STATUS OF WISCONSIN AGRICULTURE, 2008

Status of the Wisconsin Farm Economy

Situation and Outlook: Farm Products, Farm Inputs and the General Economy

Special Articles

- *Farm Bill Update*
- *Status of Working Lands in Wisconsin*
- *Hired Labor on Wisconsin Dairy Farms*

Department of Agricultural and Applied Economics
College of Agricultural and Life Sciences
University of Wisconsin-Madison

Cooperative Extension
University of Wisconsin-Extension

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An Annual Report by:

Department of Agricultural and Applied Economics
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and

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PREFACE

Status of Wisconsin Agriculture is an annual agricultural situation and outlook report authored (except where noted) by faculty in the Department of Agricultural and Applied Economics. The report contains three parts. Part I provides a brief overview of the financial environment in the Wisconsin farming sector. In Part II, market analysts review current conditions in major Wisconsin commodity sub-sectors and offer their forecasts for 2008. Part III contains special articles dealing with longer-term issues facing Wisconsin agriculture.

Status of Wisconsin Agriculture may be downloaded free from the Internet in Adobe Acrobat® format at http://www.aae.wisc.edu/www/pub/. If you do not have internet access, contact Ms. Linda Davis, Department of Agricultural and Applied Economics, UW-Madison, 427 Lorch Street, Madison, WI 53706, to obtain a printed copy of the report.

The faculty of the Department of Agricultural and Applied Economics welcomes your comments and questions on material in this report. We also encourage your suggestions regarding rural Wisconsin issues that we might address in subsequent editions.

Acknowledgements

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Summary

To say that Wisconsin farmers had a good year in 2007 is a lot like saying the Green Bay Packers had a decent season. High commodity prices — record prices in many cases — lifted farm cash receipts by more than $2 billion to nearly $9 billion. Net farm income — farmers' bottom line — did not increase as much as cash receipts due to a significant increase in production costs, especially for animal feeds and energy. But despite higher costs, Wisconsin farmers' net farm income more than doubled, going from $1.1 billion in 2006 to $2.6 billion last year. This was $800 million above the previous record set in 2004.

Milk averaged $6 per hundredweight higher than 2006, contributing $1.4 billion to the overall gain in state farm income. Cattle and poultry producers also saw higher average prices for the year, but the price gain was small compared to milk, and hog producers saw no price increase. Much higher prices for grain and soybeans boosted crop producers' incomes by about $450 million from 2006.

Wisconsin farmers' aggregate balance sheet continued its steady improvement in 2007, again on the strength of escalating values for farm real estate. Farm real estate increased an estimated $600 per acre between August 2006 and August 2007, a 19 percent gain.

Review of 2007

In our 2005 *Status of Wisconsin Agriculture* report, we noted that for dairy farmers, 2004 was a year, "… that will likely serve for many years as the yardstick in coffee shop debates about the good times." The bar was raised much sooner and much higher than we expected. Wisconsin milk prices in 2007 averaged more than $2 per hundredweight higher than 2004. The state All Milk price rose steadily from $15.10 per hundredweight in January to a record $21.60 in July. Unlike previous years when price spikes were quickly followed by freefalls of $3-4 per hundredweight, milk prices stayed at record high monthly levels through year-end.

The boost in milk prices came from a combination of supply and demand. On the supply side, depressed milk prices in 2006 and high feed costs motivated farmers to moderate milk production early in 2007. On the demand side, domestic consumption remained fairly robust despite much higher retail prices, and very tight international markets for milk proteins lifted world market prices and encouraged U.S. dairy exports. The United States is expected to be a net exporter of dairy products — the value of dairy exports will exceed that of dairy imports in 2007. That hasn't happened since 1993.

Even though total meat production was up in 2007, prices remained firm for most species. The principal exception was hogs. Unexpectedly large slaughter in the last half of the year caused hog prices to plummet more than $15 per hundredweight between August and November.

The ethanol boom had a dramatic impact on grain and oilseed markets in 2007. Very strong corn prices at the end of 2006 induced a major shift in planting to corn and away from

soybeans in 2007. U.S. corn acreage was up 20 percent and soybean acreage was down 16 percent. Wisconsin farmers planted 400,000 more acres of corn and 300,000 fewer acres of soybeans.

Despite a record corn crop, strong export and ethanol demand have kept corn prices high. USDA estimates the season-average farm price for corn harvested in 2007 will be $3.65 per bushel, 60 cents higher than the 2006/2007 average price, and $1.65 higher that 2005/06. Soybean prices benefited from the smaller crop and strong demand buttressed by bio-diesel plants. USDA expects soybean prices for the 2007 crop to average $9.75 per bushel, up more than $3 from last year.

Among Wisconsin's fruit crops, apple production was down in 2007, but tart cherry production more than doubled the 2006 harvest. Cranberry growers harvested a slightly smaller crop from state marshes, but increasing demand should bring higher prices for the 2007 crop. Wisconsin potato growers experienced generally good yields on 500 fewer potato acres than 2006. Sweet corn acreage was up by 3,000 acres and yields were also higher due to excellent growing conditions.

Nearly all farm inputs cost more in 2007. The largest increases were for fuel (up 39 percent), fertilizer (up 25 percent) and seeds (up 13 percent). But cash rents for Wisconsin farmland increased only marginally and interest rates were lower than in 2006.

Buoyed by strong consumer spending despite taking hits from high oil prices and a weak housing market, the U.S. economy grew at about the same rate in 2007 as in 2006. But several factors contributed to significant erosion in the value of the U.S. dollar. The positive side of a weak dollar is expanded export opportunities, which had positive implications for Wisconsin agriculture.

Prospects for 2008

While it would be hard to top 2007, Wisconsin farmers should do quite well in 2008.

Milk prices will fall from their stratospheric levels of 2007. The only questions are *when* and *how far*? Dairy farmers are responding to high prices by pumping out more milk, but expansion incentives could diminish quickly if feed prices rise and milk prices fall. We anticipate a soft landing for milk prices, with the 2008 Wisconsin All Milk price averaging about $17 per hundredweight. That would be down $2 from 2007, but would still be $3 above the average annual All Milk price for the ten years ending in 2006. But at the same time, higher feed and energy prices in 2008 will make it considerably more expensive to produce milk than it has been during the past ten years.

Most livestock producers are expected to see prices in 2008 close to what were observed in 2007. Choice steer prices near $90 per hundredweight are expected. Hog prices could slip a bit to $45. Broiler and egg prices will likely average below 2007 prices, but turkey prices should remain firm.

Corn and soybean growers will have another good year in 2008. Larger ethanol demand and good export opportunities due to the weak dollar combined with a smaller expected corn crop will hold prices over $3 per bushel. Some corn acreage will shift back into soybeans in 2008. But soybean supplies are expected to remain tight, keeping prices near 2007 levels.

With crop farmers scrambling to plant more acres, expect fertilizer and seed prices to stay high in 2008. Likewise, livestock producers will face higher costs from strong feed prices. Energy costs are a major wild card.

Expect the U.S. economy to slow considerably in 2008, with GDP growth in the 2 percent range compared to more than 3 percent in recent years. This could dampen consumer spending on food slightly, but any reduction will likely be more than offset by expanded agricultural exports.

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This year's *Status of Wisconsin Agriculture* contains three special articles. Ed Jesse, Bruce Jones, and Paul Mitchell review the status of new federal omnibus farm legislation with an eye toward changes in policy direction. Alan Turnquist and Jeremy Foltz provide insights on the implications of changing patterns of land use in Wisconsin. Jill Harrison and colleagues in the Department of Rural Sociology take a critical look at the expansion of immigrant labor on Wisconsin dairy farms.

I. Status of the Wisconsin Farm Economy

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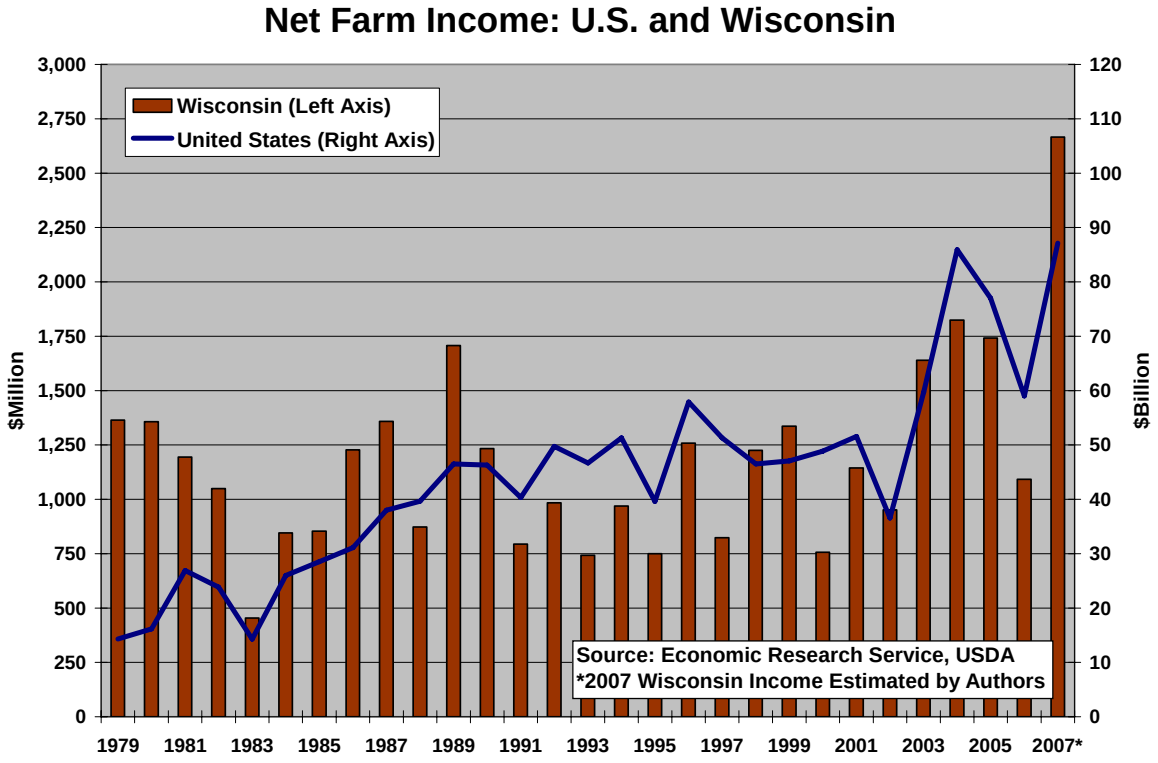
Wisconsin Farm Income

Wisconsin net farm income in 2007 is expected to surpass $2.6 billion, up sharply from last year's depressed $1.1 billion and $800 million higher than the previous record set in 2004.

Higher prices for nearly all farm commodities contributed to the boost in net farm income. Crop receipts to Wisconsin farmers were up about $450 million (21 percent), mostly from strong corn and soybean prices throughout the year. Livestock receipts were $1.6 billion higher than 2006 (34 percent), with most of that gain coming from milk prices that broke records in every month from June through December.

Higher production costs constrained the increase in net farm income, but not by much. Higher prices for purchased feed elevated the cost of farm-origin inputs by $175 million (12 percent) and more costly fuel and nitrogen fertilizer raised expenditures for non-farm inputs $100 million (9 percent).

One element of 2007 farm income that will be down (41 percent) from last year is government payments. MILC payments were made only in January and February and these were only 3 cents and 10 cents per hundredweight, respectively. High crop prices sharply reduced countercyclical and loan deficiency payments for eligible crops.



Derivation of Wisconsin Net Farm Income ($1,000)				
		2005	*2006*	*2007 (est.)*
	Value of crop production:			
	Food grains	34,336	63,659	80,000
	Feed crops	702,373	930,476	1,290,000
	Oil crops	255,402	275,605	320,000
	Fruits and tree nuts	157,571	173,794	165,000
	Vegetables	372,400	408,099	440,000
	All other crops	273,739	283,646	295,000
	Home consumption	1,269	1,062	1,000
	Inventory adjustment	85,495	621	0
	Total Crops	1,882,585	2,136,962	2,591,000
plus:	**Value of livestock production**:			
	Meat animals	1,004,478	1,051,568	1,090,000
	Dairy products	3,527,784	3,075,492	4,560,000
	Poultry and eggs	281,739	320,174	400,000
	Miscellaneous livestock	197,614	208,769	200,000
	Home consumption	17,950	16,062	20,000
	Value of inventory adjustment	62,993	2,204	0
	Total Livestock	5,092,558	4,674,269	6,270,000
plus:	**Revenues from services and forestry:**			
	Machine hire and custom work	65,813	112,474	120,000
	Forest products sold	148,800	147,900	150,000
	Other farm income	222,427	180,587	185,000
	Gross imputed rental value of farm dwellings	779,271	826,250	960,000
	Total	1,216,311	1,267,211	1,415,000
equals	**Value of agricultural sector production**	8,191,454	8,078,442	10,276,000
less:	**Purchased inputs:**			
	Farm origin	1,514,984	1,499,817	1,675,000
	Manufactured inputs	1,068,979	1,147,266	1,245,000
	Other purchased inputs and Services	1,724,654	1,769,603	1,900,000
	Total	4,308,617	4,416,686	4,820,000
plus:	**Government transactions:**			
+	Direct Government payments	585,758	414,088	245,000
-	Motor vehicle registration and licensing fees	9,845	10,737	10,000
-	Property taxes	320,000	340,000	345,000
	Total	255,913	63,351	-110,000
equals	**Gross value added**	4,138,750	3,725,107	5,346,000
less:	**Depreciation**	1,151,316	1,203,857	1,205,000
equals	**Net value added**	2,987,434	2,521,250	4,141,000
less:	**Payments to stakeholders**			
	Employee compensation (total hired labor)	655,913	663,847	720,000
	Net rent received by non-operator landlords	273,938	269,085	285,000
	Real estate and non-real estate interest	438,047	496,933	525,000
	Total	1,367,898	1,429,865	1,530,000
Equals	**Net Farm Income**	1,619,536	1,091,385	2,611,000

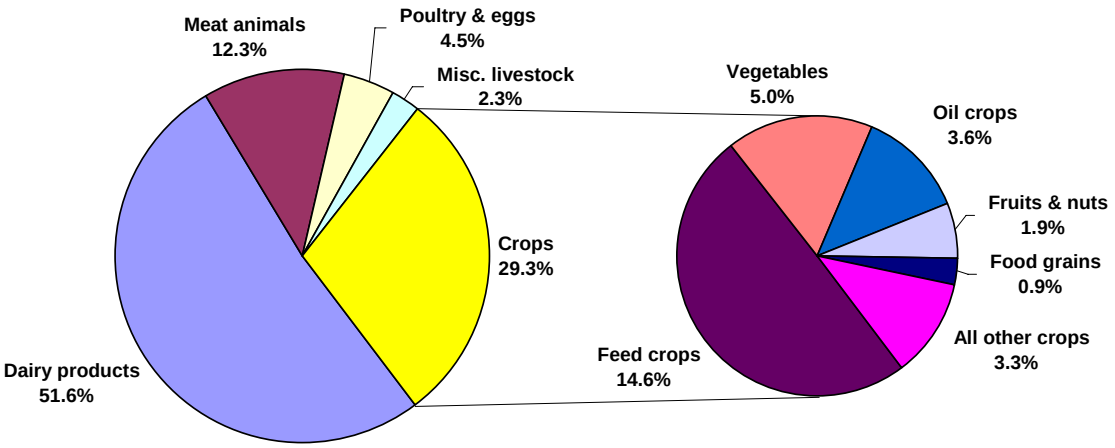
Source: 2005 and 2006 – Economic Research Service, USDA; 2007 – Authors' estimate based primarily on year-to-year changes in U.S. commodity prices and production costs.

Distribution of Wisconsin Farm Cash Receipts

Income from milk sales has dominated Wisconsin cash receipts from farming for many years. The state is second only to Vermont in the percent of gross farm income from dairy, and Wisconsin produces about 9 times more milk than Vermont. Dairy represented 51.6 percent of total cash receipts in 2007. Other livestock product sales accounted for another 20 percent. Livestock receipts include sales revenue from cull dairy cows and veal calves that was also generated by dairy farms.

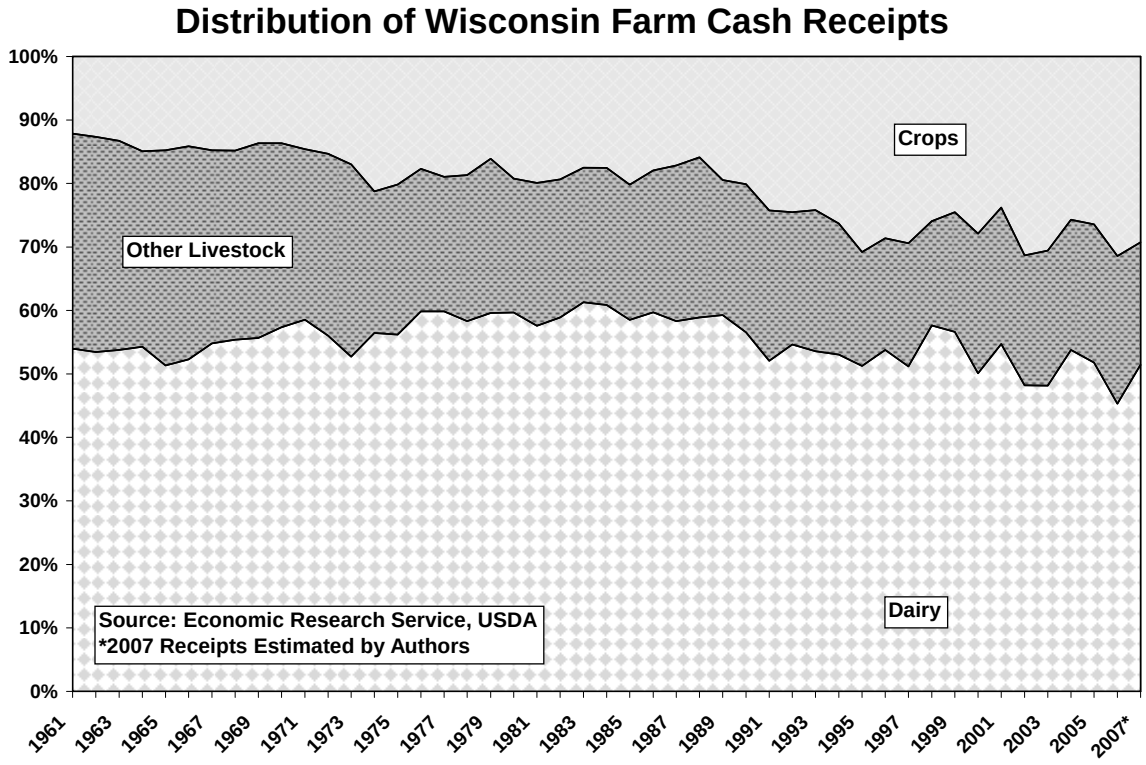
Crop sales in 2007 accounted for 29.3 percent of Wisconsin farm cash receipts, with about half of that coming from the sale of corn and other feed grains. Vegetables ranked second among crop receipts, followed by soybeans and fruit crops.

Estimated Wisconsin Farm Cash Receipts, 2007



Source: Estimated by Authors Based on Economic Research Service, USDA National Estimates

Over time, the dominance of dairying in the state's farm economy has slipped a bit. In 1983, Milk sales were more than 61 percent of Wisconsin farm cash receipts; they were just over 45 percent in 2006, when milk prices were in the tank. Other livestock sales have also been losing ground. The long-term trend (1961-2007) decrease in the percent of Wisconsin farm cash receipts represented by livestock product sales other than dairy has been 0.3 percent per year. Over the same time, crop sales as a percent of total receipts have been growing at an annual average rate of about 0.4 percent. These changes reflect the growing diversity of Wisconsin farming.



Wisconsin Farm Balance Sheet

We estimate that Wisconsin farmers held assets of $61.6 billion at the beginning of 2007. Of that total, $49.3 billion was in the form of farm real estate. Other major elements of farm assets were current inventories of livestock and poultry ($3.7 billion) and machinery and farm-related vehicles ($4.7 billion). Crops in storage and farm-held stocks of fuel, fertilizers, chemicals and other inputs were valued at $1.2 billion, and financial assets were $2.6 billion.

Farm debt was $8.1 billion, split equally between real estate and non-real estate loans. Commercial banks were the most important Wisconsin farm lender, holding 46 percent of Wisconsin farm real estate loans and 40 percent of non-real estate loans. Farm Credit Services was second in importance for both types of loans

Wisconsin farmers' equity at the start of 2007 was $53.5 billion, yielding a debt to equity ratio of 0.15. This represents a solid financial position in the aggregate.

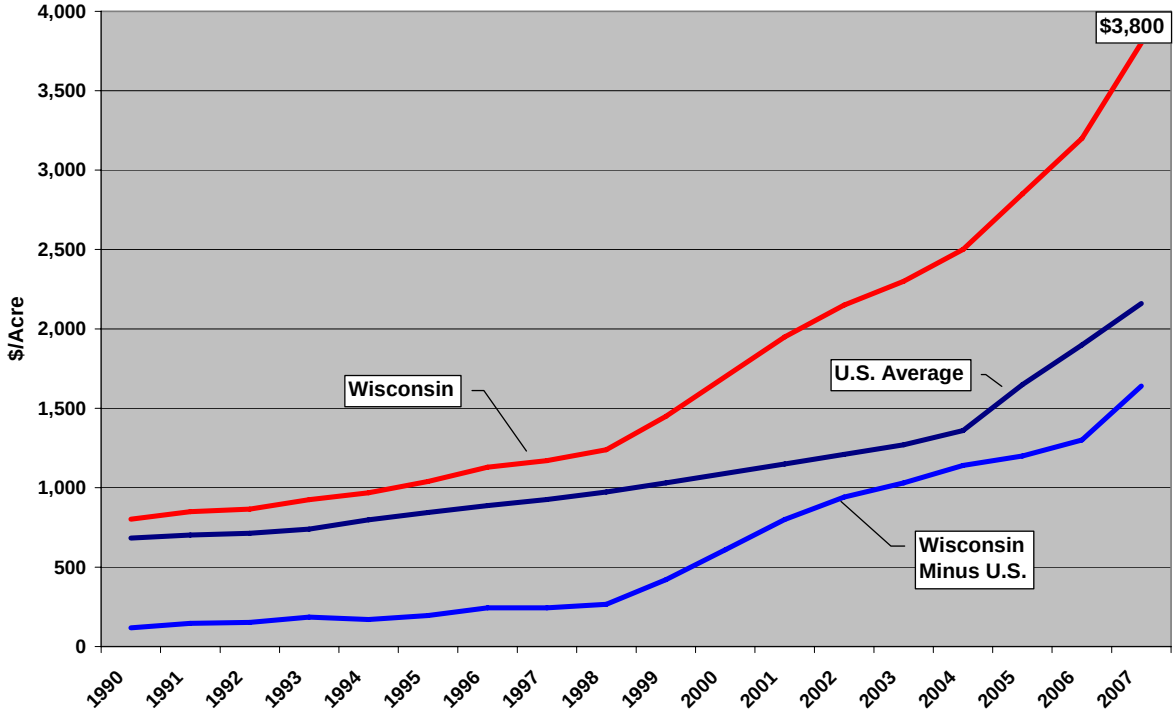
Estimated Wisconsin Farm Balance Sheet December 31, 2006			
	$Billion		***$Billion***
Farm assets:		Farm debt:	
Real estate	49.3	Real estate	
Livestock and poultry	3.7	Farm Credit System	1.2
Machinery and motor vehicles	4.7	Farm Service Agency	0.1
Crops	0.8	Commercial banks	1.9
Purchased inputs	0.4	Life insurance companies	0.1
Financial Assets	2.6	Individuals and others	0.8
TOTAL ASSETS	61.6	Subtotal	4.1
		Non-real estate	
		Farm Credit System	1.4
		Farm Service Agency	0.1
		Commercial banks	1.6
		Individuals and others	0.9
		Subtotal	4.0
		TOTAL DEBT	8.1
		NET WORTH (Assets less Debt)	53.5

We have commented in previous editions of *Status* about the cause and effects of rising farm real estate values. In brief, rising land costs are more a product of non-farmer demand for recreational property than a reflection of the value of farmland in producing crops. Hence, changes in land values are subject to general economic conditions (e.g., recessions) outside farmers' control. Increasing land values enhance the equity of farmers who own land debt-free, but add to the cost of entering farmers.

