Wisconsin Agricultural Economics Outlook Forum

January 21, 2015

Executive Summary

Status of the Wisconsin Farm Economy

This document was prepared by the Renk Agribusiness Institute in January, 2015.

- Wisconsin agriculture's financial position continued to be strong in 2014. Net farm income was at a record level—$4 billion plus—and the wealth of farmers continued to rise.

- Wisconsin farmers generally fared better than other U.S. farmers in 2014. Precipitous decreases in crop prices—particularly corn and soybean prices—greatly reduced the value of agricultural production on many U.S. farms. This decline in crop returns caused net farm income to drop about 25 percent from 2013 to 2014 in the U.S., according to the Economic Research Service of the USDA.

- Nearly all of Wisconsin's income gains were from milk production. The value of the state's milk production was up by about $1.2 billion in 2014, largely thanks to strong milk prices. These higher milk returns offset declines in crop returns as well as increases in the costs of inputs and production expenses, spurring the income gains seen in the state.

- The equity of Wisconsin farmers rose by about $1.2 billion from December 31, 2012 to year-end 2013. This wealth gain is the result of farm asset values rising by about $1.5 billion while farm debts increased roughly $300 million.

- The value of Wisconsin's farm assets did not grow at the same rate as U.S. farm assets between 2010 and 2013. Wisconsin farm assets rose about 11 percent while U.S. farm assets grew a bit more than 25 percent. This lower growth rate for Wisconsin farm assets suggests that Wisconsin farmers have not been benefitting from real estate appreciation to the extent that farmers in the rest of the U.S. have.

- About 75 percent of Wisconsin farms fall into the group of farms with less than $100,000 in annual sales. These "small farms" control about 45 percent of Wisconsin's farm equity but produce less than five percent of the state's net farm income. The bulk of Wisconsin's net farm income is generated by farms with sales of $1,000,000 or more per year. These "large farms," which are less than five percent of all Wisconsin farms, produce more than half of the state's net farm income while controlling a bit less than 20 percent of farm equity.

- See Appendix A for an income statement constructed using data compiled by the Economic Research Service of the United States Department of Agriculture, and a balance sheet derived from data obtained from the ERS Agricultural Resource Management Survey.

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Macroeconomic Conditions That Influence Agriculture

This document was prepared by the Renk Agribusiness Institute in January, 2015.

- The U.S. economy has rebounded from the Great Recession and is showing signs of reasonable growth. During the Great Recession agriculture was a source of relative stability.

- Outside the U.S., the global economy rebounded modestly from the Great Recession but is showing strong signs of renewed weakness.

- Over the next two years Gross Domestic Product (GDP) is expected to grow at a reasonable 2.8% rate, with an upper end forecast of 3.2% and a lower end forecast of 2.4%. Since 1948, the average rate of growth in the GDP has been 3.2%.

- Over the next two years, the unemployment rate is expected to remain slightly above 5.0%. While many economists consider more than 5.0% too high, since 1948 the average monthly unemployment rate has been 5.8%.

- Growth in the Consumer Price Index (CPI), the most widely used measure of inflation, is expected to remain modest over the next two years increasing from a forecast of 1.15% in June of 2015 to 2.28% by December 2016. Since 1947, the average annual rate of inflation has been 3.55%. Over the next two years, inflation rates are expected to remain below historical averages.

- Interest rates, measured by the 10-year corporate bond rates, are expected to increase to 3.75% by December 2016. Since 1948, the average 10-year corporate bond rate for AAA-rated debt has averaged 6.6%. Over the next two years interest rates—as measured by 10-year corporate bond rates—are expected to remain below historical averages.

- The biggest downside risks to the U.S. economy are global economic weaknesses and other international risks.

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Dairy Situation and Outlook

This document was prepared by the Renk Agribusiness Institute in January, 2015.

- 2014 was a great year for dairy producers with the highest peak and average milk prices of all time, lower feed costs than in recent years, and the highest income over feed costs. Wisconsin All Milk price was above $25 for five months of the year. Farms have had the opportunity to restore balance sheets, make capital investments and pre-purchase inputs for the year ahead. Consumers also faced the highest retail prices ever, but didn't seem to back away from purchases.

