession since December 2007. Whenever it began, however, the overall impact of the recession is felt differentially across the states and over the intervening months. Some places in the U.S., like Michigan, Indiana, and Ohio, have struggled with widespread job losses in durable goods and auto manufacturing dating to before the recession. Other places like Las Vegas, San Diego, and several cities in Florida enjoyed boom-level housing and commercial growth early in this decade, but have suffered broad based losses, collapsed housing prices and markets, and rapidly climbing unemployment.

Recessions hit different states differently. In the 1981 to 1982 recession, the one to which the current downturn is often compared, Iowa nonfarm jobs shrank by 4.3 percent while the national decline was a more modest 1.8 percent. In the 1990 to 1991 recession, the U.S. shrank by 1 percent, and Iowa actually grew by 1 percent. In the 2001 recession, the nation's nonfarm jobs contracted by again a mere 1 percent over two years, while Iowa contracted by 1.7 percent. Finally, in the current recession, the U.S. has lost 2 percent of its jobs since the beginning of the recession, and Iowa has lost just .5 percent.

So far Iowa has not struggled like the nation, but the state is behaving like the nation in several important areas, and it is important for community leaders and citizens to not lose sight of the larger economic picture. Over the decades, the Iowa economy has diversified markedly away from heavier dependences on agriculture and manufacturing into other industries like finance, insurance, and professional services. As a consequence, the Iowa economy is becoming much more like the national economy over time, and the Iowa economy will be prone to follow national patterns of change. Still, to date, Iowa has not realized the magnitude of loss that the nation has. In Figure 1 we see that, though trending upward of late, our state unemployment rate is substantially lower than the national average. It is interesting to note that the Iowa unemployment rate did rise at the same rate as the national rate during the early part of 2008 before stabilizing just after the flood period – it could be the case that the flood, especially in Johnson and Linn County, while causing unemployment among many also stimulated an offsetting level of recovery employment that helped to mask the overall pattern for the state.

Figure 2 gives a better near term picture of the magnitude of job losses that accrued in the last quarter of 2008. Here we see that several telling indicators about the recent performance of the Iowa economy that should be the cause for concern. First, this is a graph of the initial claims for unemployment insurance. The graph indicates very clearly that there is a seasonal, end of the year surge in unemployment claims in Iowa. In between those surges are periods of relatively low unemployment claims. For 2008, the graph indicates that claims had begun to creep upward in March, 2008. Indeed, despite the very noticeable bump in claims due to the floods, claim levels during the normally calm times were trending up overall at a period of the year in which they had not in previous years.

Figure 1

# Unemployment Rate

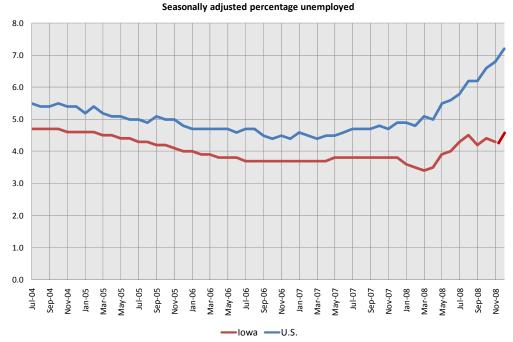
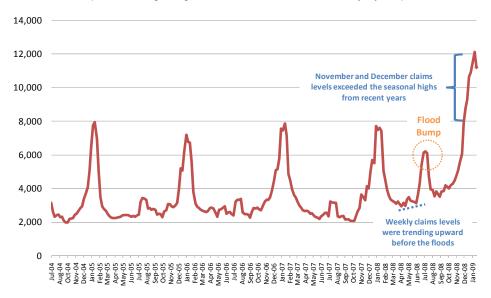


Figure 2

#### **Initial Claims for Unemployment Insurance**

Typical Seasonal Variation and Recent Levels (4-Week moving average of the number of claims, not seasonally adjusted)



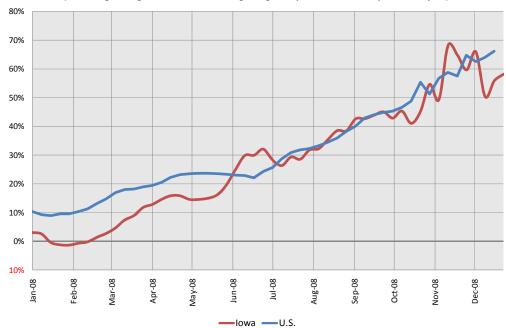
The next indication is very telling as well: the surge in claims beyond the seasonal pattern was much higher towards the end of 2008 indicating a sharp reaction to Iowa economic conditions. Despite news over the intervening months that is nowhere as negative as the national experience; indications are that the state is now starting to react more strongly to the national recession.

Our last indication of the state's condition is contained in Figure 3 below. Here are measured continuing claims for unemployment assistance in Iowa compared to the national pattern. As again is shown, the rate of increase accelerated prior to the floods, but that thereafter the moving average percentage change tracked the national pattern very closely through the end of 2008. In short, our similarity to the national pattern is quite evident.

Figure 3

#### **Continuing Claims for Unempoyment Insurance**

(Percentage change in the 4-week moving averge compared to the same period last year)



The national contraction in jobs continues, and the month of January has yielded some major announcements of plant closings, layoffs and overall industrial downsizing at the national level. Iowa is an important part of the national economy, and Iowa firms supply goods and services to national and international sources. If the national economy continues to shrink, so too will demands for Iowa goods and services orders; now that overall rates of growth globally have been revised downward, there will be decreasing demands as well for Iowa agricultural and manufactured goods. In all, the pressures pushing the Iowa economy downward exceed those that are boosting it, and Iowa likely has a ways to go to weather the current downturn.

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