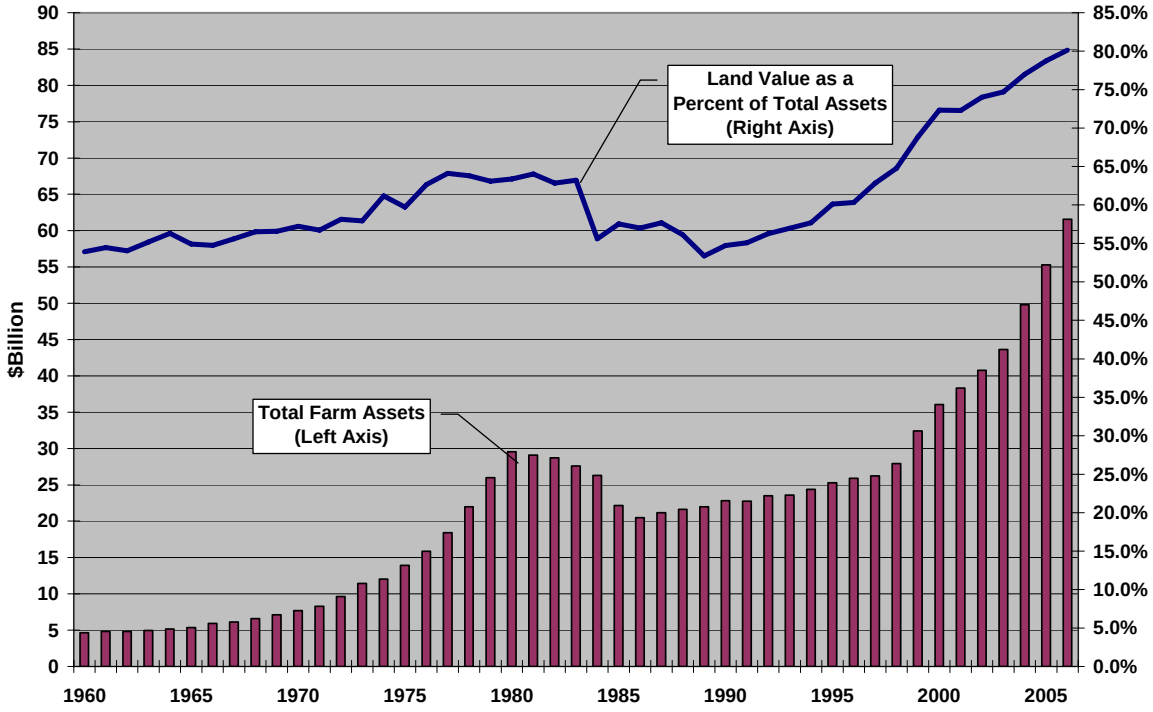
Wisconsin farm real estate values continue to escalate. USDA estimated the value per acre of Wisconsin farm real estate in August 2007 at $3,800, up $600 (19 percent) from 2006. Starting in 1999, Wisconsin farm real estate values began to increase at a rate that deviated from the U.S. trend. The gap has increased every year since, and in 2007, Wisconsin farm real estate value per acre was nearly double the U.S. average.

The value of farm real estate represents an increasing proportion of Wisconsin farm assets. After falling from 66 percent to 56 percent following the massive drop in land values in the mid- to late-1980s, the contribution of land value to total assets increased steadily to 80 percent in 2007.

Farm Real Estate Values: Wisconsin and U.S.



Wisconsin Farm Assets



II. Current Outlook: Wisconsin Agricultural Commodities, Production Inputs and the General Economy

In this section, commodity specialists offer their insights on economic conditions for Wisconsin agriculture by commodity sub-sector. Forecasts for the general economy are also offered. Interested readers are encouraged to contact these specialists for more current or more detailed information.

Dairy

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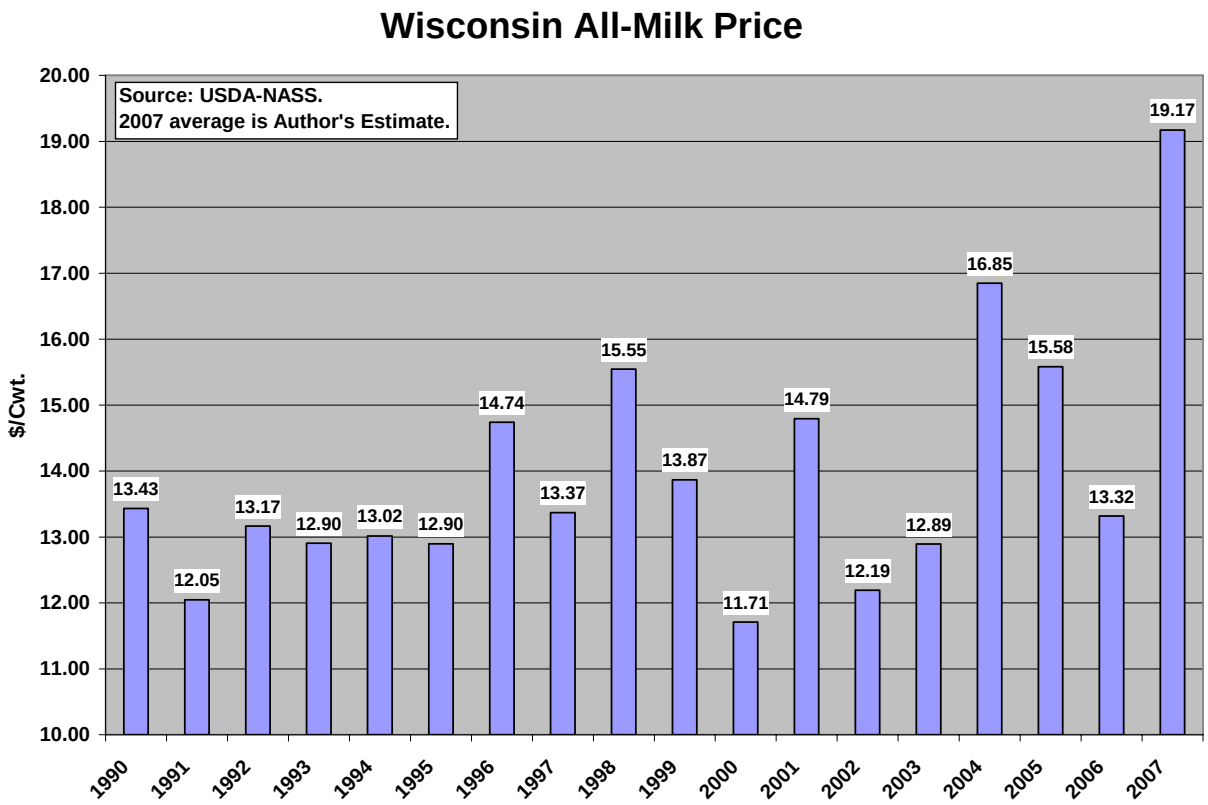
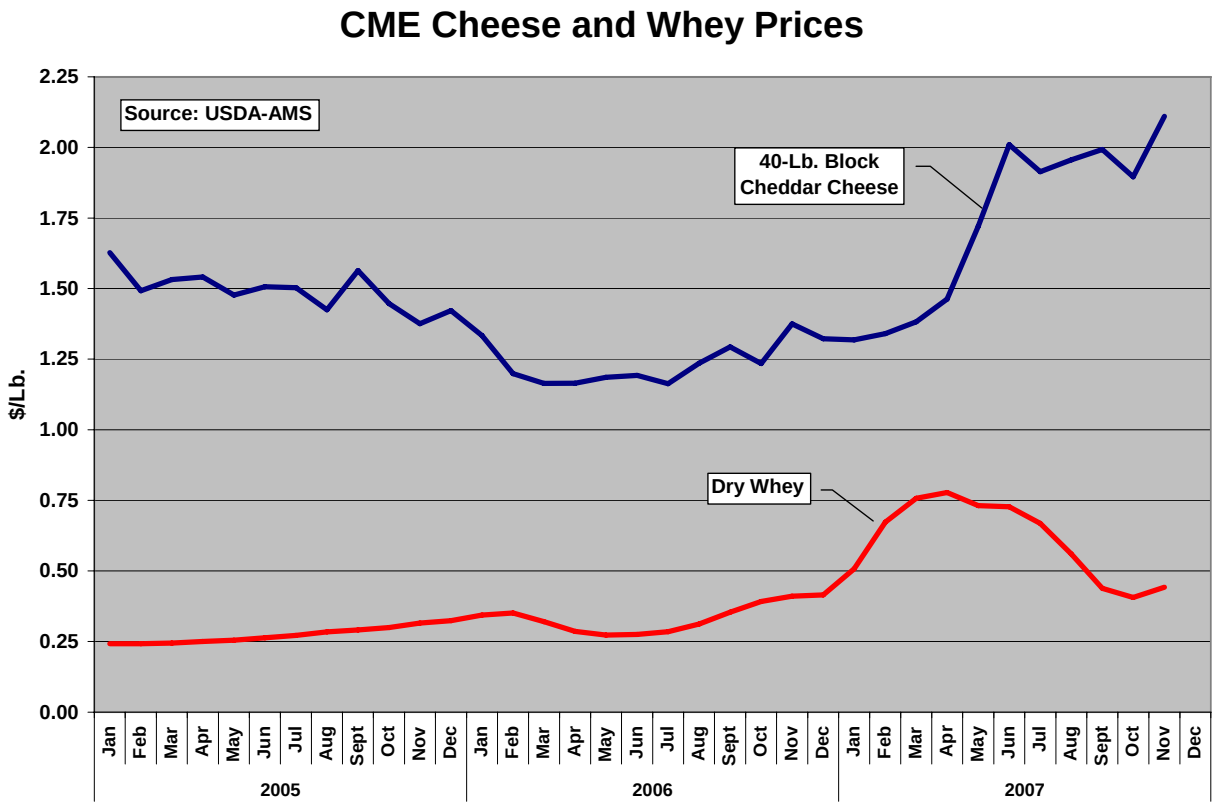
Review of 2007

Since the mid 1990s, volatile milk prices have exposed Wisconsin dairy producers to considerable price risk. In 2003, the All Milk Price paid to Wisconsin dairy producers averaged $12.89 per hundredweight; in 2004 it set a record high at $16.85; in 2005 it declined to $15.58; in 2006 it fell back to a low of only $13.32. In 2007 the pendulum swung back powerfully in a positive direction. The average Wisconsin All Milk Price for 2007 will set a new record near $19.20 per hundredweight, an improvement over 2006 of almost $6 per hundredweight. The Class III price (federal order minimum price for milk used for cheese) will average near $18 per hundredweight in 2007, breaking the previous record of $15.39 per hundredweight set in 2004.



Since the cheese industry uses more than 85 percent of Wisconsin's milk, cheese and whey prices are major drivers of Wisconsin milk prices, and both were up considerably in 2007. Chicago Mercantile Exchange (CME) 40-pound cheddar block prices started the year at $1.2875 per pound in January and then increased to reach a record high $2.2025 per pound in late November. For 2007, the CME 40-pound block price will average about $1.75 per pound compared to averages of $1.49 and $1.24 per pound for 2005 and 2006, respectively.



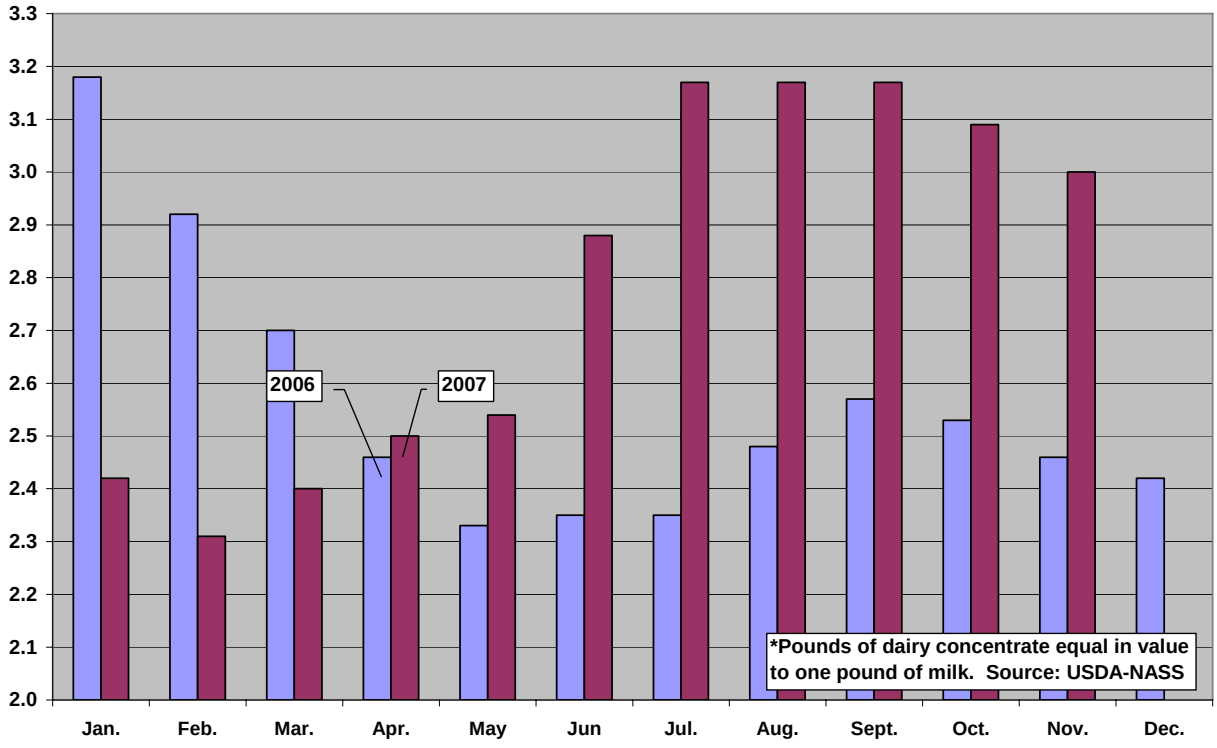
Dry whey prices, which averaged only $0.27 per pound in 2005 and $0.33 in 2006, approached $0.80 per pound in the early summer of 2007 and will average about $0.60 per pound for the year. A hundredweight of raw milk yields about 10 pounds of cheese and 6 pounds of dry whey. Thus, the main reason that the average All Milk Price increased by $6.00 in 2007 is that cheese prices averaged about $0.50 per pound higher ($5.00 per hundredweight of raw milk) and dry whey prices averaged about $0.25 per pound higher ($1.50 per hundredweight of raw milk).

Changes in farm level milk prices and dairy product prices are explained by changes in total milk production, the production of dairy products and the sale of milk and dairy products in both the U.S. and international markets. Milk prices were depressed in 2006 because U.S. milk cow numbers were up by 0.8 percent from the year before and milk yield per cow was up 2 percent, both of which combined to boost total milk production by 2.8 percent. While commercial sales of milk and dairy products increased 2.4 percent in 2006, this was less than the increase in milk production.

Year-over-year gains in milk production slowed during the first half of 2007. U.S. milk production was up less than 1 percent for the first half of the year but climbed by more than 3 percent during the second half of the year. Total milk production for 2007 is expected to total about 185.7 billion pounds, up about 2 percent from the 181.8 billion pounds produced in 2006.

The slow growth in total milk production during the first half of 2007 was due to month-to-month declines in U.S. milk cow numbers from January through April and increases in milk per cow averaging less than 1 percent, This was a response by dairy producers both to the depressed milk prices in 2006 and to higher feed and energy prices that reduced profits. Generally, farmers will feed cows for higher milk production when the ratio of milk prices to feed prices is 3 or higher. The milk-feed price ratio was below 3 throughout 2006. But by July of 2007, higher milk prices moved the ratio above 3. Since July, increases in milk per cow of more than 2 percent were reported. For the year, average milk per cow is estimated at about 20,300 pounds, 1.7 percent higher than 2007.

Milk-Feed Price Ratio*



Milk cow numbers declined January to April and fell below year ago levels in April and May. By late spring dairy producers began to respond to much improved milk prices by adding cows. Beginning in May cow numbers increased each month, and by July, the nation's dairy herd was larger than it had been a year earlier.

U.S. Milk Production			
Month	***2006 (Mill. Lbs.)***	***2007 (Mill. Lbs.)***	***Percent Change***
January	15,343	15,585	+1.58
February	14,238	14,298	+0.42
March	15,966	16,123	+0.98
April	15,538	15,757	+1.41
May	16,068	16,208	+0.87
June	15,324	15,476	+0.99
July	15,168	15,746	+3.81
August	15,061	15,536	+3.15
September	14,481	14,864	+2.64
October	14,857	15,376	+3.49
November	14,523	14,989	+3.21
December	15,231	NA	NA
Total	181,798	185,701	+2.15

Source: USDA-NASS. NA = Not Available. Annual 2007 production is estimated.

Cow numbers increased because dairy producers were culling fewer cows and adding replacement heifers. Dairy cow slaughter was above year-ago levels early in the year — up 12 to 18 percent January through March and up 26 percent for April — but fell more than 3 percent below year-ago levels from June through September.[1] By October, cow slaughter was once again above year-ago levels and is expected to stay higher for the remainder of the year as dairy producers cull low-producing cows in anticipation of higher feed costs this winter.

The July 2007 USDA Cattle Inventory Report showed 3.9 million head of dairy replacements, 2.6 percent more than July 2006. The ratio of dairy replacements per 100 milk cows was 42.6 compared to 41.5 for 2006 and 40.9 for 2005, so there were replacements available to expand cow numbers. For the year, estimated milk cow numbers will average about 9,147,000 head, 0.4 percent higher than 2006.

Higher farm-level milk prices have meant higher retail prices for dairy products. In October, when retail prices for all food were up 4.4 percent from October 2006, dairy products as a group were priced 12.8 percent higher.[2] Retail prices for fresh whole milk were up 21.4 percent, cheese prices up 12.8 percent and butter up 2.2 percent.

[1] The increase in slaughter numbers for April was partially due to the completion of Round 4 of Cooperatives Working Together (CWT) which removed 53,783 milk cows.

[2] CPI report, "Consumer Prices: Energy and Food", Bureau of Labor Statistics, U.S. Dept. of Labor.

U.S. Milk Cows and Milk per Cow						
Month	***Cow Numbers (1,000 head)***			***Milk per Cow (pounds)***		
	2006	***2007***	***% Change***	***2006***	***2007***	***% Change***
January	9,081	9,130	+0.54	1,690	1,707	+1.01
February	9,088	9,126	+0.42	1,567	1,567	0.00
March	9,106	9,134	+0.31	1,753	1,765	+0.68
April	9,116	9,122	+0.07	1,705	1,727	+1.29
May	9,129	9,127	-0.02	1,760	1,776	+0.91
June	9,139	9,135	-0.04	1,676	1,695	+1.13
July	9,119	9,157	+0.42	1,663	1,720	+3.43
August	9,114	9,157	+0.47	1,653	1,697	+2.66
September	9,107	9,161	+0.59	1,590	1,623	+2.08
October	9,107	9,169	+0.68	1,631	1,677	+2.82
November	9,111	9,175	+0.70	1,594	1,634	+2.51
December	9,126	NA	NA	1,669	NA	NA
Ann. Avg.	9,112	9,147	+0.39	19,951	20,304	+1.77

Source: USDA, NASS. NA = Not Available. Averages for 2007 are estimated.

Commercial disappearance of all dairy products totaled 184.5 billion pounds for 2006, a strong increase of 2.4 percent over 2005. Higher retail prices will trim growth in commercial disappearance for 2007. Fluid milk sales may be hit the hardest. Beverage milk sales for all federal milk marketing orders and the state of California for the month of October were 1 percent lower than a year ago. Estimated commercial disappearance for the period of January through September showed American cheese sales down 0.6 percent from a year ago, but sales of other cheese types up 4.6 percent. With good milk and dairy product sales earlier in the year, commercial disappearance for the year may still total 188.6 billion pounds, up 2.2 percent from 2006.

Commercial disappearance includes U.S. exports of dairy products. Lower volume of nonfat dry milk exports was more than offset by higher export volumes of other dairy products, netting an increase in the total volume of 2007 U.S. dairy product exports on a total milk solids basis. Export data released by USDA's Foreign Agricultural Service shows the following dairy exports for the first nine months of 2007 compared to a year ago on a volume basis: nonfat dry milk 17.8 percent lower, cheese up 37.7 percent, butter up 153 percent, dry whey up 18.9 percent and whey protein concentrates up 29.9 percent.

With milk production running more than 3 percent higher than a year ago since July, a record high November cheese price was surprising. This anomaly can be explained by smaller than expected cheese production and inventories. Cheddar cheese production was 8.4 percent below its year ago level in September and 0.4 percent below in October. Cheddar cheese production year-to-date was 2.5 percent below year ago levels. October production of all cheese varieties was up 1.6 percent and up just 1.4 percent for the year. Three factors held cheese production in check:

slow growth in milk production the first half of the year; tight stocks and high prices of nonfat dry milk, which restricted standardization of raw milk by cheese makers and lowered cheese yields; and high dry whey prices, which negatively impacted the net margins of many cheese makers. Most cheese makers don't process their whey, but the product price formula used by federal milk marketing orders to establish the minimum pay price for Class III milk includes dry whey prices. Therefore, cheese makers had to pay higher prices for raw milk even though they didn't receive the high whey prices used in the Class III formula.