- Passage of the Agricultural Act of 2014 brought the Margin Protection Program for dairy as a new risk management tool. Wisconsin dairy producers approached this tentatively with about 54% of farms enrolling in the program for 2015 and with about 55% of those farms buying protection above the free catastrophic level of coverage.

- The U.S. experienced heavy dairy product exports in the first half of 2014. Exports declined in the second half and imports of dairy products—chiefly butter—occurred during the second half of the year. U.S. dairy product prices significantly increased while prices in other exporting countries declined.

- U.S. dairy prices are now dependent on export market opportunities. Domestic product prices must decline significantly to be competitive with current prices in Oceania and the European Union. Milk production has expanded significantly in all major dairy exporting countries.

- The Wisconsin All Milk price is forecast to decline by an average of $7.20 from the 2014 levels. Although this is a large drop in income, feed prices are expected to remain near the more moderate levels of last year. This would place the 2015 income over feed costs slightly below a long-run average but nowhere near the levels of 2009.

- Farms retained cows and expanded the herd to take advantage of the strong profits in 2014. Cull cow prices have averaged well above a dollar per pound—more than double the value in 2009 and 2010—and are expected to remain high for most of 2015. Cull cow income will be a good alternative to milking marginal animals. A reduction in the national dairy herd will help to moderate milk prices by the end of 2015.

- Dairy farms that purchased higher levels of coverage in the new Margin Protection Program will see some indemnity payments starting in the second quarter of the year.

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Grain and Livestock Market Outlook

This document was prepared by the Renk Agribusiness Institute in January, 2015.

- Corn: Corn price is down approximately 6% from last year and will remain steady throughout spring. Projected stocks to use is13.8% for 2014/15, below the 15 year average of 16.8% but above the 10 year average of 13.1%. Planting intentions report will be important in determining prices after April, but with return to trend yield, prices will remain low, barring weather impacts, through marketing year 2015/2016.

- Soybeans: Soybean price is down 21% from last year, while soybean meal price was down 14% and soybean oil price was down 17%. South American production and increased acreage in the U.S. combined with large carryover will continue to push soybean prices lower in 2015. Current soybean to corn ratio is 2.4, which is historically a neutral ratio, but with costs today it favors soybeans slightly.

- Wheat: Wheat price is being affected by exchange rates, non-U.S. harvests and politics, which have impacted export sales. Wheat prices will remain steady in 2015.

- Poultry: Chicken costs of production are down nearly $0.20/lb since late 2012. Poultry supplies are expected to grow 5-6% in 2015.

- Pork: Porcine Epidemic Diarrhea Virus (PEDv) impact is lessening as the number of pigs per litter for the September to November was up 0.7% relative to 2013. Hog costs of production dropped to less than $80/cwt in 2014 from $93.95/cwt in 2013 and may drop to less than $70/cwt in 2015. Carcass based national average hog prices hit historical highs and averaged over $100/cwt in 2014, prices will be close to 15% lower in 2015 with the lowest prices in the fourth quarter. Increased breeding herd numbers, pigs per litter, and higher market weights indicate that pork production will increase almost 4% in 2015 and another 3.5% in 2016. Late 2016 may see processor capacity issues due to increased hog supply

- Beef: With pasture conditions significantly improved and improved profit opportunities for cow/calf producers, cattle herd expansion should begin in 2015. Pasture conditions are significantly improved, and coupled with current profit incentives for cow/calf producers, cattle herd expansion should begin. Commercial slaughter is down slightly over 7% in 2014 vs 2013, and will be down another 2% in 2015. Commercial beef production is down almost 6% in 2014 and will be down 0.8% in 2015. Protein demand has remained strong for all proteins in 2014, but the additional poultry and pork supplies in 2015 may lead to weaker beef demand due to the price differences between the different proteins. Finished cattle prices are up almost 23% and feeder prices were up 40% in 2014 and finished prices will be up another 5% in 2015 while feeder prices rise another 10%.