Tighter cheese stocks also supported higher cheese prices. As of October 31, American cheese stocks were down 2.6 percent from than a year earlier and the stocks of all natural cheeses were down 2.1 percent. American cheese stocks for September were the lowest since 2003. In contrast, higher butter production and much higher butter stocks kept wholesale butter prices around $1.30 per pound. Compared to a year ago, butter production was 9.1 percent higher for October and 5.5 percent higher year-to-date. October 31 butter stocks were 24 percent higher than a year ago.

October 31 Butter and Cheese Inventories (Million Lbs.)

Product	***2006***	***2007***	***Percent Change***
Butter	157.6	195.4	+24.0
American cheese	533.9	520.1	-2.6
All Natural cheeses	810.2	793.6	-2.1

Source: USDA, AMS

Higher dry whey and nonfat dry milk prices have been driven by a strong domestic market and an even stronger international market for milk proteins. As a result, the burdensome stocks of surplus nonfat dry milk purchased by USDA under the dairy price support program as late as 2004 have disappeared.

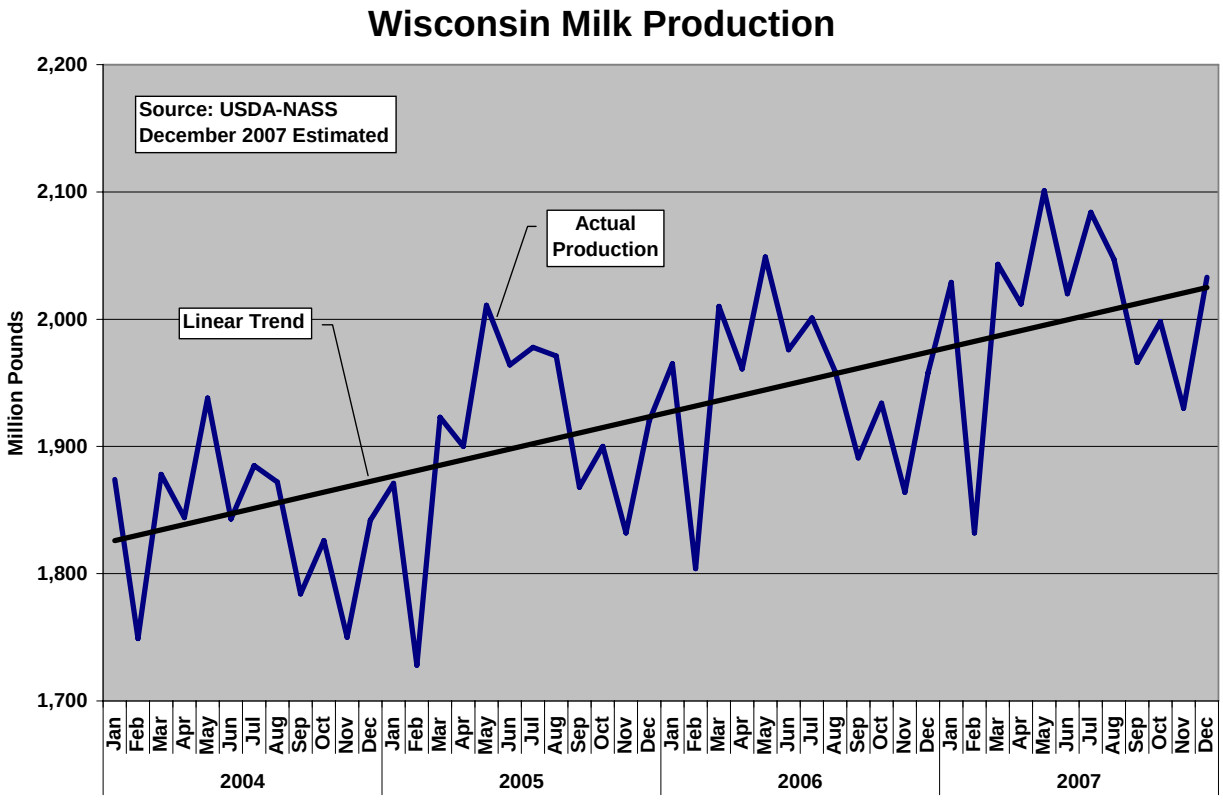
Strong demand for milk proteins is due in large part to world-wide growth in nutritionally enhanced food products and nutritional beverages. World market prices for nonfat dry milk and dry whey increased to levels that enabled the United States to profitably export these products. As a result, U.S. stocks of nonfat dry milk have become tight and the price of nonfat dry milk, which was in the $0.83–1.00 per pound range most of the 2004 to 2006 period, increased to more than $2 per pound by June of 2007.

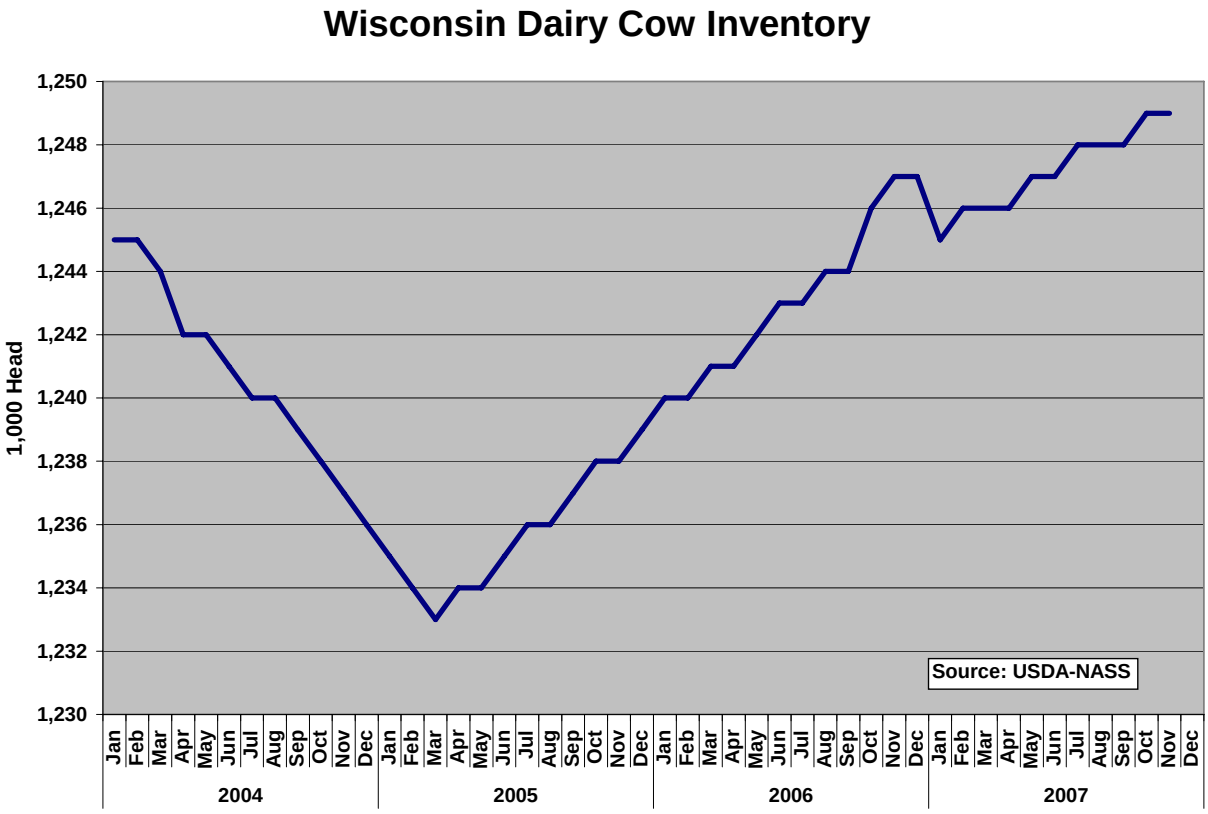
Since dry whey may be used as a substitute for nonfat dry milk as an ingredient in many food applications, whey piggybacked on nonfat dry milk, enjoying increased exports at much higher prices. Also helping drive higher world prices and expanded U.S. dairy exports were the severe drought in Australia, slow milk production growth in the EU, the weak U.S. dollar and a growing world-wide demand for cheese and butter as well as milk proteins.

Following a long period of stagnant milk production that began in the mid 1980's,

Wisconsin continues to experience a turnaround in total milk production that started in 2005. In 2005, Wisconsin produced 22.9 billion pounds of milk, a 3.5 percent increase over 2004 production. Production grew another 2.3 percent, to 23.4 billion pounds, in 2006. Wisconsin will produce about 24.1 billion pounds of milk in 2007, an increase of 3.2 percent and less than 1 billion pounds short of the record 25 billion pounds produced in 1988. Since 2004, Wisconsin has increased total milk production by more than 2 billion pounds. The combination of milk prices averaging about $6 per hundredweight higher than 2006 and milk production up about 700 million pounds means Wisconsin's gross income from the sale of milk will be about $4.6 billion in 2007, an increase of about $1.5 billion over 2006.

Wisconsin has shown consistent growth in its dairy herd since early 2005. State milk cow numbers averaged 1.236 million head for 2005, 1.243 million head for 2006 and an estimated 1.247 million head for 2007. Since 2004 Wisconsin has increased milk per cow about 9 percent, from 17,796 pounds to an estimated 19,335 pounds for 2007. State initiatives such as low interest milk volume loans to expand cow numbers, planning grants under Dairy 2020 and investment tax credits as well as a positive image for Wisconsin's dairy industry promoted by the Professional Dairy Producers of Wisconsin and the Wisconsin Dairy Business Association.





Outlook for 2008

It's almost certain that farm milk prices in the U.S. will be lower in 2008 than they were in 2007. The question is not whether milk prices will decline, but by how much. Dairy producers will respond to the record high milk prices received during 2007 by producing more milk, and high wholesale and retail dairy product prices will have some dampening effect on milk and dairy product sales. This larger domestic supply and diminished demand will be partially offset by a boost in dairy exports driven by the weak dollar.

U.S. milk cow numbers are likely to grow for at least the first half of 2008. With normal culling, the number of dairy replacement heifers is not only adequate to maintain the size of the nation's dairy herd, but also for it to grow. It's reasonable to assume that average U.S. milk cow numbers will increase to around 9.19 million head, an increase over 2007 of about 0.5 percent.

Higher corn, soybean and hay prices will drive up feed costs in 2008. Demand from the biofuel industry for corn and soybeans will keep these feeds pricey all year. But hay prices should ease with a good 2008 harvest. In 2007, alfalfa hay production was down about 3 percent from 2006. And dry summer conditions forced dairy and livestock producers, particularly in the South and Southeast, to tap into winter hay supplies much earlier than normal. Fall 2007 alfalfa hay prices were up about 25 percent for the U.S. with reports of prices 40–50 percent higher in California and other parts of the West.

High feed prices, along with weakening of milk prices, will likely result in a milk-feed-price ratio once again below 3 by the second half of the year or even earlier. But barring unfavorable weather, it's reasonable to expect an increase in annual milk per cow of around 1.6 percent, to 20,625 pounds, for 2008.

U.S. Milk Production and Disappearance Indicators, Estimated 2007 and Projected 2008

	2007	***2008***	***Percent Change***
Cows (1,000 head)	9,147	9,193	+0.5
Milk per cow (pounds)	20,300	20,625	+1.6
Total milk production (bill. lbs.)	185.7	189.6	+2.1
Commercial disappearance (bill. lbs.)	188.6	193.3	+2.5

With these cow number and yield projections, total 2008 milk production would reach 189.6 billion pounds, an increase over 2007 of 2.1 percent. USDA's December dairy forecast estimates 2008 milk production slightly higher at 190.5 billion pounds.

High wholesale and retail prices during 2007 and into 2008 will likely weaken domestic sales of beverage milk and cheese. But larger U.S. exports of dairy products could still net total commercial disappearance of about 193 billion pounds, an increase over 2007 of about 2.5 percent. USDA's December dairy forecast estimates 2008 commercial disappearance even higher, at 194.7 billion pounds.

Prices for milk and dairy products in 2008 are projected to decline from their 2007 high but remain well above recent historical averages. The largest price drops will be for cheese and dry whey. CME 40-pound cheddar blocks may start the year near $1.75 per pound. But with milk production anticipated to run 2 percent or more above year-ago levels during the first half of the year, cheese production will increase and stocks will grow. This will put considerable downward pressure on cheese prices, to a seasonal low of about $1.50 per pound by the middle of the second quarter. Cheese prices may increase seasonally throughout the third quarter but larger milk production will weaken the normal seasonal increase. Cheese prices may peak around $1.70 per pound in September before declining seasonally and ending the year near $1.50 per pound.

With higher production and stocks, dry whey prices should be more stable in 2008, in a range of $0.42–0.50 per pound. Expected dry whey exports near 2007's very high volume will help to hold prices at these levels.

With these cheese and dry whey price projections, the Class III price would average about $16.30 per hundredweight for the first quarter, $15.00 for the second quarter, $16.35 for the third quarter and $15.70 for the fourth quarter. Increased milk production during 2008 will likely

weaken the seasonal price increase normally observed for Class III. Expect Class III prices above $17.00 per hundredweight in January, declining to about $14.65 in May, peaking below $17.00 in September and ending the year below $15.00. For the year, the Class III price is projected to average about $15.85 per hundredweight, about $2.15 lower than the 2007 average.

Projected 2008 Milk and Dairy Product Prices

Quarter	*40-lb. Block Cheddar Cheese*	*Dry Whey*	*Butter*	*Nonfat Dry Milk*	*Class III Price*	*Class IV Price*	*Wisconsin All Milk Price*
	$/lb.	$/lb.	$/lb.	$/lb.	$/cwt.	$/cwt.	$/cwt.
Jan-Mar	1.67	0.43	1.25	1.75	16.30	18.40	17.65
Apr-Jun	1.55	0.42	1.32	1.60	15.00	17.45	16.30
Jul-Sep	1.65	0.45	1.42	1.52	16.35	17.15	17.70
Oct-Dec	1.60	0.46	1.35	1.45	15.70	16.30	17.00
Ann. Avg.	1.60	0.45	1.35	1.60	15.85	17.35	17.20

Large stocks of butter relative to needs going into 2008 will hold down butter prices initially. Some strengthening will occur by the end of the second quarter, with prices peaking at around $1.45 per pound at the end of the third quarter. Butter prices are projected to average about $1.35 per pound for the year.

Nonfat dry milk prices are expected to decline throughout the year as global production and stocks recover from low 2007 levels. But the price decline will be limited by continued large U.S. exports and increased use of nonfat dry milk by cheese makers to standardize raw milk. For the year, nonfat dry milk prices are expected to average about $1.60 per pound.

With these butter and nonfat dry milk prices, the Class IV price is projected to average about $17.35 per hundredweight in 2008. The Class IV price will most likely be the mover of Class I (beverage milk) prices for every month in 2008. The Wisconsin All Milk Price is projected to average about $17.65 per hundredweight for the first quarter, $16.30 for the second quarter, $17.70 for the third quarter, and $17.00 for the fourth quarter. For the year, the projected average Wisconsin All Milk Price is about $17.20 per hundredweight, $2 under 2007.

In summary, Wisconsin dairy producers may experience average milk prices about $2 per hundredweight lower than 2007, but still $3 higher than the average annual All Milk price from 1997-2006. Lower milk prices coupled with higher feed and energy costs will trim profit margins from those experienced in 2007.

Livestock and Poultry

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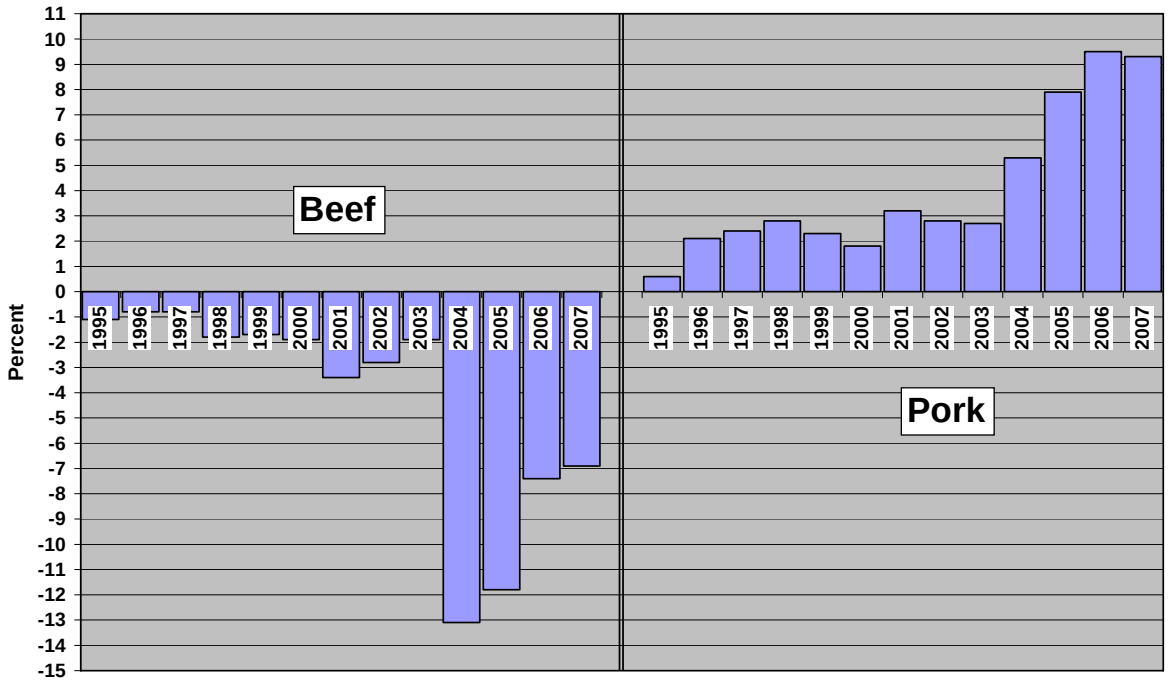
2007 in Review

U.S. meat production increased more than 1 percent in 2007 to about 90.5 billion pounds, a new record high. Pork production rose more than 3 percent to a new record. This was the seventh consecutive year that pork output rose, the longest such string of annual increases in 90 years of records. Pork production has increased more than 15 percent during the last seven years. Turkey output rose 3 percent, also to a record high. Broiler production showed little change, matching its record high set in 2006. Beef output rose about 0.5 percent, but remained about 3 percent below its record high set in 2002. U.S. meat production has increased in 23 of the last 25 years — downturns of less than 0.25 percent were recorded in 2003 and 2004.

Despite the small increase in meat production, the average annual price of most livestock and poultry increased in 2007. Cattle, lambs, broilers and turkeys all posted higher average prices. However, the price of hogs, feeder cattle and broilers all sagged badly during the last third of 2007.

Beef exports increased for the third straight year but continued well below the pre-2004 levels before BSE-related restrictions became effective. Beef imports rose about 5 percent during 2007 despite the weaker dollar.

U.S. Foreign Trade Balance (Exports minus Imports) as a Percent of Production



After a slow start, pork exports set another record high in 2007. Pork imports also recorded a modest increase. Net pork exports (exports minus imports) of over 1.9 billion pounds again amounted to more than 9 percent of U.S. pork production in 2007.

Despite much higher corn prices, the average price of feeder steers in 2007 was about the same as in 2006. However, the average price of feeder cattle fell sharply after an early September peak.

A 7 percent increase in cow slaughter in 2007 was split about equally between dairy cows and beef cows.

Per capita consumption of meat declined slightly in 2007. After a long, sustained rise, the trend has been sidewise in recent years with annual totals between 218.9 and 221.4 pounds per person every year except one from 1999 and 2007.

U.S. Meat Production Likely Up Slightly in 2008

Meat output is expected to rise about 1 percent in 2008 to yet another record high. If so, it would be the 24th record high achieved in the last 26 years. Production of beef and lambs should be near 2007 levels but each of the other major livestock and poultry categories should post modest increases.

Steer Prices Should Average Near 2007 Levels in 2008

After bringing more than $90.00 per cwt. for the first time in 2007, average U.S. choice steers (Texas, Oklahoma) may have trouble reaching that price in 2008, but they should come close. Further recovery of the beef export market to nearer the 2003 level would help keep average steer prices over the $90.00 per hundredweight threshold.

Feeder Cattle Prices May Average Lower in 2008

The annual average of feeder cattle prices (Oklahoma City) has hovered between $104 and $110 per hundredweight during the last four years. Feeder prices held up well in 2007 despite much higher corn prices. However, feeder cattle prices did decline during the last four months of 2006. On the negative side, corn prices are expected to remain strong in 2008. On the positive side for prices, the expected cyclical expansion of the cattle production cycle has not been robust. Widespread drought in many areas of the country in recent years has limited any expansion. The number of beef cows and the size of the annual calf crop have continued to decline slowly to levels not seen since the 1960s.

Cow Prices Likely About Steady in 2008

Following a couple of down years, utility boning cow prices averaged higher in 2007 despite a weak fourth quarter. This increase in the annual price occurred despite an increase of 7 percent in cow slaughter. Both dairy cow slaughter and beef cow slaughter rose 7 percent. This increase in cow slaughter followed a 12 percent rise in 2006 from the lowest level in over 40 years. Barring a worsening drought, any cow slaughter increase in 2008 should be small and allow cow prices to average near 2007 levels.

Average Hog Prices Likely Lower in 2008

The hog production industry enjoyed a nearly unprecedented 14 quarters of profitability from the second quarter of 2004 through the third quarter of 2007, during which hog prices averaged $50.28 per hundredweight That followed a difficult six-year (1998-2003) period when hog prices averaged $38.45 per hundredweight.

However, an unexpected increase of more than 6 percent in hog slaughter during the last five months of 2007 sent hog prices reeling from an average of over $52.00 in August to about $36.50 in November. A key factor in the upswing is better hog health and survival rates due to recent progress against the circovirus problem.

The annual average price of hogs in 2008 may be a bit below the $46 to $47 per hundredweight level achieved in both 2006 and 2007. The seasonal pattern is expected to be different than that in 2007, when hog prices averaged $49.64 per hundredweight for the first three quarters but less than $40.00 during the fourth quarter. Prices in 2008 will likely exhibit less seasonal variation.

Hog prices are likely to continue to be supported by the uptrend in pork exports, which nearly doubled from 2003 to 2007. However, recent USDA surveys of hog producers indicate that the number of market hogs and hogs kept for breeding will continue to be up 1 to 3 percent greater than a year earlier, suggesting that U.S. pork output will show a moderate increase for the seventh consecutive year.

Average Broiler Prices May Be Slightly Lower in 2008

Broiler prices rebounded about 17 percent from a two-year decline to match the annual average price achieved in 2004. Prices were unusually strong during the first three quarters, but declined more than usual in the fourth quarter.

The price surge early in the year resulted from an unusual 4 percent decline in broiler output in the first quarter. However, broiler output in the last half of 2007 was up about 3 percent from 2006. Broiler production is expected to rise 2 to 4 percent in 2008 as annual broiler marketings reach the 9 billion mark.

Turkey Prices Should Hold Most of Recent Price Gains in 2008

Following a three-year price decline and poor economic returns earlier in the decade, turkey producers cut production, and prices have recovered to reach new highs in 2007. Prices have increased in each of the past three years.

Prices increased in 2006 and 2007 even though output increased 3 percent both years. Smaller increases in production in 2008 should permit most of the recent price gains to be retained.

Lamb Prices Are Expected to Rise a Little in 2008

After a sharp price decline of 21 percent in 2006, lamb prices rose more than 10 percent in 2007. Another modest price increase is expected in 2008, but this would still leave lamb prices below the three high years of 2003-2005. A very slow decline in production and a very slow increase in imports in recent years have

allowed annual lamb consumption to remain at 1.1 pounds per person during this decade.

Egg Output Up and Prices Lower in 2008

The historic volatility of egg prices continued in 2007 as egg producers cut production about 1 percent in response to high and rising corn prices in late 2006 and into 2007. Egg prices responded with a 50 percent rise from the 2006 average. Egg producers can respond rapidly to a change in input costs, and egg prices often react quickly and violently to changes in output. Egg production should increase about its usual 1 percent per year in 2008, forcing average prices down from their very lofty levels of 2007.

Retail Price of Meat Likely to Rise Again in 2008

The average retail price of meat, poultry, fish and eggs rose about 5 percent during 2007, somewhat more than the rise in the overall Consumer Price Index. Prices should continue to increase in 2008, although possibly at a slightly reduced pace. Despite higher prices, purchases of meat and poultry continue to take a smaller bite from consumer income. In the last three years, consumer expenditures for meat and poultry represented only 11.5 percent of total food expenditures and 1.9 percent of disposable income. These percentages are down from 15.8 and 4.1 percent, respectively, in 1970-74.

Meat Consumption Per Capita May Edge Lower in 2008

Meat consumption per capita may decline a bit in 2008. It has been relatively stable during this decade as the consumption of broilers has slowly risen to offset minor losses for beef, pork and turkey. Total annual meat consumption is about 220 pounds per person.

Beef and veal consumption per person peaked at 97.7 pounds in 1976. It has fallen below 66 pounds in recent years. After peaking at 60.6 pounds in 1971, annual pork consumption per capita has ranged between 48 and 54 pounds each year since 1982. Turkey consumption rose to a peak of 18.5 pounds per capita in 1996 and has receded to about 17 pounds during this decade. Broiler consumption has risen for decades and continues to trend slowly upward. It was only 23.5 pounds per person in 1960 and is now above 80 pounds.

U.S. Meat and Poultry Expenditures

Years	*Expenditures as % of:*	
	Disposable Personal Income	***Total Food Expenditures***
1970 -74	4.1%	15.8%
1975 -79	3.8%	15.8%
1980 -84	3.2%	14.6%
1985 -89	2.5%	13.2%
1990 -94	2.2%	12.9%
1995 -99	1.9%	12.3%
2000 -04	1.9%	11.7%
2005 -07	1.9%	11.5%

Corn and Soybeans

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Introduction

Markets for grains and oilseeds experienced unprecedented volatility through the 2006/07 marketing year (Sept.1 –August 31). A combination of factors caused the volatility. There was strong demand, fueled partly by corn use in bio-fuels production. A weakening U.S. dollar made U.S. commodity exports increasingly competitive in the world market. And some speculators took unusually large positions in grain futures markets. As noted in last year's *Status of Wisconsin Agriculture*, the size of speculative market positions relative to commercial positions (those taken by people in the grain business) in the futures market has grown significantly, and this has contributed to both higher prices and greater price volatility.

While prices were well above historical norms at the end of the 2006/07 marketing year, they were below levels reached earlier in the year. However, the upward price trend returned in the first quarter of the 2007/08 marketing year, and prices for the current year will still be above historical averages.

Corn

According to USDA's estimate in December 2007, we began the current marketing year (September 1) with 1.3 billion bushels of corn. This is almost 50 percent larger than what USDA had projected at the beginning of 2007, but it's still 33 percent smaller than the previous year's beginning stocks. The carryout is larger than expected because farmers planted substantially more corn acres than predicted.

U.S. producers harvested 13.2 billion bushels of corn in 2007. This far exceeds the previous production record of just over 11 billion bushels set in the 2005/06 marketing season. The record crop was due to more corn acres planted than in any year since the 1940's, as well as to excellent yields. Planted acres in spring 2007 totaled 93.6 million, up almost 20 percent from the previous year. U.S. average yield of 153 bushels per acres was the second highest ever, topped only by the 160.4 bushel per acre yield in 2004.

Wisconsin followed the national trend by increasing corn acres in 2007, although by a smaller percent. Wisconsin farmers planted just over 4 million acres to corn, 11 percent more than the previous year. Wisconsin corn yields averaged 140 bushels to the acre, which was below yields in each of the previous two years. Despite somewhat lower yields, increased acreage resulted in a total Wisconsin corn crop of 462 million bushels, up more than 15 percent over the 2006 corn harvest.

Thanks to larger production and relatively high prices, the value of Wisconsin' corn crop increased significantly. While 2006 represented a significant improvement over 2005, the state's 2007 corn harvest had a total value (based on average prices in December 2007) of nearly $1.7 billion dollars. This is twice the value of the Wisconsin corn crop from just two years ago.

U.S. Corn Balance Sheet (Sep/Aug)								
Mktg. Year	***00/01***	***01/02***	***02/03***	***03/04***	***04/05***	***05/06***	***06/07****	***07/08*** **
	Million Bushels (Except as Noted)							
Beg. Stocks	1,718	1,899	1,596	1,087	958	2,114	1,967	1,304
Imports	7	10	14	14	14	9	12	15
Acres Planted (Mil.)	79.5	75.8	78.9	78.6	80.9	81.8	78.3	93.6
Acres Hvst. (Mil.)	72.7	68.8	69.3	70.9	73.6	75.1	70.6	86.1
% Harvested	91.4%	90.8%	87.8%	90.2%	91.0%	91.8%	90.2%	92.0%
Yield (Bu./A.)	**137.1**	**138.2**	**129.3**	**142.2**	**160.4**	**147.9**	**149.1**	**153**
Production	9,968	9,507	8,967	10,089	11,807	11,112	10,535	13,168
Total Supply	**11,693**	**11,416**	**10,578**	**11,190**	**12,776**	**13,235**	**12,514**	**14,487**
Feed & Res.	5,890	5,868	5,563	5,795	6,164	6,136	5,598	5,650
Food/Seed/Ind.	1,967	2,054	2,340	2,537	2,686	2,981	3,488	4,590
Ethanol					1,323	1,603	2,117	3,200
Exports	1,937	1,905	1,588	1,900	1,814	2,147	2,125	2,450
Total Demand	**9,794**	**9,820**	**9,491**	**10,232**	**10,664**	**11,264**	**11,210**	**12,690**
Ending Stocks	1,899	1,596	1,087	958	2,112	1,971	1,304	1,797
Stocks to Use (%)	**19.39%**	**16.25%**	**11.45%**	**9.36%**	**19.80%**	**17.50%**	**11.63%**	**14.16%**
Average Farm Price ($/Bu.)	**$1.85**	**$1.97**	**$2.32**	**$2.42**	**$2.06**	**$2.00**	**$3.04**	**$3.65**

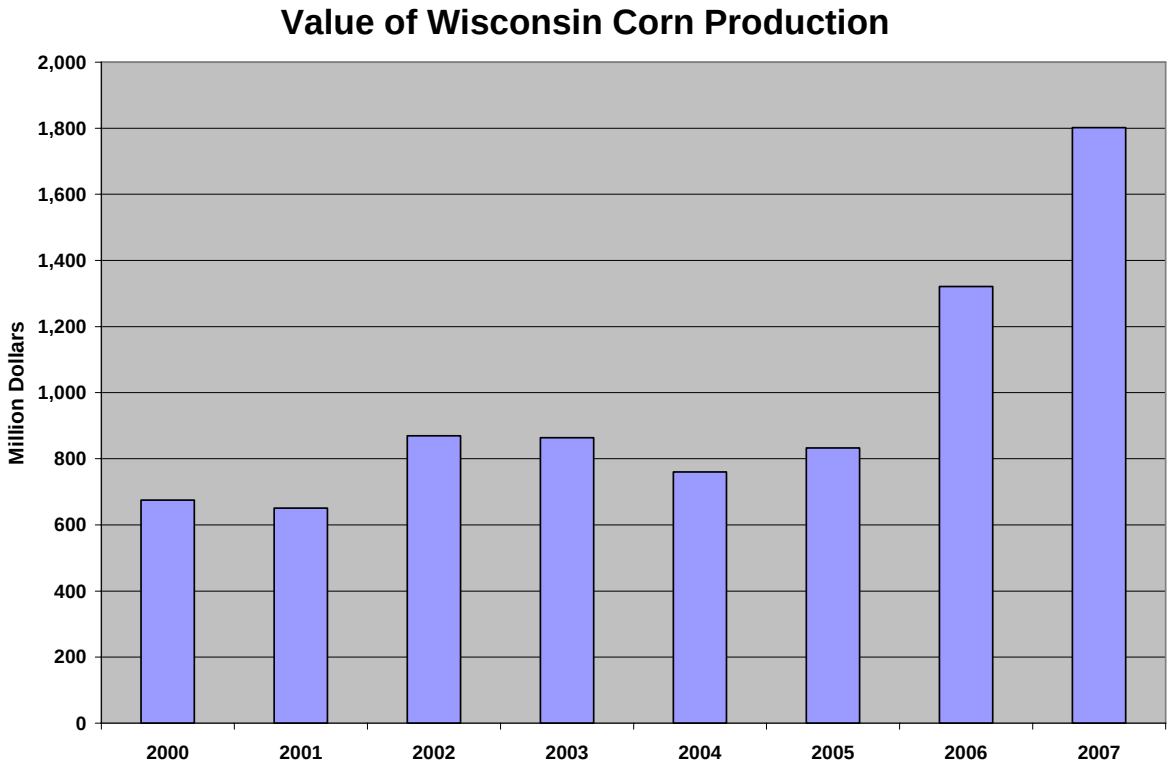
* USDA Estimate as of December 2007
**USDA Forecast as of December 2007

USDA projects total corn use for 2007/08 to be 12.7 billion bushels — up 13 percent from the previous year. That means that the projected 2007/08 use of corn exceeds what U.S. farmers have produced in every crop year except the current one. If USDA projections hold up, corn carryout in 2007/08 will be 1.8 billion bushels, an increase of 38 percent over last year's carryout. However, at this point analysts are predicting that fewer acres will be planted to corn in 2008, so we'll likely see a smaller carryout in the 2008/09 crop year even with an excellent production season. If the expected decline in acres were coupled with poor yields, 2008/09 carryout would fall to precariously low levels. As a result, even with a larger carryout predicted for August 2008, corn prices this crop year are likely to average above those in 2006/07. They are also likely to continue to be extremely volatile.

The volume of corn used for ethanol will again increase more than all other types of uses. As of December 2007, USDA was projecting that 3.2 billion bushels would be used to make ethanol in 2007/08, up from 2.1 billion last year and 1.6 billion in the 2005/06 marketing year. But ethanol is not the only reason for high prices and abnormal volatility. Also contributing is the deteriorating value of the U.S. dollar, which partially offsets the higher prices of U.S. commodities in the export market.

Exports have remained strong even with domestic prices at near-record levels. Total corn exports for the 2007/08 marketing year are currently projected at

2.45 billion bushels, more than 15 percent above last year and almost 25 percent higher than 2005/06, when the average U.S. corn price at the farm level was $2 per bushel.



Corn prices are also supported by the continuation of large speculative bets by non-commercial futures traders. These traders began taking on large positions in most domestic grain futures markets in late 2006, and have continued to hold a large percentage of total open interest. A significant amount of last year's volatility came from speculators moving in and out of the markets. However, they have continued to be net buyers. Downside volatility has tended to be associated with the liquidation of long speculative positions, and upside with the re-establishment of positions at lower prices. This activity is expected to continue at least through the rest of the current marketing year.

For most corn producers, the 2007 harvest represents a banner year. With an expectation of strong demand from all three major categories (ethanol, exports, and feed), prospects for next year are also bright. Prices in 2007/08 will exceed those of the previous crop year despite a projected increase in the carryout. There will likely be opportunities to price 2008 corn at $4 per bushel or higher. The major challenge to producers will be dealing with extreme price volatility. Price swings in excess of $1 per bushel are likely.

Soybeans

In December, USDA estimated the 2007 soybean harvest at just under 2.6 billion bushels. This was about 19 percent smaller than the previous year's harvest, with both fewer acres and lower yields accounting for the reduction. Total U.S. area planted to soybeans in 2007 was estimated to be 63.7 million acres, compared to 75.5 million acres in 2006. Yields averaged 41.3 bushels per acre, compared to 42.7 bushels per acre in 2006, and 43 bushels per acre in 2005.

U.S. Soybean Balance Sheet (Sep/Aug)

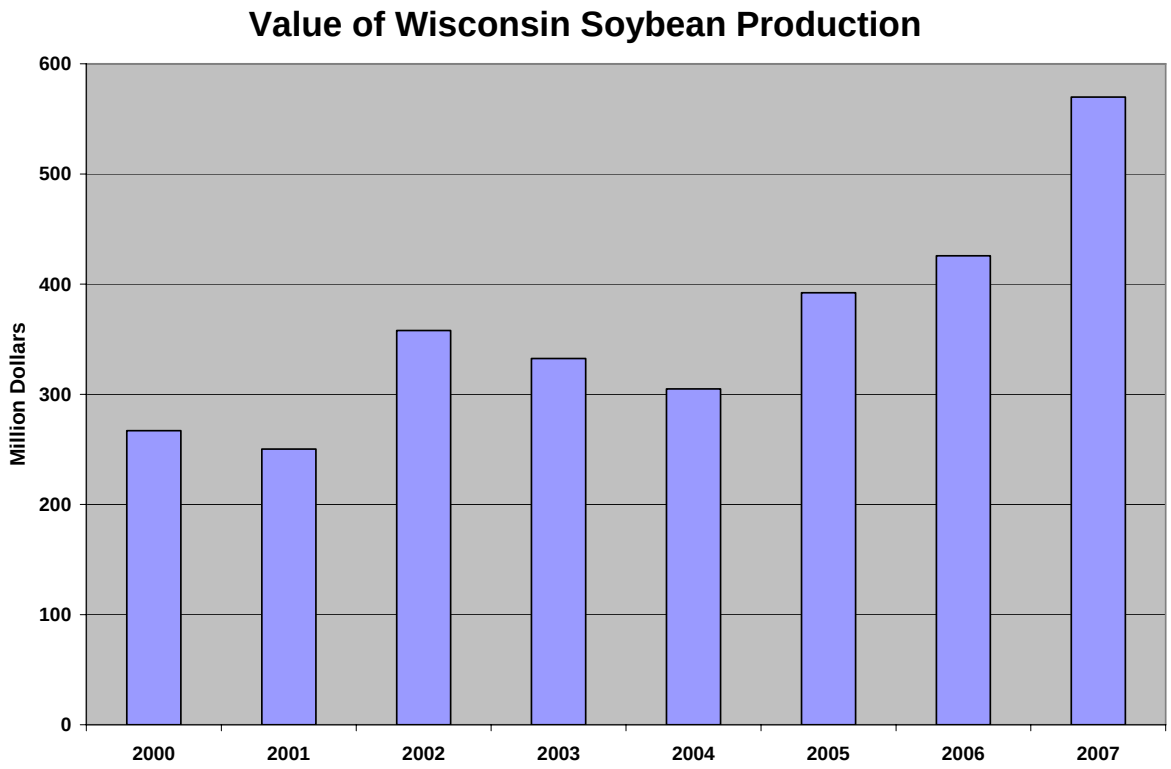
Mktg. Year	*00/01*	*01/02*	*02/03*	*03/04*	*04/05*	*05/06*	*06/07**	*07/08***
				Million Bushels (Except as Noted)				
Beg Stocks	290	248	208	178	112	256	449	573
Imports	4	2	5	6	4	3	9	6
Acres Planted (Mil.)	74.3	74.1	74	73.4	75.2	72	75.5	63.7
Acres Hvst. (Mil.)	72.4	73.0	72.5	72.5	74	71.3	74.6	62.8
% Harvested	97.4%	98.5%	98.0%	98.8%	98.4%	99.0%	98.5%	98.6%
Yield	**38.1**	**39.6**	**38**	**33.9**	**42.2**	**43**	**42.7**	**41.3**
Production	2,758	2,891	2,756	2,454	3,124	3,063	3,188	2,594
Total Supply	**3,052**	**3,141**	**2,969**	**2,638**	**3,242**	**3,322**	**3,647**	**3,173**
Crush Sep/Aug	1,641	1,700	1,615	1,530	1,696	1,739	1,806	1,830
Exports	998	1,064	1,044	887	1,103	947	1,118	995
F/S/R	165	169	130	109	187	188	149	163
Total Demand	**2,804**	**2,933**	**2,791**	**2,526**	**2,986**	**2,874**	**3,074**	**2,988**
Ending Stocks	248	208	178	112	256	449	573	185
Stocks To Use (%)	**8.84%**	**7.09%**	**6.38%**	**4.43%**	**8.57%**	**15.62%**	**18.28%**	**6.19%**
Avg. Farm Price	**$4.54**	**$4.38**	**$5.53**	**$7.34**	**$5.74**	**$5.66**	**$6.43**	**$9.75**

* USDA Estimate as of December 2007
**USDA Forecast as of December 2007

Beginning stocks for the 2007/08 marketing year were estimated to be 573 million bushels. In past years, this would have been perceived as particularly burdensome, and would have led to prices well below loan rate levels. However, given the year-over-year decline in soybean production, the beginning stocks number is perceived to be market neutral. The combination of production and beginning stocks results in a total market supply for 2007/08 of 3.2 billion bushels, 13 percent less than last year and significantly less than expected consumption. As a result, ending stocks for 2007/08 are expected to fall to 185 million bushels or 68 percent less than the stocks carried into the year.

Following the national trend, Wisconsin planted about 300 thousand fewer soybean acres in 2007 compared to 2006. Wisconsin's 2007 soybean acres totaled 1.35 million, of which 99 percent were actually harvested. Wisconsin yields, estimated at 39 bushels per acre, came in a bit below the national average. This is down 5 bushels from each of the last two years.

Despite fewer acres and lower average yields, the total value of the Wisconsin crop is considerably higher than last year thanks to quite high prices during the harvest season. As of December 2007, the total crop was valued at about $565 million dollars, almost 33 percent above the average crop year value of the 2006 harvest.



US soybean use is expected to total almost 3 billion bushels in 2007/2008, which would exceed production by 400 million bushels. Soybean crush is expected to increase slightly this year, and total 1.863 billion bushels. Exports, on the other hand, are expected to decline slightly, and total slightly less than 1 billion bushels.

Total US soybean meal demand is expected to increase about 1.3 percent, while total oil use — due largely to a 36 percent increase in oil used for biodiesel production — is projected to increase about 4.5 percent. Projected use of soybeans for biodiesel production is 3.8 billion pounds. However, this likely represents an upper bound as several biodiesel projects were either cancelled or put on hold the latter part of 2007 because of the high cost of soybean oil.

On the international front, USDA estimates Brazil will increase soybean production by more than 5 percent in 2008, while Argentina experiences a small reduction. Total world production is expected to be 6 percent below a year ago, primarily due to the reduction in year-over-year U.S. production. World ending stocks of soybeans are also expected to fall in 2007/08, contributing to a tightening of the world balance sheet.

Similar to corn, soybean prices have been well above historical averages over the last year, and are expected to maintain an aggressive level through the 2007/08 marketing year. While an increase in U.S. soybean acres is expected for 2008, healthy demand will still lead to a tightening of the balance sheet, and a continuation of relatively high prices and significant price volatility.

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Fruits and Vegetables

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Synopsis

Wisconsin apple production dropped marginally in 2007, but higher prices should maintain income at close to year-ago levels. Tart cherry production was up sharply, suggesting that 2007 prices will be lower. Cranberry production is forecast to be down slightly from 2006. Because of strong demand for cranberry products, farm-level prices are increasing and growers are looking to expand.

Changes in grain prices, land values, and input costs have put severe pressures on Wisconsin's commercial vegetable industry. Agronomic crops now present a more competitive alternative to potato or vegetable crops. As a result, contract prices have increased across the region. Wisconsin, Minnesota, and Illinois comprise a prime vegetable production and processing area and constitute the largest concentrated production of canned and frozen vegetables in the nation. Wisconsin acreages changed slightly based on alterations in cropped acres in Illinois and Minnesota, but total production is surprisingly consistent across the region over time.

Apples

USDA's July 2007 apple production estimates put Wisconsin's apple crop at 62 million pounds, down 4.8 percent from the 65 million pounds produced in 2006. But actual 2007 yields will be below that estimate, because fruit size suffered from very dry weather in July and early August. Prices for apples were up sharply in 2007 because of limited availability of local apples in the Midwest due to the Easter freeze that devastated fruit crops through the lower Mississippi and Ohio River valleys. The 2006 price for all apples averaged $0.42 per pound, with fresh prices just below $0.50 per pound.

Tart Cherries

Wisconsin tart cherry production is estimated at 11.7 million pounds in 2007, up sharply from the 4.5 million pounds produced in 2006. National production was estimated to increase by 11 percent from 2006, suggesting that grower prices will be slightly lower in 2007. Wisconsin is expected to produce about 4 percent of the nation's tart cherries on about 1,700 acres.

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Cranberries

USDA forecast 2007 U.S. cranberry production at 6.9 million barrels in August, unchanged from 2006. Wisconsin's 2007 cranberry crop is forecast to decrease slightly to 3.9 million barrels (1 barrel = 100 pounds). Late summer and early fall rains following a hot and dry July provided sufficient water to harvest the crop. A long, warm autumn gave Wisconsin growers ample opportunity to harvest fruit. Wisconsin leads the nation in cranberry production and will produce about 57 percent of the nation's crop in 2007.