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Farm Production Costs

This document was prepared by the Renk Agribusiness Institute in January, 2015.

- Energy prices have generally been rising in concert with crude oil prices. Now that crude oil prices have plummeted, the prices for diesel, gasoline and LP gas are down dramatically and projected to stay down for at least the first half of 2015.

- Prices for seeds have steadily risen for over a decade and are likely to continue to rise in the coming year. The growth in seed prices may slow a bit, however, because farmer demand for seed is likely to soften if corn and soybean prices remain at current levels that yield limited net returns.

- Fertilizer prices have been relatively stable in recent years, but they may be set to drop in the near term. Low prices for corn and soybeans will most likely reduce farmers' demand for fertilizer. This decline in demand should put some downward pressure on fertilizer prices.

- Farmer loan demands are up and repayments are down according to the Chicago Federal Reserve Bank survey of agricultural bankers. These findings are not surprising given that cash grain farmers' incomes and cash flows have decreased as corn and soybean prices have fallen. Interest rates continue to remain relatively low, good news for farmers who have to borrow money to bridge the gap between cash expenditures and cash receipts in the short run.

- In the last few years, crop rents for cropland have risen dramatically in response to strong corn and soybean prices. Now that crop prices have fallen, it follows that cash rents should be moving down from what they have been recently. This adjustment must occur in the long run. But in the short run, cash rents could change very little if producers are willing to incur some economic losses for a year or two in order to maintain control of rented cropland for use in future years.

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Appendix A

Wisconsin Net Farm Income	2010 Million $	2011 Million $	2012 Million $	2013 Million $	2014 (Est) Million $
Value of crop production	3,468.99	4,227.31	4,927.18	4,264.96	3,750.00
Crop cash receipts	3,465.11	4,224.41	4,921.74	4,256.74	3,742.73
Feed crops	1,588.64	2,338.45	2,568.46	2,118.05	1,838.28
Food grains	77.71	124.17	138.13	106.33	94.94
Fruits and nuts	206.22	233.26	263.64	226.14	198.86
Oil crops	812.77	683.72	1,088.28	887.94	711.18
Vegetables and melons	461.10	513.28	534.81	609.89	581.69
All other crops	318.66	331.53	328.44	308.40	317.78
Home consumption	3.88	2.90	5.43	8.21	7.26
Value of livestock production	5,697.55	7,153.64	7,187.55	8,050.02	9,587.49
Livestock and products cash receipts	5,676.55	7,134.96	7,180.24	8,034.13	9,569.47
Dairy products, Milk	4,147.20	5,233.14	5,229.46	5,541.49	6,775.00
Meat animals	975.10	1,370.42	1,392.62	1,717.72	1,996.22
Miscellaneous livestock	331.51	314.86	314.54	322.68	332.01
Poultry and eggs	222.74	216.54	243.61	452.23	466.25
Home consumption	21.00	18.69	7.31	15.89	18.02
Revenues from services and forestry	1,302.22	1,293.13	1,488.52	1,806.68	1,669.55
Forest products sold	19.23	18.72	18.22	18.04	17.96
Gross imputed rental value of farm dwellings	922.31	970.06	867.63	972.78	1,001.11
Machine hire and customwork	131.42	67.18	82.52	37.62	44.31
Other farm income	229.26	237.17	520.16	778.24	606.17
Value of agricultural sector production	10,468.75	12,674.09	13,603.24	14,121.66	15,007.04
Purchased inputs	5,384.68	6,160.06	7,052.43	7,228.67	7,461.80
Farm origin	1,970.44	2,417.07	2,786.94	2,912.31	2,869.97
Feed purchases	1,330.00	1,770.00	1,940.00	2,060.00	1,964.19
Livestock and poultry purchases	110.44	117.07	166.94	132.31	169.42
Seed purchases	530.00	530.00	680.00	720.00	736.36
Manufactured inputs	1,396.76	1,626.36	1,970.90	1,991.54	2,073.10
Electricity	185.32	176.47	205.00	212.35	231.83
Fertilizer, lime, and soil conditioners	560.00	700.00	890.00	880.00	912.29
Pesticides	230.00	260.00	310.00	350.00	356.79
Petroleum fuel and oils	421.44	489.89	565.90	549.19	572.19
Other intermediate expenses	2,017.48	2,116.63	2,294.59	2,324.81	2,518.73
Contract labor	23.57	10.91	35.43	15.28	16.86
Machine hire and custom work	188.62	183.55	208.46	210.34	221.92
Marketing, storage, and transportation	263.49	277.45	330.07	260.30	307.78
Repair and maintenance	597.36	623.82	684.87	682.95	654.95
Miscellaneous expenses	944.45	1,020.91	1,035.76	1,155.94	1,317.22
Net government transactions	-163.51	-176.77	-100.74	-193.91	-211.96
Direct government payments	259.29	196.02	281.83	221.82	213.29
Motor vehicle registration and licensing fees	12.80	12.79	12.57	15.74	16.13
Property taxes	410.00	360.00	370.00	400.00	409.12
Gross value added	4,920.57	6,337.25	6,450.07	6,699.08	7,333.28
Capital consumption	1,415.18	1,479.23	1,036.52	1,147.65	1,152.04
Net value added	3,505.39	4,858.02	5,413.55	5,551.43	6,181.24
Payments to stakeholders	1,519.61	1,402.15	1,848.09	1,828.00	1,920.57
Hired labor and employee compensation	778.80	711.01	924.57	924.72	978.35
Net rent received by nonoperator landlords	175.26	155.58	249.55	211.93	233.53
Total interest expenses	565.55	535.56	673.97	691.35	708.69
Net farm income	1,985.78	3,455.87	3,565.46	3,723.43	4,260.68