The price per barrel for cranberries in 2006 was $37.20 and is expected increase marginally for 2007. Demand for cranberry products remains high. Over the past 10 years total cranberry sales have increased by 62 percent. During this time foreign sales have increased by 321 percent while domestic sales have increased by 44 percent.

The August 31, 2007, U.S. cranberry inventory was 3 million barrels, just under what was in storage a year earlier. This relatively low inventory, combined with a modest crop and anticipated strong domestic and foreign demand for U.S. cranberry products, should lift prices in 2008. Heightened demand and increasing prices are spurring cranberry growers to consider renovating older beds and expanding plantings.

Potatoes

The 2007 Wisconsin potato crop was good to very good. Above-average yields were reported from the state's multiple production regions. Wisconsin farmers harvested 65,500 acres of potatoes in 2007 with a total yield of 28.2 million hundredweight, or just less under 429 cwt. per acre. Losses due to shrink have already reduced the crop yields by 1 percent based on quality reports. The Wisconsin crop utilization breaks down as 9 percent for seed potatoes, 19 percent for chip potatoes, 23 percent for frozen/fry/dehydration, and 49 percent for fresh.

Wisconsin growers planted fewer acres to chip potatoes in 2007, but more acres to processing potatoes, so that the state's total planted acres dropped only 500 acres from 2006 to 2007. The fresh market price has been steady to strong with large volumes of potatoes sold during October and November. Wisconsin stored potatoes will be marketed and processed well into July or August of 2008.

Although planting was delayed by an April 10th snowstorm, ideal growing conditions after that led to rapid crop emergence. Growing conditions were nearly ideal until August, leading to good yield and tuber size and the best fry color in recent memory. August heat decreased the solid content of many potatoes, causing some minor problems with chipping and processing. In addition, heavy rains in late August caused some minor flooding on mineral soils that caused potatoes to rot in the field.

Considering the wet weather preceding harvest, the crop has stored remarkably well. Small pockets of stored potatoes have had some disease issues, but these have been manageable to date. Flooding on muck soils destroyed several hundred acres of fresh market potatoes in Central and Southern Wisconsin. In addition, a large storage fire resulted in destruction of

significant volume of fresh market and seed potatoes in Northern Wisconsin.

Sweet Corn

Wisconsin is the leading producer of processed sweet corn. The state's producers harvested 85,600 acres in 2007, up 3000 acres from 2006. Yields also increased by 0.25 tons per acre, leading to a harvested crop to nearly 630,000 tons, a 28,000-ton increase from 2006. Temperatures were ideal for sweet corn production with crop maturity occurring 5 to 8 days faster than normal. Dry conditions did stress the crop in some areas, but timely rains resulted in good to very good yields across much of the state.

Snap Beans

Wisconsin led the nation in production of processing snap beans again in 2007. The state's producers harvested an estimated 70,500 acres, down 400 acres from 2006. Average yields increased 0.2 tons per acre leading to slightly higher total production of just over 310,000 ton. Good growing conditions across much of the state promoted rapid growth and crop harvest 2 to 5 days ahead of schedule. Frost in mid September resulted in some passed acres across Central and Southern Wisconsin. Soybean aphid-transmitted virus hurt yields and quality in some fields for the first time in northwest Wisconsin and Minnesota in 2007.

Green Peas

Harvested pea acres increased in Wisconsin in 2007 compared to 2006 due to shifting of acres from Minnesota to Wisconsin. The pea crop was stressed by dry conditions during May and June in several areas of Wisconsin. Mid-June showers caused the crop to mature rapidly. Some fields had to be passed because the crop over-matured.

Other Vegetables

Wisconsin is a leading producer of a number of other vegetable crops including carrots, onions, cucumbers, cabbage, beets and mint. Carrots and beets are used primarily for processing, while cabbage and cucumbers are used primarily for kraut and pickles, respectively. Onions are sold on the fresh market, and spearmint and peppermint are grown for oil.

The 2007 season was a tough one for Wisconsin carrot producers. Early season winds and dry weather resulted in blowouts and lost stands in nearly all production regions. A number of fields were destroyed or replanted. Fall rains caused significant flooding damage and a total loss of some carrot fields in central and southern Wisconsin. Harvested carrots did have good yields where stands were solid and flood damage was avoided.

Onion and cucumber crops were good to excellent. Onion yields averaged 340 hundredweight per acre, up from the previous two years. However, total production was down because growers planted 200 fewer onion acres in 2007 than in 2006. High demand for onions early in 2007 led to rapid sales and good prices for the 2006 crop out of storage. Early sales indicate fair prices for 2007 onions from storage with good movement of product.

Farm Inputs and Services

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Inputs

According to the National Agricultural Statistics Service (NASS), the prices of some key agricultural inputs rose dramatically between 2006 and 2007. Fuel prices climbed almost 40 percent from November of 2006 to November of 2007. Fertilizer prices rose about 25 percent over the same period. Fuel prices rose largely because of rising crude oil prices. Fertilizer prices increased primarily because of higher prices for natural gas, the raw material for anhydrous ammonia.

Fertilizer prices were also affected by a major shift in the cropping patterns. Corn acreage increased substantially, increasing the demand for anhydrous ammonia. That higher demand was anticipated, but there still wasn't enough available to satisfy farmers' demands, leading to rationing and much higher prices.

Since corn prices are expected to remain high in 2008, fertilizer demand will remain strong. The combination of strong farmer demand for fertilizer and high natural gas prices will probably keep the price of nitrogen-based fertilizer on the high side.

Increased demand for fertilizer has also driven up the price of potash, a source of the crop nutrient, potassium. The weaker U.S. dollar has also been a factor. Most potash used by U.S. farmers comes from Canada, so the relative cost of potash has increased because the U.S. dollar has fallen relative to the Canadian dollar. For example in the early spring of 2007, the U.S. dollar was worth around $1.16 Canadian. By November, the value of the U.S. dollar dropped to as little as $0.93 Canadian. This raised the cost of potash by about 20 percent.

Seed prices in November of 2007 were almost 14 percent higher than a year ago, most likely the result of farmers putting more acreage into production.

Average Annual Price Changes for Selected Farm Inputs

Item	*Last Year (2006-2007)*	*5 YRS (2002-2007)*	*10 YRS (1997-2007)*
Seed	13.44	7.94	5.81
Fertilizers	24.71	13.82	5.94
Fuel	39.37	17.59	10.07
Chemicals	3.05	3.08	0.94
Feed	10.27	6.59	3.88

Source: Agricultural Prices, NASS, USDA

Prices of agricultural chemicals only rose about 3 percent in the last year, which is surprising given that many more acres of corn were grown in 2007. Stable chemical prices could indicate that the need to use chemicals to produce row crops has declined as GMO crops (Genetically Modified Organisms) have become more widely planted by U.S. farmers.

Feed costs were about 10 percent higher in 2007 than in 2006, and they will continue to be high in 2008, since prices for feedstuffs such as corn, soybeans, and hay will remain high.

Prices of farm inputs are not expected to rise in 2008 at the same rates that they increased in 2007. Last year's big jumps in seed and fertilizer prices occurred because of dramatic shifts in farmers' cropping activities. Changes in plantings in 2008 will be much more modest.

Fuel and energy costs continue to be the big wild card in input prices. Farmers have seen the costs of fuel rise dramatically as crude oil prices have nearly doubled in a five-year span. If crude oil prices continue to rise at recently-observed rates, farmers' costs for fuels will continue to move to higher and higher levels. The flip side of this is that higher fuel prices can also help raise prices for biofuel crops like corn and soybeans.

Rents

According to NASS, 2007 cash rents for cropland in Wisconsin were up only $1 per acre from 2006. This small change in Wisconsin cash rents stands in contrast to significant increases in other Midwestern states.

The largest absolute increases in Midwestern cropland rents occurred in Illinois, Michigan and Iowa. Average cash rents for Illinois cropland rose $9 per acre from $132 in 2006 to $141 in 2007. Comparable increases were $8 in Michigan and $7 in Iowa. These higher cash rents generally reflect the excellent prospects for high cropping returns going into 2007.

Stable Wisconsin cash rents for cropland is nothing new. Since 2003, cash rents on Wisconsin cropland have risen only $4 per acre from $68/A to $71/A. During the same period, cash rents rose $18/acre in both Illinois and Iowa, $13/acre in Michigan and $12/acre in Minnesota.

Farmers' willingness and ability to pay cash rents is related to the gross income that they expect to generate from the rented land. The values reported in the table below reflect the relationships between cash rents and the 5-year moving averages of gross income from land used to raise corn. The values are the averages for the period from 1967-2006 for Wisconsin and each of the four neighboring states.

Cash Rents as a Percentage of Five Year Moving Average Gross Corn Returns Per Acre (1967 - 2006)	
State	***Cash Rent Percentage***
Wisconsin	21.77
Illinois	36.32
Iowa	38.61
Minnesota	27.27
Michigan	22.63

Source: NASS, USDA

Wisconsin and Michigan cash rents have historically equaled about 22 percent of the five-year moving average of gross income from corn production. Thus a $10 increase in gross income from higher prices or greater yields has generally caused cash rents to increase about $2. Changes in gross income from growing corn brought a proportionally higher increase in rents in Iowa, Illinois and Minnesota. In Iowa a $10 increase in average gross income generally boosted cash rents by $3.80 per acre. The same increase in per-acre gross income in Illinois and Minnesota would increase rents about $3.60 and $2.70, respectively.

It is unclear why Wisconsin cash rents have been less responsive to changes in gross income. It could reflect a thinner land market — less land is available for rent here than in Illinois and Iowa.

According to the 2002 Census of Agriculture, about 72 percent of Wisconsin farmland was owned by farmers. In contrast, less than 43 percent of Illinois farmland and about 49 percent of Iowa farmland was farmer-owned. The fact that farmland is more likely to be owned by farmers in Wisconsin means that considerably less farmland is rented in the Badger State than in Illinois and Iowa. This means both landlords and tenants have less experiences in negotiating rents on Wisconsin farmland. This lack of experience in setting up lease arrangements might be holding Wisconsin farmland rental rates below those of most adjacent states.

For whatever reason, to this point Wisconsin farmers have been getting a pretty good deal on rents compared to what's being paid across the state line. But it is nearly certain that cropland rents will be up substantially in Wisconsin in 2008. With December 2008 corn trading well above $4.00 per bushel, farmers are likely to be quite optimistic about profits. Last year, most landlords locked in cash rental rates based on the relatively low grain prices received prior to 2007. Since both corn and soybeans have been highly profitable for nearly a year, landlords won't hesitate to try to get a piece of the higher returns.

Credit

Conditions in agriculture credit markets are about as good as they have been in the last quarter of a century. Farm profits are up almost across the board due to strong prices for nearly all of the major farm commodities. These higher profits have generally translated into strong cash flows for most farms. So the payment of principal and interest on farm loans was not generally a burden for farms in 2007.

Farms not only have strong cash flow positions, they also have extremely strong net worth positions. This is largely the result of the appreciation of farm real estate values that has been occurring for almost a decade. This growth in real estate values had significantly enhanced the equity of farmers who have been fortunate enough to own land during the last 10 years. Lenders' risks have been sharply reduced because the chances for losses on farm loans have declined as collateral in the form of farm real estate has increased in value.

Interest rates on farm operating loans and farm mortgages declined modestly throughout 2007. Declining interest rates can be traced to the cuts in interest rates made by the Federal Reserve Bank (The Fed) in response to the problems that have surfaced this year in the home mortgage markets. Since mid 2007, the Fed has systematically cut rates so that mortgage lenders could work thought mortgage defaults and delinquencies on what are commonly referred to now as "sub-prime loans."

Interest rates on farm operating loan and mortgage in 2008 will most likely be lower than they were in the past year, but much depends on what happens in the residential housing markets. The Fed will most likely continue to take steps to keep interest rates low as long as the housing market continues to go though the corrections that began in 2007, meaning interest rates are likely to remain low through the rest of 2008.

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The General Economy and Agricultural Trade

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Synopsis

Economic forecasters are criticized for claiming too frequently that the economic outlook is more uncertain than usual. But in making such a claim about 2008, they might be right. Despite big uncertainties, one thing is clear: The U.S. economy is near a turning point and is headed toward slower real Gross Domestic Product (GDP) growth. The big question: How low will the economy go?

Positive forces affecting the economy probably will be strong enough to produce a 1.8 to 2.3 percent real growth in GDP despite major weaknesses in the U.S. housing market, credit crunches, large current account deficits and high oil prices. But if these negatives feed strongly into consumer spending and business investment decisions, then still lower growth or even recession is possible.

U.S. agricultural exports are likely to be about $83 billion in fiscal year (FY) 2008, up from the previous record total for FY 2007. The big uncertainties in U.S. agricultural trade relate to longer-term developments associated with growing protectionist tendencies in Congress, which could produce policies that curtail U.S. agricultural exports, and uncertainties regarding the impact of corn-based ethanol production on U.S. corn exports.

As in the past, the farm economy will be affected more by supply/demand conditions for individual agricultural products than by overall macroeconomic conditions. Thus, the picture is brighter for the U.S. farm economy in 2008 than for the overall economy. But the prospect of lower real growth for the U.S. economy will modestly limit the demand for agricultural products. While petroleum-related farm input costs will increase again in 2008, the anticipated relatively low interest rates will favor the capital-intensive farming sector.

U.S. Economic Growth is Heading Lower

After performing strongly for most of 2006 and the first three quarters of 2007, the U.S. economy appears to be heading for real GDP growth of 1.8 to 2.3 percent in 2008. However, there is a substantial downside risk associated with even this modest growth forecast. Indeed, a few analysts put the probability of a recession (defined as two consecutive quarters of negative real GDP growth) in 2008 at 35–40 percent. The major positive and negative factors that will influence the U.S. economy in 2008 include those noted below.

Plus Factors

- Relatively strong consumer demand
- A weak and declining dollar
- Strong agricultural and non-agricultural exports
- Relatively large government expenditures

Macroeconomic Statistics for the U.S. Economy

Year or Quarter	*Real GDP Growth*	*Inflation Rate (CPI)*	*Oil Price*	*Housing Starts*	*Current Account (Deficit)*
	%	%	$/Barrel	Mil. Units	$Billion
2000	3.7	3.4	30.35	1.573	(417.4)
2001	0.8	2.8	25.96	1.601	(384.7)
2002	1.6	1.6	26.11	1.710	(459.6)
2003	2.5	2.3	31.12	1.854	(522.1)
2004	3.6	2.7	41.47	1.950	(640.2)
2005	3.1	3.4	56.56	2.073	(754.8)
2006	2.9	3.2	66.12	1.812	(811.5)
2007 Q1	0.6	3.8	58.09	1.460	(788.4)
Q2	3.8	6.0	64.96	1.464	(763.2)
Q3	4.9	1.9	75.19	1.296	(760.2)

*Sources: Global Insight, U.S. Executive Summary, various issues 2007 and Wall Street Journal, various issues November and December 2007. Quarterly housing start and current account deficit figures for 2007 represent estimates of annual figures for the two series. Oil price is for West Texas Intermediate crude oil.

Consumer spending accounts for about two-thirds of GDP. It held up relatively well in 2007 despite the weakness in the housing market, credit crunches and high gasoline prices. Indeed, the strength and resiliency of the U.S. economy dating back to 9/11/2001 can be traced substantially to strong consumer demand.

The declining U.S. dollar has helped foster larger U.S. agricultural and non-agricultural exports. The dollar's decline relative to the Euro and Canadian dollar has been nothing short of spectacular. The dollar fell from about $0.92 to the Euro in 2000 to near $1.50 in November 2007 — a decline of more than 50 percent. The Canadian dollar was worth about 65 U.S. cents in November 2000, but by late 2007 it had pulled even with the U.S. dollar. The weaker dollar and strong demand in foreign markets increased U.S. exports by over 16 percent in the third quarter of 2007.

While it is impossible to forecast accurately how far the dollar will fall, additional weakening probably will bring the nation's large negative current account balance more nearly into balance. The United States ran a negative current account balance of about $775 billion in 2007 or about 5.6 percent of nominal GDP, reflecting mainly the large excess of U.S. imports over exports. While the 2007 deficit is down from the $811 billion figure (6.1 percent of nominal GDP) recorded for 2006, it is still large by historical standards.

Government expenditures will remain relatively large in 2008. This will help to limit weakness in real GDP growth in 2008.

Minus Factors

- A weak housing market
- Limits on availability of credit
- Large current account deficits
- High oil prices

Weakness in the housing market continues to shave approximately one percentage point off real GDP growth, and there is little evidence that we have reached the bottom. Housing starts have dropped by about one third since peaking in 2005. The continuing slump is reflected in declining prices for new and existing houses in much of the nation. Moreover, costs for renting vs. ownership indicate that housing prices must decline substantially more (20 to 30 percent more in certain areas) before this relationship returns to normal levels. House prices are expected to decline the most in parts of the Northeast, West coast, Arizona and Nevada. Wisconsin will likely see a smaller decline, just as it saw a smaller increase during the housing boom.

Problems in the U.S. sub-prime mortgage market continue to spread. Foreclosures on homeowners with sub-prime mortgages increased in 2007. Some banks that made or purchased sub-prime mortgage loans also are in financial trouble. This is partly because many sub-prime mortgages were repackaged into collateralized debt obligations (CDO) units by big banks. These CDOs are of uncertain value because of the possibility of defaults on some unknown percentage of the sub-prime mortgages they contain. In addition, interest rates on approximately $360 billion of adjustable rate, sub-prime mortgages will reset at higher levels in 2008, creating higher mortgage payments for borrowers and additional foreclosures. As expected, lenders have imposed tighter credit requirements on home owners

seeking to refinance mortgages and people seeking new mortgages and other types of consumer credit. Problems in the sub-prime market also have made it difficult to put a realistic value on the loan portfolios of some large banks.

The nation's large current account deficit limits the Federal Reserve Board's options. While financial markets would like to see a lower federal funds rate to stoke the economy and prop up stock prices, the Fed will be limited in how much it can cut interest rates. Further cuts in the federal funds rate (at 4.50 percent on December 1, 2007) could further weaken the U.S. dollar, leading foreign businesses and central banks to pull additional assets out of U.S. dollar-denominated securities. While a big run on the U.S. dollar is unlikely, if it did happen the Fed would be forced to increase interest rates to stem the run, which could push the already weakened U.S. economy into recession. Pushing interest rates lower and further weakening the U.S. dollar would also make imported goods more expensive and increase inflation risks.

Oil prices are likely to remain high and function like a tax on U.S. consumers and petroleum-dependent businesses. The high oil prices are driven by strong demand for petroleum products in the United States, China, and India as well as a host of other forces. It's a wonder that the U.S. economy has held up relatively well despite oil prices that approached $100 per barrel in late November 2007. In 1973 and 1979, real (inflation-adjusted) oil prices similar to those existing in late November 2007 caused recessions.

Two factors help explain the smaller impact of high oil prices in 2007. First, the U.S. economy is more efficient than in the 1970s. It took only about half as much petroleum in 2007 to produce an inflation-adjusted dollar of GDP as it did in 1970. Secondly, strong U.S. consumer demand has countered the high oil prices enough to keep the economy from tipping into a sharply slower growth mode or recession. But persistent high gasoline, fuel oil, and other petroleum product prices together with other negatives influencing the economy could sap consumer purchasing power enough to shave economic growth more than currently expected or produce a recession.

Uncertain Factors

Business investment, employment and inflation all could affect or be affected by developments in the overall economy. The first two variables strengthened the U.S. economy in 2007. Business investment was a major contributor to relatively strong economic growth during the third quarter of 2007. Low U.S. unemployment rates (4.4–4.7 percent) during much of 2007 undoubtedly contributed to relatively strong consumer demand. Business investment, employment, and stock prices — which were exceedingly volatile and reflected uncertainties about company earnings in 2007 — all can be expected to head south if significant weaknesses emerge in the U.S. economy.

Inflation is a wild card. Inflation from 2005 to the present generally has run higher than in the early 2000s. The Federal Reserve Board was undoubtedly uncomfortable with inflation in the first two quarters of 2007. Moreover, the weak U.S. dollar, which fosters higher priced imports, will contribute to inflationary pressures in 2008. It is possible that the economy will be sufficiently weak in 2008 that inflation pressures will decline, but

this is not a sure thing. Thus, inflation pressures in 2008 could be troublesome. A few analysts use the "S" word — stagflation — to describe the 2008 outlook.

How Low Will the Economy Go?

The plus and minus factors and the inflation wild card obviously produce a murky picture of U.S. economic prospects for 2008. The potentially powerful negatives could overwhelm the impact of the positive factors in prospect for the economy. Accordingly, growth at the lower end of the 1.8–2.3 percent range appears most likely. Optimists use a football metaphor: The U.S. economy will bend but not break in 2008. But, any big negative surprises — such as additional large increases in oil prices and an unexpectedly severe credit crunch affecting consumers and businesses — could tip the U.S. economy into recession.

The U.S. Agricultural Trade Outlook

The USDA forecasts that U.S. agricultural exports will total $83.5 billion in FY 2008, up from about $79 billion in FY 2007 and $68.6 billion in FY 2006. The FY 2008 forecast reflects several positive developments, including weakness in the U.S. dollar, strong foreign demand for corn, wheat, cotton, soybeans, and dairy products, poor crop prospects in Australia, and China's growing demand for many agricultural products. The USDA forecasts a U.S. agricultural trade balance of a positive $8.5 billion in FY 2008. That's higher than the weakly positive trade balance figures of FY 2005 through FY 2007, but still sharply lower than in the mid-1990s, when trade balances exceeded $20 billion.

Unlike in most previous years, U.S. dairy exports promise to make an important contribution to higher U.S. agricultural exports in 2008. The USDA forecasts that U.S. dairy exports will total about $2.3 billion in FY 2008, about the same as in FY 2007 but up from $1.77 billion in FY 2006 (a gain of 30 percent). While several U.S. dairy product exports will exhibit strength in FY 2008, the outlook for nonfat dry milk and whey products is particularly promising for 2008 and beyond. U.S.-produced specialty cheeses also may displace additional imports of European specialty cheeses in the U.S. market in the next few years.

The U.S. agricultural trade outlook appears relatively favorable for the next few years. But several dark spots loom on the horizon:

- The Doha Round of WTO trade talks — suspended in July 2006 — are stalled with no agreement in prospect. This could delay the Doha Round Agreement for years or, in an increasingly likely worst-case scenario, produce an end to multilateral trade agreements. The latter development could lead to widespread agricultural protectionism that would limit U.S. agricultural exports.

- Congress has expressed a growing distrust of globalism and disappointment over the impact of bilateral, regional, and multilateral trade agreements. These concerns make it questionable whether the President elected in 2008 will secure "fast track" negotiating authority, which would limit

Congress to an up-or- down vote on a trade agreement. Without such authority, it will be impossible for any President to complete negotiations on bilateral, regional or multilateral trade agreements. Countries will not negotiate with the United States if Congress can modify trade agreements before voting on them. The prospect of no new trade agreements does not bode well for U.S. agricultural exports.

- Prospects for U.S. corn exports have become more uncertain due to developments relating to ethanol. A year ago prospective domestic demand for U.S. corn for ethanol production appeared so robust that U.S. corn exports were likely to be substantially curtailed. Several developments have changed the picture including a drop in ethanol prices, questions about whether government policies should favor corn-based ethanol over cellulosic ethanol, complaints about the increased demand for water associated with producing corn-based ethanol, concerns by livestock and poultry producers about increases in domestic feed grain prices, and complaints about higher consumer food prices associated with ethanol production. These developments eventually could reduce domestic corn use for ethanol production and free up additional U.S. corn for export.

Implications for the U.S. Agricultural Sector

As in past years, the supply and demand for individual farm products will have more impact on U.S. farm prices and incomes than the overall macroeconomic environment. However, the weaker growth of the U.S. economy in 2008 will provide modestly less support for agricultural product demand than in 2007.

The USDA expects 2007 U.S. net farm income to be $87 billion, up about 48 percent from 2006. The record net income total reflects higher prices for corn, wheat, soybeans, milk and poultry. Crop prices in 2008 are likely to be strong relative to livestock prices. The preceding commodity situation and outlook articles provide detail on expected farm prices and incomes for 2008, including some reductions in farm milk prices.

While the U.S. farm economy was strong in 2007, some agribusinesses experienced tougher times. Dean Foods, the nation's largest fluid milk processor, cut its earnings forecasts for 2007 twice. The lower earnings were attributed in part to strong competition for Dean's branded milk from private label fluid milk and higher input prices caused partly by robust export demand for nonfat dry milk.

Tyson's beef and chicken businesses suffered in 2007. The company's troubles stem from lower foreign demand for beef and high costs for poultry feed.

Smithfield, the nation's largest hog producer and pork processor and largest turkey processor, has difficulties of another sort. The firm's balance sheet is burdened with debt as a result of the company's acquisition of Sara Lee's European meat business, Premium Standard Farms, and ConAgra's Butterball turkey division under a joint venture. Smithfield is seeking to work down the company's debt to more manageable levels.

By contrast, Deere & Company, whose fortunes reflect prosperity in the U.S. farm sector and strong export demand for the company's farm equipment, has performed very well. For example, the company's fiscal fourth quarter earnings for 2007 were up by more than 50 percent over the same quarter a year earlier. Domestic and foreign demand for Deere's farm equipment is expected to remain high in 2008.

Farming is one of the most capital-intensive sectors of the U.S. economy. Thus, the prospect of relatively low interest rates — the cost of capital —will help the farming sector. But this will be countered by increasing petroleum-based farm input costs in 2008.

III. Special Articles

Farm Bill Update

Ed Jesse, Bruce Jones, and Paul Mitchell

Status of New Legislation

This special article was supposed to be a condensed description of the 2007 farm bill — omnibus legislation to replace the Farm Security and Rural Investment Act of 2002. Most of the provisions of current law expired in 2007. However, at this writing, it is apparent that new farm legislation will not be enacted in 2007.

The House of Representatives wrapped up its farm bill (The Food, Nutrition, and Bioenergy Act of 2007) on July 27, when the full House voted passage 231-191. The Senate Agricultural Committee approved the Senate version (The Food and Energy Security Act of 2007) on October 25, and debate before the full Senate began in early November. Progress toward a vote was stymied by numerous amendments, most of them unrelated to the Bill. A cloture vote held on November 16, before Congress recessed for its 2-week Thanksgiving break, failed to yield the 60 votes necessary to limit debate and amendments.

Following some behind-the-scenes negotiations, the Senate informally agreed to limit amendments to 20 each from each party. Amendments were debated during the week of December 10, and on December 13, the Senate voted 79-14 to adopt the Committee bill almost intact.

The next step in the enactment process is House-Senate conference committee action to work out differences between the two bills. This will occur sometime after Congress returns from recess on January 21.[4] The compromise bill will then be submitted for President Bush's signature. But administration advisors have threatened a presidential veto of any compromise bill that contains certain provisions of the current House and Senate bills, citing a number of hidden tax increases to create budget offsets and "gimmicks" to hide the true cost of the legislation. The administration has also expressed dismay that both the House and Senate bills propose increased payments to U.S. farmers at a time when net farm income was record high.

Delays in passage of farm legislation are not uncommon, though the current bills are being held up for different reasons than in the past. In fact, the last two farm bills were enacted after their predecessors expired. The 1996 Farm bill expired at the end of 2001, and what was initially the 2001 farm bill became the 2002 farm bill when it was passed by Congress and signed by the president in May. The 1995 farm bill was transformed into the 1996 farm bill, enacted in April.

[4]In late December 2007, Congress extended the Farm Security and Rural Investment Act of 2002 until March 15, 2008 to accommodate the delay in passage of new legislation.

There will be a new farm bill, and it will not likely deviate much from what the House and Senate have proposed. Though differing in specifics, the House and Senate bills are similar in content. Both bills:

- Retain fixed direct payments, countercyclical payments and loan deficiency payments for eligible crops.
- Provide farmers the option of receiving revenue-based payments as an alternative to price-based payments (countercyclical and loan deficiency payments).
- Tighten payment limitations by reducing the adjusted gross income eligibility cap.
- Substantially increase research and market-enhancement support for producers of horticultural crops.
- Require implementation of Country of Origin Labeling (COOL) for red meats in 2008.
- Strengthen the conservation title, mainly by increasing funding for existing conservation programs.
- Rename the Food Stamp Program and expand benefits and eligibility.
- Expand funding for Rural Development.
- Significantly increase funding for research and commercial development of crop-based biofuels.

Noteworthy differences between the two bills that will need to be worked out in conference include:

- Both bills contain a new Title X, increasing the number of titles from 10 to 11. The Senate's Title X is, "Livestock Marketing, Regulation, and Related Programs." The House's Title X is, "Horticulture and Organic Agriculture."
- The Senate creates a Special Counsel for Agricultural Competition within its Title X that, among other things, limits packer ownership of livestock. This controversial provision is not included in the House bill.
- The Senate bill includes a provision for permanent disaster payments to cover losses from droughts and other natural disasters and authorizes $5 billion in funding; the House bill does not have a disaster payment provision.

- There are significant differences between the two bills in funding of the Environmental Quality Incentives Program (EQIP) and the Conservation Security Program (CSP). The House proposes adding $1.9 billion to EQIP; the Senate keeps EQIP funding even and adds $2 billion to CSP.

The House-Senate conference committee will probably also have to make changes in the compromise bill to meet White House objections regarding budget impact — the close vote in the House suggests there are insufficient votes in that body to override a veto. This could reduce authorized funding for some programs, and these cuts could prolong the House-Senate conferencing process.

Since the details of new farm legislation are unknown at this time, we will use this article to discuss some changes in policy direction suggested by the House and Senate bills. We first examine implications of changes (or lack thereof) in existing policy instruments: commodity price and income supports (including payment limitations), conservation, and energy. Then we look at a new element of the farm bill proposals that suggest a shift from supporting farm *prices* though price supports and deficiency payments to supporting farmer *incomes* through some form of subsidized gross revenue insurance.

Current Policy Mix

Income Supports and Subsidies

The farm bills developed by the House and the Senate both call for the continuation of three income support programs from the 2002 Farm Bill: (1) loan deficiency payments; (2) counter cyclical payments; and (3) direct payments. The administration's farm bill proposal released early in 2007 also supported these programs.

The only changes in the loan deficiency payments program proposed by the House and Senate would be to increase the loan rates for wheat, barley, oats, minor oilseeds and decrease the loan rates for dry peas and lentils.

Counter cyclical payments (CCPs) were introduced in the 2002 Farm Bill. They are designed to counteract declines in crop prices to keep farm incomes from falling below targeted levels. CCPs are a modified version of deficiency payment programs used from the late 1970s through the mid-1990s to support incomes for crop farmers. CCPs differ from traditional deficiency payments in that farmers receive payments based on *historic* versus *current* production. Thus, farmers who historically grew corn and thus have a corn acreage and yield base receive CCPs as if they were growing corn even though they may actually be growing hay or soybeans on their land. Because there is no link between CCPs and current production, the program complies with WTO rules pertaining to the trade-distorting effects of domestic agricultural support programs.

Both the House and Senate versions of the farm bill continue CCPs in much their current form, but they make some adjustments in the target prices. Target prices for wheat, barley, oats, soybeans, and other oil seeds are all increased while the target price for

cotton is lowered. These adjustments are intended to eliminate any real or perceived disparities that existed among program crops under the 2002 Farm Bill's CCP program.

The Bush Administration's farm bill proposal called for farmers to continue to receive direct payments and for these payments to grow over time. The House and Senate versions of the farm bill also continue direct payments, but they hold these payments at the levels specified under the 2002 Farm Bill.

Direct payments are fixed and paid to farmers regardless of commodity prices. Both the House and Senate farm bills retain the same direct payment levels authorized in current legislation.

The practice of paying farmers subsidies that are unrelated to their income position got its start in the 1996 Farm Bill, often referred to as the "Freedom to Farm Act." The idea was to wean farmers from payments tied to acreage bases. A key component of the Act was guaranteed "transition payments," paid to farmers on the basis of historic program crop acreage bases and yields but freeing them from actually producing the program crops. For example, corn farmers received transition payments on corn acreage bases applied to historical yields even if they quit growing any corn and started growing hay.

These payments were to be made only through 2001. However this did not happen. In the 2002 Farm Bill, the funds that had previous been paid out as transition payments were transformed and paid to farmers as direct payments.

The inclusion of direct payments in the House, Senate, and Administration Farm Bill proposals dramatizes their popularity with farmers. This is not surprising. Direct payments reward farmers without requiring them to do anything in return. Politicians are apparently unwilling to shut down this system because they are afraid they will face the ire of disgruntled farm voters. But with current farm incomes at record high levels, it is difficult to come up with any economic justification for a farm program that pays out large sums of taxpayer dollars to add to farmers' large market-based profits.

Payment Limitations

Both the House and Senate versions of the Farm Bill limit the amount of farm income supports and subsidies given to individuals whose principal occupation is something other than farming.

The House proposes that an adjusted gross income (AGI) in excess of $1 million would disqualify persons from receiving program payments. The income eligibility requirement, as reflected by AGI, is reduced to $500,000 in those cases where less than 67 percent of AGI is from farming.

The Senate version of the farm bill phases in income eligibility requirements over time, continuing the current limit of $2.5 million AGI through 2008 and then scaling it back to $1 million in 2009 — except in those cases where more than 67 percent of AGI is from

farming. The Senate bill further reduces the income threshold to $750,000 in 2010-2012 except for those who earn more than 67 percent of AGI from farming.

The key thing to note is that the Senate does not limit payments to persons who earn 67 percent or more of their AGI from farming. This means that larger farmers are generally not at risk under the Senate bill.

Both the House and Senate farm bills eliminate the limits on the benefits farmers can collect from loan deficiency payments. But both bills put new limits on the benefits farmers can receive as direct payments and counter cyclical payments. The House allows a farm couple (a wife and husband) to collect up to $250,000 in direct payments and counter cyclical payments with no more than $60,000 being direct payments. The Senate version of the farm bill further limits the total payments that can be received by farm couples: They can receive no more than a total of $200,000 of counter cyclical payments and direct payments annually, and no more than $60,000 can be counter cyclical payments.

The 2002 Farm Bill allowed persons to collect full benefits for one farm operation and half benefits for up to two additional farming operations in which they had ownership interests. This provision, known as the three-entity rule, gave some persons more opportunities to collect farm income supports and subsidies. Both the House and Senate versions of the new 2008 bill close this special doorway to additional program benefits.

Conservation

The House and Senate versions of the farm bill both continue the conservation programs that were in place in the past farm program and they generally maintain or increase funding for the various programs that are intended to promote and enhance the preservation of natural resources. The key components of the total conservation plan are:

- Working Lands Program
- Land Retirement Program
- Farm Land Protection
- Watershed Protection
- Conservation Innovative Grants

The Working Land Program and the Land Retirement Programs are probably the most important to farmers because they provide the financial resources that farmers can use to adopt conservation practices or idle or preserve fragile cropland, wetlands or grasslands.

The longstanding Conservation Reserve Program (CRP) is continued as one of the key components of the new farm bill. So are the the Wetlands Reserve Program and the Grasslands Reserve Program.

Another important objective of the farm bill's conservation title is to preserve and enhance environmental quality. Both the House and Senate propose to continue the

Environmental Quality Incentives Program (EQIP) as well as the Conservation Security Program (CSP) and the Wildlife Habitat Incentive Program (WHIP).

Energy

The new Farm Bill will provide even greater financial support for the development of biofuels and other renewable energy sources. Both the House and Senate versions continue nearly every energy program in the 2002 Farm Bill, and increase funding for most of them.

The House's version of the Energy Title calls for federal agencies to continue to purchase bio-based energy products. The Senate's bill also calls for federal agencies to give preferences to bio-based products and requires USDA to develop a voluntary labeling program for bio-based products.

The new Farm Bill will most likely continue the grants program started in 2002 to finance the cost of developing and constructing biorefineries and biofuels production plants. The House mandates spending $800 million on this initiative over FY 2008-12. The Senate is less generous in mandating only $300 million.

One major difference between the energy titles of the House and Senate bills is the level of mandatory funding authorized for the Bioenergy Program. The Senate plan sets funding at $245 million, which is well above the $150 million appropriated in the 2002 farm bill, but is far below the $1.4 billion of mandatory spending called for by the House. It is a good bet that biofuel producers will get considerably more financial support from new farm legislation. But it is doubtful that the Senate will agree to spend $1.4 billion on this initiative. The final spending authority on this program will likely be closer to the $250 million proposed by the Senate.

Income versus Price Safety Nets

Both the House and Senate versions of the farm bill take an important new direction regarding the "safety net" that the federal government provides for commodity producers. Neither of these versions would replace existing counter-cyclical programs. Rather, each offers farmers an alternative choice. We describe and compare these new proposed programs below and demonstrate their potential benefit to Wisconsin farmers using an historical analysis.

The House's Revenue-Based Counter-Cyclical Payments

The House version of the farm bill offers *Revenue-Based Counter-Cyclical Payments* as an alternative to the current counter-cyclical commodity program. The proposal specifies national target revenue for each program crop. If the *actual* national revenue for the crop is less than the *target* revenue, participating producers receive per-acre support payments equal to the difference. Thus, the program attempts to create a revenue floor.

The table below lists the national target revenues for corn and soybeans from the House farm bill. The bill doesn't specify how target revenues will be determined. Actual national revenue for a crop is calculated by multiplying the national average yield by the higher of (a) the national average market price received by producers during the 12-month marketing year or (b) the loan rate. The House farm bill does not indicate how the national average yield and national average market price are determined. For our analysis, we used USDA-NASS national yield per harvested acre and price data to compute the implied revenues and revenue-based counter-cyclical payments for corn and soybeans for 2002 to 2006 shown in the table.

These results suggest that the House proposal could have substantial value to corn farmers and some benefit to soybean farmers. The large average revenue-based counter-cyclical payments for corn are due to low corn prices, especially in 2002 and 2005. Using current futures prices as a guide, we expect that marketing year average prices for corn and soybeans will be much higher in the next few years than they were from 2002 to 2006. Consequently, only if national *yields* are very low could farmers expect to receive revenue-based counter-cyclical payments. But then, neither are current price support programs likely to trigger payments for corn and soybeans over the next few years.

The House bill does provide a process to update the national target revenues. Such a process is important since the national yield potential for most program crops has been increasing over the years. The implication is that, without such a procedure, both the chances of receiving revenue-based counter-cyclical payments and the size of those payments would decrease over time.

Yields, Prices, and Revenue for Corn and Soybeans and Implied Revenue-Based Counter-Cyclical Support Payments under the House Program.

Corn					
Year	***Yield (bu/ac)***	***Price ($/bu)***	***Actual Revenue ($/ac)***	***National Target Revenue ($/ac)***	***Support Payment ($/ac)***
2002	129.3	2.32	299.98	344.12	44.14
2003	142.2	2.42	344.12	344.12	0.00
2004	160.4	2.06	330.42	344.12	13.70
2005	148.0	2.00	296.00	344.12	48.12
2006	149.1	3.04	453.26	344.12	0.00
Soybeans					
Year	***Yield (bu/ac)***	***Price ($/bu)***	***Actual Revenue ($/ac)***	***National Target Revenue ($/ac)***	***Support Payment ($/ac)***
2002	38.0	5.53	210.14	231.87	21.73
2003	33.9	7.34	248.83	231.87	0.00
2004	42.2	5.74	242.23	231.87	0.00
2005	43.0	5.66	243.38	231.87	0.00
2006	42.7	6.43	274.56	231.87	0.00

The Senate's Average Crop Revenue Payments

The farm bill approved by the Senate includes *Average Crop Revenue Payments* as an alternative to the current counter-cyclical commodity program. The Senate version structures its revenue program somewhat like the Group Risk Income Plan (GRIP), a revenue insurance policy based on county revenue.

Average Crop Revenue Payments for a crop would be triggered when *actual* state revenue is less than the state crop revenue *guarantee*. This guarantee is 90 percent of expected state yield per planted acre times the pre-planting crop price. Expected state yield is based on a linear regression trend of yield per planted acre using USDA-NASS yield data for 1980 to 2006. The pre-planting crop price is the average of the pre-planting crop prices used for crop revenue insurance policies for the current and the two previous years. For corn and soybeans, these prices are based on the average Chicago Board of Trade (CBOT) settle prices in the month of February for December corn and November soybean futures.

The table below reports the expected yield, price and revenue guarantee for Wisconsin corn and soybeans for the Average Crop Revenue program for 2002 to 2007.

Yields, Prices, and Revenues for Corn and Soybeans in Wisconsin and Implied Revenue Guarantees and Average Crop Revenue Support Payments under the Senate Program.

Corn							
Year	***Expected Yield (bu/ac)***	***Pre-Plant Price ($/bu)***	***Revenue Guarantee ($/ac)***	***Actual Yield (bu/ac)***	***Harvest Price ($/bu)***	***Actual Revenue ($/ac)***	***Support Payment ($/ac)***
2002	103.6	2.43	226.59	107.3	2.52	270.30	0.00
2003	104.9	2.40	226.56	98.0	2.26	221.57	4.99
2004	106.2	2.52	240.80	98.2	2.05	201.36	39.44
2005	107.5	2.52	243.71	112.9	2.02	228.15	15.56
2006	108.7	2.58	252.49	109.7	3.03	332.39	0.00
2007	110.0	2.99	296.07	144.1	3.58	408.39	0.00
Soybeans							
	Expected	***Pre-Plant***	***Revenue***	***Actual***	***Harvest***	***Actual***	***Support***
2002	39.7	4.83	172.56	43.4	5.45	236.69	0.00
2003	40.1	4.81	173.58	27.2	7.32	199.00	0.00
2004	40.5	5.49	200.11	33.4	5.26	175.80	24.31
2005	40.9	5.84	214.97	43.2	5.75	248.29	0.00
2006	41.3	6.14	228.23	43.7	5.93	259.34	0.00
2007	41.7	6.60	247.71	38.7	9.75	275.24	0.00

Actual state revenue is the USDA-NASS Wisconsin yield per planted acre times the harvest price used for crop revenue insurance policies — the average of CBOT settle prices for the month previous to the harvest month futures contract. Actual state revenues and implied Average Crop Revenue Payments for 2002 to 2007 are calculated using NASS-reported state yields.

This historical analysis seems to indicate that the Senate program could have value to farmers, but payments are lower than the House proposal. Interestingly, the two proposals benefit farmers in different years, a point discussed below in comparing the two programs.

In the Senate version, expected corn yields for Wisconsin are much lower than the national yields used in the House version because the House version uses yield per *harvested* acre, while the House uses yield per *planted* acre. In most states, the difference between planted and harvested acres is primarily due to crop loss, but in Wisconsin, about 20-25 percent of planted corn acres are used for silage. These acres do not contribute bushels to the state production, but are included when dividing by total planted acres, and so make yield per planted acre substantially lower in Wisconsin. This "silage effect" of the Senate's Average Crop Revenue program substantially reduces revenue guarantees and program payments for Wisconsin corn farmers.

GRIP, the crop insurance policy that the Senate program uses as a model, requires growers to choose whether they want their indemnities to depend on the NASS yield per planted acre or yield per harvested acre. Wisconsin is the only state for which GRIP (and the closely related GRP policy) makes this option available. Indeed, the value of these insurance policies can be quite different depending on which option is chosen. It is important for Wisconsin that if the final version of the farm bill includes a revenue support program based on state or county yields, Wisconsin farmers have the option to base their payments on yield per harvested acre or yield per planted acre, the same option they have for the GRIP revenue insurance policy.[5]

Comparing the Programs

In general, farmer revenue will track state revenue more closely than national revenue. Thus, farmers face more "basis risk" for their support payments under the House program than under the Senate program. This difference between the programs is important. When farmers incur low yields because of local weather conditions, they are generally more likely to receive income support payments under the Senate program, since its payments are more closely tied to local conditions. However, other factors also influence payments.

Because the Senate proposal uses the three-year average pre-plant price, not the current year's pre-plant price, it has "momentum" built into its revenue guarantees. If pre-plant futures prices are high for two or three years and then drop sharply, the revenue guarantee for the Senate proposal will tend to remain high, even though farmers' expected revenue

[5] See "Is GRP a Good Deal for My Corn?" available at http://www.aae.wisc.edu/mitchell/Crop%20Insurance/Corn%20GRP.pdf).

at planting is low. Then, because payments are based on the realized harvest price for only the current year, farmers in this situation are more likely to receive support payments. However, the reverse is also true. If pre-plant futures prices are low for two or three years and then rise sharply, the revenue guarantee under the Senate's proposal will tend to remain low, even though farmers' expected revenue at planting is high.

This momentum effect highlights another significant difference between the two programs. The House's target revenue is not affected by market history or current conditions — it is a constant revenue floor. The Senate's revenue guarantee moves with market conditions. Specifically, the House program makes support payments whenever national revenue falls below the target revenue, regardless of price and yield expectations at planting time. In contrast, the Senate proposal makes payments whenever state revenue falls below 90 percent of the revenue the market expected at planting. In other words, the House program aims to provide a constant revenue floor as a safety net while the Senate program tries to provide a safety net for larger than expected revenue declines. Thus, if expected prices and revenues are low, the House program is more likely to give support payments, but if expected prices and revenues are high, the Senate program is more likely to give support payments.

The differences in the support payments in our historical calculations are largely due to these three factors: (1) using state yields and CBOT prices versus national yields and marketing year average prices, (2) the momentum effect built into the prices used by the Senate program, and (3) the different nature of the safety nets provided by each program.