Wisconsin ARMS Balance Sheet	2009 Million $	2010 Million $	2011 Million $	2012 Million $	2013 Million $
Assets: Livestock inventory	928.13	761.84	817.90	829.79	916.35
Assets: Crop inventory	1,876.16	2,107.28	2,805.22	2,829.66	2,143.94
Assets: Purchased inputs	424.87	401.94	435.98	592.26	514.36
Assets: Cash invested in growing crops	67.00	78.39	77.08	103.93	75.11
Assets: Prepaid insurance	56.39	56.00	67.99	75.18	74.27
Assets: Other	2,685.18	3,057.02	2,347.61	3,892.10	2,325.56
Assets: Current	6,037.75	6,462.54	6,551.78	8,322.93	6,049.51
Assets: Investment in cooperatives	487.58	241.65	361.21	354.24	401.36
Assets: Farm equipment	7,130.31	7,030.07	7,364.91	8,790.67	8,544.20
Assets: Breeding animals	2,898.67	2,922.93	3,103.22	3,020.15	3,166.52
Assets: Land and buildings	47,943.24	48,905.92	52,530.01	51,906.54	55,725.21
Assets: Non-current	58,459.80	59,100.50	63,359.35	64,071.52	67,837.36
Farm assets	64,497.62	65,563.04	69,911.13	72,394.46	73,886.87
Liabilities: Notes payable within one year	620.26	535.40	499.43	1,027.19	995.99
Liabilities: Current portion of term debt	812.54	833.75	886.59	826.65	872.93
Liabilities: Accrued interest	218.17	237.98	259.26	259.73	269.22
Liabilities: Accounts payable	184.78	207.64	174.64	260.50	241.51
Liabilities: Current	1,835.75	1,814.77	1,819.92	2,374.07	2,379.66
Liabilities: Nonreal estate	1,366.42	1,208.55	1,191.90	1,098.18	1,186.83
Liabilities: Real estate	4,472.89	5,356.09	6,063.91	5,705.67	5,917.87
Liabilities: Noncurrent	5,839.31	6,564.56	7,255.80	6,803.92	7,104.69
Farm liabilities	7,675.06	8,379.34	9,075.72	9,177.92	9,484.35
Farm equity	56,822.56	57,183.70	60,835.41	63,216.53	64,402.52
Assets: Operators dwelling	8,679.80	9,517.53	8,356.61	8,667.47	8,199.03

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Wisconsin Farm Bureau Federation

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