It will be interesting to see how the conference committee goes about reconciling the House and Senate versions of these new revenue based counter-cyclical programs. Once the specifics of the final such program are settled, we will provide additional information to help Wisconsin farmers choose the best option among those available. However, given the nature of the political process, this may not happen until after 2008 crops are planted.

The Status of Working Lands in Wisconsin: Current Trends and Policies[6]

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Introduction

Wisconsin's history and vitality are closely tied to the state's productive agricultural and forest lands, which form the backbone of the state's rural communities. These *working lands* cover more than 21 million acres — nearly two-thirds of the state.

Despite their importance, both agricultural and forestlands are on the decline. Decreasing profitability of working lands, population growth, increasing land prices and decreasing housing density have all contributed to the loss and fragmentation of agricultural and forest lands. These land use changes have raised concerns about the future of Wisconsin's working lands and led to policy initiatives aimed at stemming their loss.[7]

This report reviews some data on the current state of land use, points to statewide trends in land use over the past five years and highlights some key regional differences in those trends.[8]

The most salient finding of this research is that the majority of the state's farmland loss comes from taking agricultural land out of production, rather than permanently converting it to other uses. This suggests that losing farmland may have less to do with suburban sprawl than with factors such as the relative profitability of farmland. It also indicates that much of Wisconsin's farmland loss is not irreversible. It makes sense that land use policies take these points into account when addressing farmland loss.

Statewide Land Use Inventory

Wisconsin's more than 76,000 farms cover 12.1 million acres of land — the largest type of land use in the state. As Table 1 shows, over one-third of the state's total land area is used for agriculture. Nearly half (46 percent) the state's privately held land is in agricultural production. The next most common land use is for forest, which accounts for 35 percent of all privately held lands. Non-agricultural development — residential, commercial and manufacturing lands — together make up just under 10 percent of all privately owned land. The remaining 10 percent are undeveloped land, primarily fallow fields and wetlands.[9]

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[6] This article is a condensed version of the Program on Agricultural Technology Studies Research Report no. 18 published in October of 2006. It is available in its entirety at http://www.pats.wisc.edu/

[7] In this report, working lands include agricultural land and forest land.

[8] All data in this report are from the Wisconsin Department of Revenue (Wis. DOR) *Property Tax Master data set* for the years between 2000 and 2005.

[9] For tax purposes, "undeveloped" land is comprised primarily of wetlands and fallow tillable land (assuming agricultural use is the land's highest and best use).

Table 1. State Acreage by Land Use type, 2005			
Land Type	***Acres***	***Percent of Total State Land Area***	***Percent of Private Lands***
Working Lands	**21,448,944**	**65.0%**	**81.3%**
Agricultural	12,117,683	36.7%	45.9%
Forest	9,331,261	28.3%	35.4%
Developed	**2,390,565**	**7.2%**	**9.1%**
Residential	1,988,917	6.0%	7.5%
Commercial	301,631	0.9%	1.1%
Manufacturing	100,017	0.3%	0.4%
Other	201,101	0.6%	0.8%
Undeveloped	**2,541,499**	**7.7%**	**9.6%**
Public	**6,622,100**	**20.1%**	N/A
Federal	1,873,093	5.7%	N/A
State	1,491,229	4.5%	N/A
County	2,576,458	7.8%	N/A
Other	681,319	2.1%	N/A
Total	**33,003,108**	**100.0%**	**100.0%**

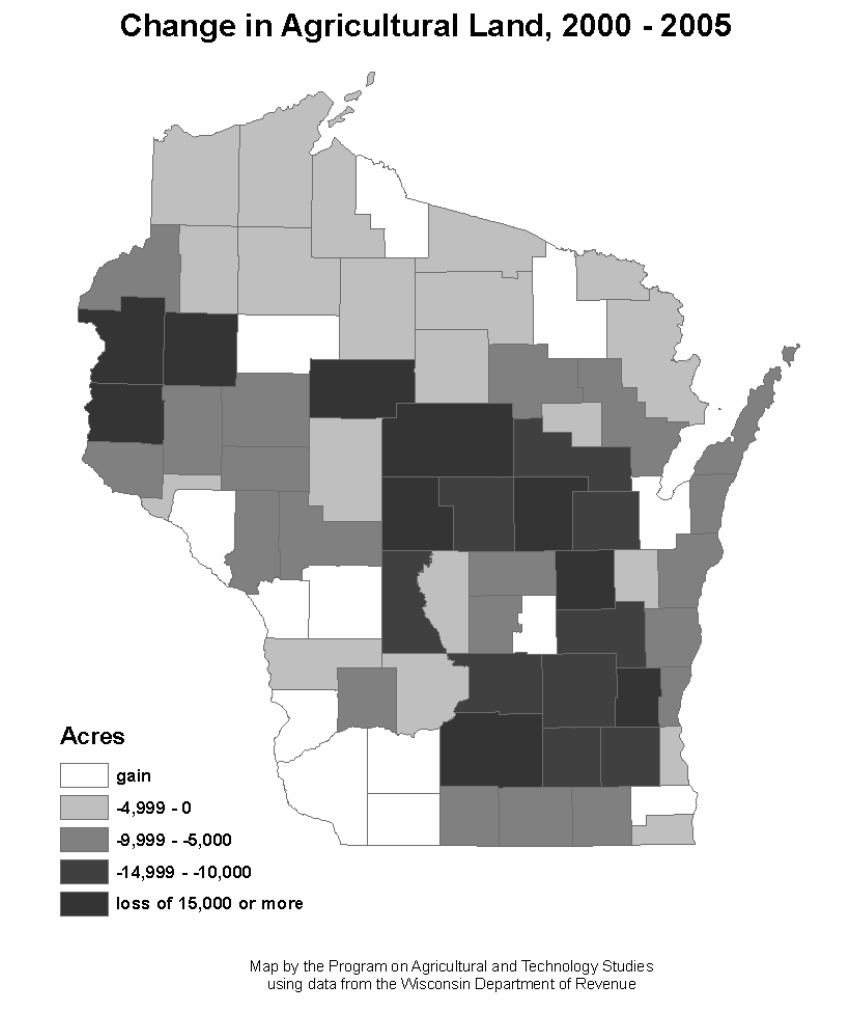
Changes in Land Use

Wisconsin saw significant changes in land use between 2000 and 2005. Table 2 shows these changes in both real and percentage terms for each land use category. The combination of non-agricultural development and conversion of agricultural land to undeveloped (fallow) land accounts for the acreage loss in agricultural and forest lands. The growth in undeveloped land, primarily due to the fallowing of previously productive farmland, was substantially greater than the increase in developed land.

Agricultural Land Changes

Wisconsin lost nearly one-half million acres of agricultural land in the first five years of the 21st century. The *Change in Agricultural Land* map below shows the distribution of county-level changes across the state. This map indicates that most of the counties with the largest agricultural land losses are in the north-central, southeast, and northwestern portions of the state.

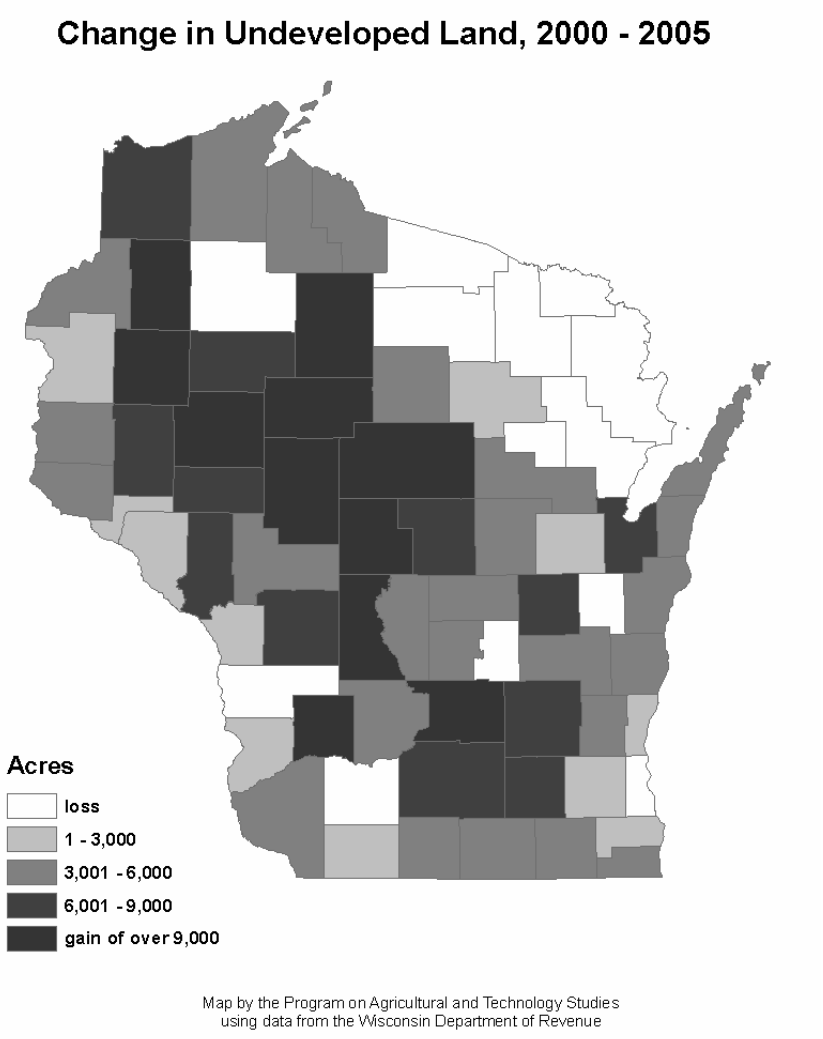
Table 2. State Land Use Change 2000-2005				
Land Type	*Acres*		*Change, 2000-2005*	
	2000	*2005*	*Acres*	*Percent*
Working Lands	**22,047,719**	**21,448,944**	**-598,774**	**-2.7%**
Agricultural	12,616,100	12,117,683	-498,417	-4.0%
Forest	9,431,618	9,331,261	-100,357	-1.1%
Developed	**2,336,099**	**2,591,666**	**255,567**	**10.9%**
Residential	1,742,726	1,988,917	246,191	14.1%
Commercial	291,328	301,631	10,303	3.5%
Manufacturing	100,360	100,017	-343	-0.3%
Other	201,685	201,101	475	0.2%
Undeveloped	**2,199,351**	**2,541,499**	**342,148**	**15.6%**



Undeveloped Land Changes

Between 2000 and 2005, the undeveloped land category grew by over 342,000 acres (15 percent). In both acreage and percentage terms, that growth far outstripped that of any other land use category (see Table 2 above). Much of the increase likely comes from the fallowing of previously productive agricultural lands.[10] The increase in undeveloped lands is equal to approximately 69 percent of the acreage losses in farmland between 2000 and 2005. This suggests that more than two-thirds of the agricultural land loss in the state is due to this fallowing process, rather from permanent development such as suburban housing growth.

As the *Change in Undeveloped Lands* map (below) indicates, the extent of changes in use of undeveloped land acreage varied substantially across the state.



[10]Some of the changes may be due to changes in assessment practices resulting from use value assessment. Additionally, a small increase in wetland acreage due to more precise delineation may contribute to these gains, but it is not likely that those changes account for a significant portion of the over 342,000 acre growth in undeveloped lands across the state.

While many counties saw significant increases, much of the increase happened in a cluster of counties stretching from the central to the northwest portions of the state. This shows that the major gain in undeveloped lands tends to be away from state's largest population centers. A comparison of the two maps shows the close connection between growth in undeveloped land (farmland fallowing) and loss of agricultural land. In particular, the maps demonstrate that much of the farmland loss in the north-central portion of the state is due to this fallowing process.

Developed Land Changes

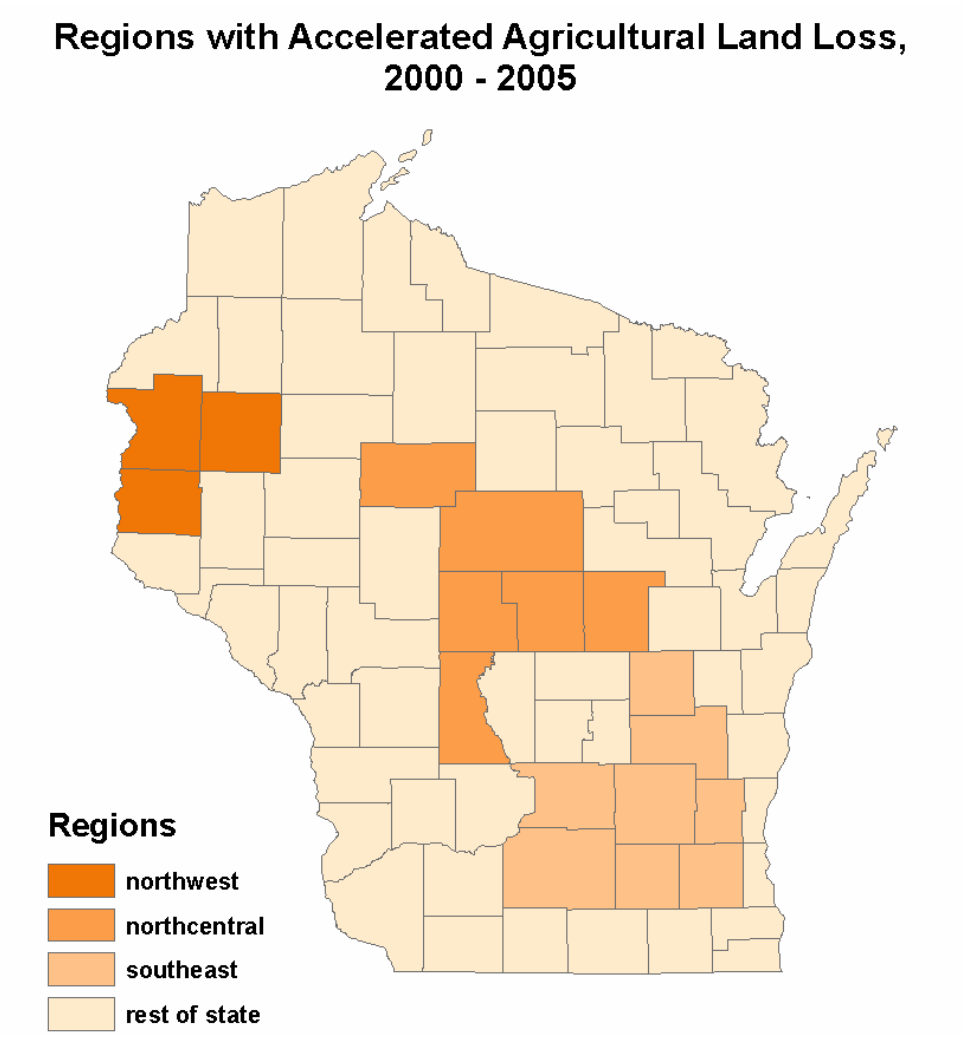
Non-agricultural development increased by more than 255,000 acres (11 percent) between 2000 and 2005 (see Table 2 above). This development growth was responsible for approximately 43 percent of the almost 600,000 acre decrease in working lands. Residential growth accounted for approximately 19 out of every 20 of the newly developed acres. Residential land increased by 246,000 acres (14 percent) between 2000 and 2005. Commercial land acreage grew by 11,000 acres (3.5 percent). Manufacturing and other lands stayed relatively constant, each changed by less than 500 acres across the state in the five-year period.

Not surprisingly, much of the increase in developed acres occurred in counties around the larger metropolitan areas. Near Milwaukee, the counties of Waukesha, Washington, and Ozaukee together converted 54,000 acres to development. Dane County, surrounding Madison, added 18,100 acres. In the Green Bay area, Brown County added 39,000 acres. Just east of Twin Cities, St. Croix County added 9,200 acres. In the north, Lincoln and Oneida counties together gained developed 28,000 acres, but this likely reflects the building of vacation homes, rather than permanent residences, and would tend not to affect agricultural acreage substantially.

Regions with Accelerated Agricultural Land Loss

The map below shows that three areas in the state accounted for most of the loss of farmland between 2000 and 2005. One such region is in the southeast – eight counties in a triangle bounded by Oshkosh, Milwaukee and Madison. Another includes six counties the north-central part of the state in the vicinity of Wausau. The third, in the northwest portion of the state, includes three Wisconsin counties just east of the Twin Cities.

While these are not the only places where Wisconsin is losing agricultural lands, they deserve greater attention for a couple of reasons. First, they represent clusters of counties where conversion of agricultural land is happening at a particularly high rate. Combined, the 19 counties in these three regions account for nearly 60 percent of the agricultural land loss across the state. Second, these areas include some of the state's most productive farmland.



The Southeast Triangle

The southeast portion of the state remains an important area for agriculture, despite the region's metropolitan centers and associated development pressures. In 2005, the eight counties in what we call the southeast triangle accounted for 16 percent of the state's agricultural land. That share is on the decline, as this area lost 5.7 percent of its agricultural land between 2000 and 2005 — a rate nearly half again as fast as the state as a whole. The losses in the southeast triangle represent 23 percent of the total state agricultural land conversion during those five years.

Some of these counties are losing more agricultural land to development than others. In general, most of the conversion of agricultural land to non-agricultural development is taking place in the counties bordering the metropolitan areas of Milwaukee and Madison. For example, in Dane, Waukesha, and Washington counties, 92 percent, 76 percent, and 60 percent of the land lost to agriculture was converted to developed land, respectively. In the remaining five counties, less than half of the acres removed from agriculture went into development. The same counties also had substantial acreage gains in undeveloped

(fallow) lands, suggesting that urban sprawl is not the force driving conversion of most of the agricultural lands in counties not bordering urban centers.

There is a noticeable connection between the value of developed lands and the conversion of agricultural lands in the southeast. Table 3 shows that the counties with the highest per-acre value of developed lands (Dane, Waukesha, and Washington) also had the highest ratio of increases in developed acreage to lost farmland. When you get past these suburban counties, the per-acre value of developed land drops dramatically. This indicates that the likelihood of losing farmland to development decreases substantially as the value of developed lands decreases.

Table 3: Value per Acre of Non-Agricultural Developed Lands in the Southeast, 2005

County	*Per acre value ($) of developed lands*	*Percent of agricultural losses going to new development*
Dane	136,827	92%
Waukesha	99,167	76%
Washington	69,693	60%
Winnebago	48,209	41%
Columbia	34,156	22%
Dodge	31,200	43%
Fond du Lac	26,535	49%
Jefferson	13,856	23%
State Average	**34,547**	**43%**

North-central area

In 2005, the counties of Juneau, Marathon, Portage, Taylor, Waupaca, and Wood contained 10 percent of Wisconsin's agricultural land. But this region's share of the state's farmland is likely to decrease, because the area has been losing agricultural land at more than twice the rate of the state as a whole (8.7 percent vs. 4.0 percent). In total, the area's conversion of 114,000 acres out of agriculture represents 23 percent of the state's total farm land loss.

In this region more than any other, the fallowing of previously productive agricultural lands was the force driving farmland loss between 2000 and 2005. Two-thirds of the area's loss of agricultural land shows up as gains in undeveloped lands. Put differently, more than one out of every twenty acres (6 percent) of land in agricultural production in the area in 2000 had been fallowed by 2005. The area fallowed land at three times the rate of the state as a whole.

The north-central region does not have the same development pressures as other areas of the state, which may be a key driver of the higher rate of land fallowing. This is reflected in the value of developed lands in the area, approximately $14,000 per acre, less than half

of the statewide average of $35,000 per acre. The lower development pressure helps to explain the high percentage of land that is no longer in agricultural production and lying undeveloped. Additionally, the area's shorter growing season make farming potentially less profitable than elsewhere. This could help explain the high rates of agricultural land loss despite the relatively low development pressure.

Northwest area

Barron, Polk, and St. Croix counties lie just east and north of the Minneapolis/St. Paul metro area. While these three counties hold only 6 percent of the agricultural land in the state, they accounted for 12 percent (53,000 acres) of the statewide agricultural land conversion between 2000 and 2005. The region lost 6.7 percent of its farmland during this five-year period, a rate nearly 70 percent greater than that of the state as a whole.

The connection between development pressures and agricultural land conversion varied across this region. Overall, the increase in undeveloped land equaled about half (49 percent) of the losses, while gains in residential, commercial, and manufacturing development were responsible for 43 percent of the agricultural land losses. The remaining losses were due to gains in forest land. In St. Croix County, which is closest to the twin cities metropolitan area, development played a larger role, amounting to 53 percent of the agricultural land decrease. In Barron and Polk counties, development was less of a factor, causing 24 percent and 44 percent of the farmland losses, respectively.

Conclusions

Our data indicate the following:

- Agriculture is the dominant type of land use in Wisconsin, accounting for over 46 percent of all private land and 37 percent of the total state land area in 2005.

- Agricultural and forest lands decreased by 4 percent (498,000 acres) and 1 percent (100,000 acres), respectively, between 2000 and 2005.

- Undeveloped acres grew by 16 percent (342,000 acres) between 2000 and 2005. This increase is substantially greater in both real and percentage terms than the increase in developed lands of 11 percent (255,000 acres) during that same time. Most of the growth in undeveloped land was due to fallowing of previously productive farmland.

- The majority of agricultural land conversion (60 percent) is taking place in the southeast, north central and northwest portions of the state, where only 32 percent of the state's agricultural land is located.

These results suggest that land use initiatives to address farmland loss should take into account not only residential and commercial development, but also the fallowing of

productive farmland. While development (especially residential) remains a major factor in farmland loss, these data show that the majority of farmland losses are due to land coming out of production without being physically covered with new development. Given this fact, policies should take fallowing into account, especially in areas away from centers of high population growth.

Regional differences in the causes of farmland loss point to the need to tailor land use policies to the characteristics of a given area. Areas near metropolitan centers and other high-growth locations tend to have higher land values and lose more farmland directly to development. Permanent farmland preservation efforts may go the farthest toward preventing irreversible farmland losses when focused in areas where development pressures are highest. A focus on more housing density coupled with permanent easements through transfer or purchase of development rights may be effective at stemming this irreversible land conversion. Of course, because land values are generally higher in these places, strategies that involve the purchase of land or development rights will be more costly than in other areas of the state.

Looking ahead, the recent slowing of the real estate market coupled with favorable prices for corn, soybeans, and milk may well alter recent trends in land use and slow agricultural land conversion. Additionally, the growing potential for using working lands to supply our energy needs emphasizes that land is a vital resource. While these market forces can help to revitalize the state's agricultural sector, they are subject to change and can't be counted on to preserve farmland in the long run. To the extent that long-term preservation is desirable, farmland protection initiatives should use these changing market forces to develop informed public policy aimed at securing a permanent base of working lands in Wisconsin.

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Hired Labor on Wisconsin Dairy Farms: Trends and Implications[11]

Jill Harrison, Julia McReynolds, Trish O'Kane, and Brent Valentine[12]

Introduction

Labor relations in Wisconsin agriculture are undergoing major changes. Hired employees from diverse cultural backgrounds, mostly Spanish-speaking ones, play an increasingly important role. These changes are especially evident in Wisconsin's dairy sector, where the reliance on hired farm employees has expanded dramatically in the past decade as the number and scale of larger farms has increased. Though local, English-speaking laborers still comprise the majority of the growing workforce in the dairy sector, Spanish-speaking workers have increasingly stepped up to fill the labor void, especially on larger farms. The most recent figures from the National Agricultural Statistics Service (NASS) indicate that one-third of all hired dairy farm laborers in Wisconsin speak Spanish as their primary language.

In this report, we summarize the available data on Wisconsin's farm workers, particularly focusing on immigrant labor in the dairy industry. We describe their growing role in Wisconsin agriculture, cultural background, and the often tenuous legal status of immigrant workers. We also identify some challenges and opportunities facing farmers, farm workers, the agricultural sector and surrounding communities. This article reports preliminary findings from a long-term research project. Much of the dairy farm labor data comes from a series of on-farm interviews conducted by Brent Valentine.

The emerging role of immigrant labor on Wisconsin dairy farms has had different impacts on both the industry and rural communities than has been the case with migrant labor on fruit and vegetable farms. For example, because dairy farms rely on hired labor year-round rather than on a seasonal basis, workers are far more likely to settle in the surrounding area. This places new demands on public services but also offers the prospect of a more diverse culture and vibrant economy. In addition, because the returns to long-term investments on larger dairy farms (parlors, housing facilities, and so on) depend on a reliable workforce, the vitality of many Wisconsin farm operations is affected by national immigration policy, community acceptance of immigrant workers, and the relationships that farmers build with their hired workers. Thus, a clear picture of what is going on with hired labor on Wisconsin dairy farms is of vital importance to farmers, farm workers, and the surrounding communities.

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[11] The data presented in this article represent preliminary efforts of a long-term research program on Wisconsin's farm labor and immigration issues funded by UW-Madison's Program on Agricultural Technology Studies (PATS), a UW Hatch grant (project WIS01272), and the Frederick Buttel Endowment Fund. We wish to thank UW-Extension Agents Tina Kohlman (Sheboygan County) and Paul Dyk (Brown County) for their valuable assistance on the survey work.

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Trends in Hired Labor

Increase in hired labor

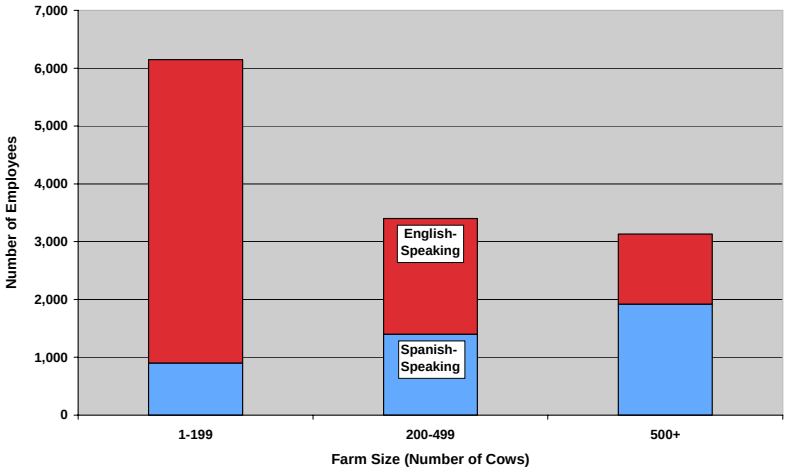
While immigrant workers have served as temporary, seasonal workers in the Upper Midwest's vegetable sectors since at least the 1930s, and within meatpacking and other food processing sectors throughout the 20th century, their widespread role as laborers in the dairy industry is relatively recent. A 2007 USDA survey found that one-third of Wisconsin's dairy employees are native Spanish speakers (NASS 2007b). The 2004 version of this USDA survey of Wisconsin dairy did not ask a single question about hired labor, indicating that until recently, little information was being collected on this issue.

The shift of the Wisconsin dairy industry towards fewer, larger farms creates demand for more hired labor. The 1997 Census of Agriculture counted 22,600 Wisconsin dairy farms with 9,400 hired employees. The 2002 Census shows that while the number of dairy farms fell to 16,900, the number of hired employees rose to 12,700. In view of the state's accelerated dairy expansion, it is likely that hired labor plays an even bigger role now than in 2002.

Increased reliance on immigrant workers

Though the 2007 NASS survey indicates that one third of Wisconsin's 14,000 hired dairy employees speak Spanish as their primary language, this phenomenon is, by all accounts, a recent one. The farmers surveyed in 2007 by Valentine report, on average, that they started hiring immigrant employees in 2000.

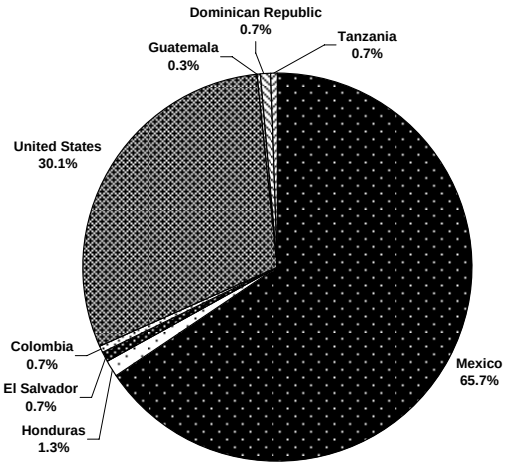
Figure 1. Spanish-Speaking Portion of Wisconsin Dairy Farm Labor Force, by Farm Size, 2007



The degree to which dairy farms employ Spanish-speaking laborers varies considerably by region and by farm size. Interviews and focus groups with farmers, UW-Extension agents and worker advocates in 2006 and 2007 suggest that Latino immigrants comprise 40 to 80 percent of the dairy farm labor force in eastern Wisconsin but a much smaller percentage in other areas. Across the state, however, there is a strong relationship between farm size and the extent of employment of Spanish-speaking labor. Figure 1 demonstrates that Spanish-speaking laborers comprise less than one-sixth of all

hired workers on farms with fewer than 200 cows, but comprise over two-thirds of the employees on farms with 500 or more cows (NASS 2007b).

Figure 2.
Country of Origin for Wisconsin Dairy Employees



Source: Valentine Survey, 2007

The survey conducted in summer 2007 provides an initial snapshot of Wisconsin's dairy farm labor force, especially the immigrant workers. As indicated in Figure 2, 70 percent of employees surveyed are immigrants, nearly all of them from Mexico.[13] The majority of immigrant workers are male, but 60 percent are married and 48 percent live here with their immediate family (wife and/or children).

An increasing number of immigrant workers expect to live in Wisconsin for more than five years. Thirty-four percent of foreign-born employees see themselves living here in 2017. This desire to settle permanently is good news for employers seeking a stable workforce. Furthermore, nearly 80 percent of those surveyed expressed interest in learning advanced skills, such as animal health care or machinery operation. This interest in learning puts a premium on the bilingual language abilities of dairy employees and management.

Demographic changes in the dairy farm labor force mirror the trends in the seasonal crop labor force, where the percentage of agricultural workers reporting Spanish as their primary language rose from 41 percent in 1990 to 81 percent in 2000 (NAWS 2005). This parallels demographic trends throughout Wisconsin. According to US Census data, the state's foreign-born population more than doubled to 245,000 between 1990 and 2006, and more of these immigrants now come from Mexico than from any other country (APL 2007, pp. 1-2).

It is difficult to state with certainty what percentage of immigrant workers are legally documented. [14] Research conducted in California suggests that 50 to 90 percent of immigrant farm workers are unauthorized. Research by Valentine in 2005 found that 84

[13] Data from Valentine's on-farm surveys in two Wisconsin Counties.

[14] Asking immigrants questions about their legal status can compound the vulnerabilities experienced by immigrant respondents as well as by their employers.

percent of respondents had crossed the border without papers. A recent survey of 548 farm workers in the state of New York found that 65 said they were unauthorized (Parra and Pfeffer 2006, p. 86). Fortuny et al, using data from the U.S.Census Bureau, Immigration and Naturalization Services (INS), and Department of Homeland Security, estimated that 37 percent of the foreign-born population in the state of Wisconsin is unauthorized, but base this assumption partly on the Census bureau's propensity to undercount immigrants (Fortuny et al, 2007, p. 34).[15]

Because agriculture has historically been a starting point for unauthorized immigrants in other parts of the nation, we believe that Wisconsin's agricultural sector is also likely to have a disproportionately higher percentage of unauthorized workers than the state average. This assumption is supported by Fortuny et al's (2007) finding that unauthorized immigrants in Wisconsin are relative newcomers to the United States. An estimated 80 percent of Wisconsin's unauthorized immigrants have been in the United States for 10 years or less. Data from Fond du Lac and Sheboygan Counties show that 90 percent of the respondents have been in the United States for less than 10 years, the average being 5.19 years.

Explaining These Changes in the Dairy Labor Force

These changes in the dairy farm labor force stem both from structural changes in the industry as well as factors that drive immigration from countries like Mexico into the United States. As noted earlier, large dairy farms, which require hired employees, are growing in number in Wisconsin. This opens new job opportunities for hired workers.

While dairy farm jobs are increasing, farmers report difficulty finding enough U.S.-born workers. In our focus groups in early 2007, farmers consistently spoke of their inability to find reliable U.S.-born employees. Farmers and others often say that young people in rural Wisconsin have little desire to work on dairy farms, and that it is difficult to find employees who are willing to work long hours, night shifts, and weekends. As these problems escalated during the 1990s, farmers report that they were being approached with increasing frequency by Latino immigrants who wanted jobs and were willing to accept the hours, wages, and tasks being offered.

In October 2007, Rod Nilsestuen Wisconsin's Secretary of Agriculture, Trade and Consumer Protection, said that without this steady source of labor, many farms would be unable to function: "If you took away Hispanic labor from agriculture and from dairying in Wisconsin, we'd be in crisis." (Arcega 2007). The following statement by one dairy farmer (with a 150-cow operation) shows that labor trends affect relatively small dairy farmers as well:

[15] This most recent estimate would mean that in 2004, 2 percent of the state's total population was unauthorized immigrants. This is an increase of 750 percent in Wisconsin's unauthorized immigrant population between 1990 and 2004, as compared to 195 percent increase in the U.S. as a whole during that period. This puts Wisconsin 23rd in a ranking of the U.S. states by total number of unauthorized immigrants.

> "So as our last two children entered high school, and I realized that soon I would have no family labor to rely on, we moved our farm to all hired labor. I have not been able to hire an American citizen since 1997. I have tried! The way I see it, if we didn't have Hispanics to rely on for a work force, I don't believe I could continue farming" (personal communication).

Immigrants from Mexico and elsewhere seek work in the United States for a multitude of reasons: they cannot find adequate employment in their own country, wages in the United States are much higher than in Mexico, to earn enough money to pay off medical and other debts, to flee political violence, to better meet their basic needs and to reunite with family members living in the United States. This is an international phenomenon, where U.S. trade policies can exacerbate economic vulnerabilities for many populations in Mexico and thus also affect the decision to immigrate. Many immigrants enter the United States without documents or overstay their visas because they see few other options and cannot afford to wait years or decades to clear the United States' immigration system.

Implications of These Changes: Challenges and Opportunities

The reliance on workers with limited English proficiency, different cultural backgrounds, and, for some, a lack of legal authorization to work and live in the United States presents a set of opportunities and challenges. The challenges not only affect immigrant laborers but also their employers and the communities in which they live. The year-round nature of dairy work deepens these challenges, particularly relating to communication in schools and social services. Additionally, the fact that more than 95 percent of Wisconsin dairy farms are family owned and operated portends additional challenges associated with increased reliance on hired labor, which can modify the traditional management and succession patterns for those businesses. Anticipating and preparing for these challenges could help increase the viability of the state's dairy farms and the cultural and economic diversity of the communities in which they operate. Conversely, a failure to effectively address these challenges could undercut the viability of farms, the agricultural sector and rural communities.

Challenges in the workplace

Although immigrant employees are a crucial component of the economic viability of dairy farms, the employer-employee relationship is fraught with social, legal and economic vulnerabilities.

Language. All surveys, interviews, and focus groups indicate that language barriers are one of the primary difficulties faced by immigrant employees, their employers and other community members. Communication barriers pose health and safety risks in the workplace, limit the number of tasks for which a worker can be trained, and limit the ability of immigrant and native residents to interact and relate. The dairy farmers who responded to the statewide NASS survey in 2007 reported that 45 percent of their Hispanic workers speak no English. Only 22 percent of the immigrant employees

surveyed by Valentine in 2007 described their English as good or fluent, and only 7 percent of native employees described their Spanish as "good" or fluent. Only 45 percent of employers surveyed said they had some bilingual staff, suggesting that most dairy farmers rely on minimal verbal communication and hand signals.

The burden of overcoming communication barriers is typically borne by employees. Half of the farm worker respondents in the NASS survey expressed a need for English classes for these workers, but only one quarter of the employers said they would like to study Spanish. Of the employees who have not taken language classes, 90 percent expressed interest in doing so. This highlights the importance of creating more effective language training so that employers can take advantage of employee interest in learning advanced skills.

Upward Mobility. Language skills play a crucial role in determining an individual's chances for upward mobility. The majority of workers surveyed by Valentine are eager to learn new skills and move upward in their workplace, and many aspire to become independent dairy farmers. However, immigrant workers have a limited ability to accumulate sufficient assets and are predominantly situated in entry-level positions (milkers). Only one-quarter of employers surveyed cited communication as a problem on the farm, yet more advanced job skills require fluency or near-fluency in English. Moreover, workers' ambitions to learn English are limited by the long hours they spend working (averaging 55 hours per week), lack of public transportation, family responsibilities and limited funds for childcare.

While limited upward mobility obviously affects laborers, it could also have profound impacts on the viability of the Wisconsin dairy industry and farm succession patterns in particular. Historically, new generations of farm owners and managers have come from people who understand the intricacies of the operations. A big part of that challenge on larger farms will be the management and coordination of specialized labor activities. It makes sense that some of those new farm managers and owners would come from the workers involved. However, both immigrant workers and current farmers face various constraints in that process. While addressing the upward mobility issue is challenging, farmers and farm organizations can help develop programs that will both improve conditions for immigrant employees and maintain a dependable farm labor force – notably, programs pertaining to language training, management skills, and small business development assistance for minority farmers and farm workers.

Legal Status. Vulnerabilities that employers face can, in turn, affect their decisions about how to treat the immigrant employees they hire. Daunting language barriers and legal problems can affect farmers' decisions about how to organize farm work and whether to invest time into training and skill development. Consequently, failed immigration policy reform and hard-line immigration practices (workplace raids, surveillance, deportations, as well as legal sanctions against employers) in conjunction with language differences, can serve as a major barrier to training, job diversification, and other practices that could improve employee satisfaction, upward mobility, and stability within the workplace.

At the same time, workers' legal vulnerabilities can increase their ability to self-exploit and to be exploited — a circumstance that increases business profitability and thus presents a problem for workers but not employers. As one dairy farmer participant in our focus groups pointed out,

> "You have to keep perspective. Some dairies do cheat their workers… We have dairies that hire immigrants. They hire people and then just don't pay them the last month. And there are people who do pay them a lower wage. You picked [focus group participants] who are not going to treat people bad. But it's not like that with all employers."

Challenges in the community

The increased reliance on immigrant labor is unfolding in an era of considerable controversy over immigration policy, changes in immigration policy enforcement, and strong anti-immigration sentiments. All of these factors influence immigrants' experiences not just at work but also living in rural communities. Initial results from our research demonstrate that while many farmers are very supportive of their immigrant employees, many immigrants have troubling experiences in their broader social context: fear, discrimination, racial profiling by law enforcement, along with everyday struggles associated with securing transportation, housing, education, and health care while lacking sufficient financial resources, language skills, and (often) the rights of citizenship.

New immigrant populations clearly pose communication challenges for schools and other social service providers. While reports on the economic impacts of unauthorized immigrants vary considerably from region to region and study to study, immigrant workers are often blamed for an extraordinary array of social problems — garbage, gangs and other violence, and the financial troubles of education and health care systems. The social isolation experienced by immigrant dairy workers exacerbates these challenges. Almost one-third of the immigrant workers interviewed by Valentine said they have no social interaction with fellow Latino immigrants outside of work. Such comments are more common among workers on dairy farms not located near an urban center.

Discrimination and rejection experienced by immigrant farm workers in rural communities appears to be quite common. As one focus group participant stated:

> "They're not very well accepted. There's a label attached to them that's not very positive…. People in [this region of] Wisconsin are not very open. We're not very receptive to people that look different, and you can spot them right out. … People here are racist by nature and conservative by nature".

> "They're all labeled as partiers, as troublemakers…. I tell everyone, most of these people are 18-22 year-old males. Are they doing anything different than the local 18-22 year-old guys? They're not. They're just easier to spot…. Immigrants can't do it but our kids can…"

Many of the dairy farmers in our focus groups also expressed concerns about immigrant employees being singled out and disproportionately put under surveillance. Many told stories of their employees being followed by local law enforcement, although they were reluctant to characterize the practice as "racial profiling." Farmers and immigrant advocates also report that local officials have (inappropriately) taken it upon themselves to enforce immigration law. Typical of many anecdotes we heard was the following, which illustrates why immigrants may hesitate to approach authorities or utilize public services:

> "I had [an employee] who didn't have a driver's license. I went to the DMV and asked them for a manual in Spanish after he had an accident. He bought a car in the meantime. I went with him to get a license, and the guy asked for a social security card. He said, that's illegal, get him out of here or I'm calling the sheriff."

In addition to scapegoating and racial profiling, civilian militia groups, such as the Minuteman Project, are emerging and thriving in rural communities throughout the Midwest. No longer limited to patrolling the U.S.-Mexico border, such groups aim to identify and remove 'illegal' immigrants they perceive as the root of social problems (Moser 2006). Such practices by law enforcement and civilian militias increase anti-immigrant sentiment and raise questions about the impact of the unending "gaze of surveillance" in immigrants' lives (see Stephen 2004).

With the increasing threat of workplace raids, surveillance and anti-immigrant political action, immigrant advocates report that many immigrant workers avoid using important social services — such as domestic violence counseling — in order to stay out of the spotlight. Immigrant advocates argue that recent anti-immigrant discourse in Green Bay "has created a culture of fear," noting that the Latino congregations in local churches declined by 50 percent and that one-third of the 24 floats for a Mexican culture parade failed to show. Unauthorized immigrants are now unable to obtain drivers licenses in Wisconsin, yet their need to drive has not declined. This is a big problem for dairy farm employees, who typically work in remote areas with no public transportation, few co-workers, and little immigrant community to rely on.

There are, however, reasons for hope. All social service providers we have met with are eager to learn about this new population and to adjust their outreach to better serve it. Some innovative outreach efforts (notably, the Puentes project) and a number of UW-Extension agents are attempting to build rapport between immigrant farm employees and their employers.[16] UW-Extension organized several meetings and trainings in 2007 relating to the growing immigrant population. And several surveys of farmers indicate a high level of acceptance of diversity in Wisconsin's dairy sector (Wilber et al., undated,

[16] Puentes is a program that organizes trips for dairy farmers and others to travel to Mexico and visit the communities which their dairy employees are from. Strong family and social networks amongst Latinos mean that most immigrant employees on a farm or in a particular region in Wisconsin come from the same town or region in Mexico.

a; Wilber at al., undated, b). Yet, the relationships between immigrant workers and their wider communities are also very important. To that end, some Wisconsin immigrant advocates and dairy industry leaders have started to join forces to design pro-immigrant policy proposals and lobbying strategies.

There are many incentives for such efforts. Immigrant workers provide a much-needed source of reliable labor to the state's dairy sector. They bring cultural diversity and new residents to rural communities in which, in many cases, populations had been stagnant or declining in recent years. Unauthorized immigrant workers also contribute to the local, state, and national tax coffers. Employers withhold not just income taxes, but also Social Security, and Medicare taxes from their unauthorized employees who are working under false Social Security numbers and who will never collect the benefits. The federal government does not route these funds back to local agencies that provide services to these immigrant groups. Immigrants also pay sales taxes on purchases and property taxes, either directly as homeowners or indirectly as renters. In 2003, the federal government collected an estimated $7 billion in Social Security taxes from payers whose Social Security numbers did not match their taxpayer ID number. The IRS believes that most of these mismatches involve filings by unauthorized workers (Lipman 2006, p. 24).

Concluding Thoughts

Latino immigrant workers now constitute an integral component of Wisconsin's economically and culturally important dairy sector. In the short term, this is good news for the state's dairy sector: There is an abundance of workers willing to work long hours for relatively low wages, perform menial tasks, accept limited benefits, and issue few complaints.

However, the industry's relationship with this new labor force is fraught with legal and economic vulnerabilities in the workplace and nearby communities. These vulnerabilities are embedded in a mixture of language differences, limitations to upward mobility, legal status, xenophobia and changes in immigration enforcement. A combination of long workdays and anxiety stemming from immigration politics and enforcement, make it difficult for workers to study and learn English and the skills necessary to take on additional responsibilities on the farm. These factors give workers less incentive to invest themselves in their current job and community, and considerable incentive to pursue work in other sectors that offer higher pay and greater social interaction.

These findings point to several sets of recommendations.[17] First, they suggest the need for efforts to improve conditions for immigrant employees and thereby maintain a dependable farm labor force — notably, programs that teach language and management skills, and small business development assistance for minority farmers and farm workers. Second, these findings underscore the need for immigration reform at state and federal

[17] These recommendations echo many suggested in "The Future of Farming and Rural Life in Wisconsin" study that was completed in 2007 (WASAL, 2007, pp. 194-200).

levels. Third, there is a need for social services geared toward the needs of year-round farm workers and their employers..

Fourth, we see the need for further research on several key questions. Immigrant advocates and social service providers are clamoring for a thorough, high-quality assessment of the economic impact of immigrants in Wisconsin. Currently, we are assessing how the changing organization of farm work affects the structure of wages and other benefits, opportunities for upward mobility, and stability within the workplace. We will also continue to investigate how immigrants experience local immigration politics and policies outside of work, how immigrants and their advocates mediate these experiences, and how their experiences in the broader community match with immigrants' experiences in the workplace. We believe that such research will contribute to the economic viability of Wisconsin agriculture and improve the livelihoods of farmers, hired employees and their families, and the other members of agricultural communities.

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