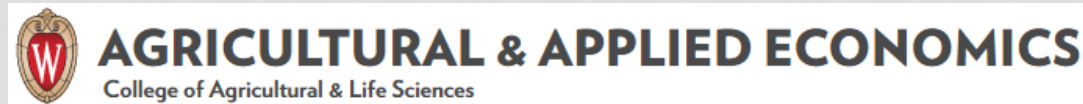


Overview of Wisconsin Agriculture



AAE 320: Agricultural Systems Management

Paul Mitchell



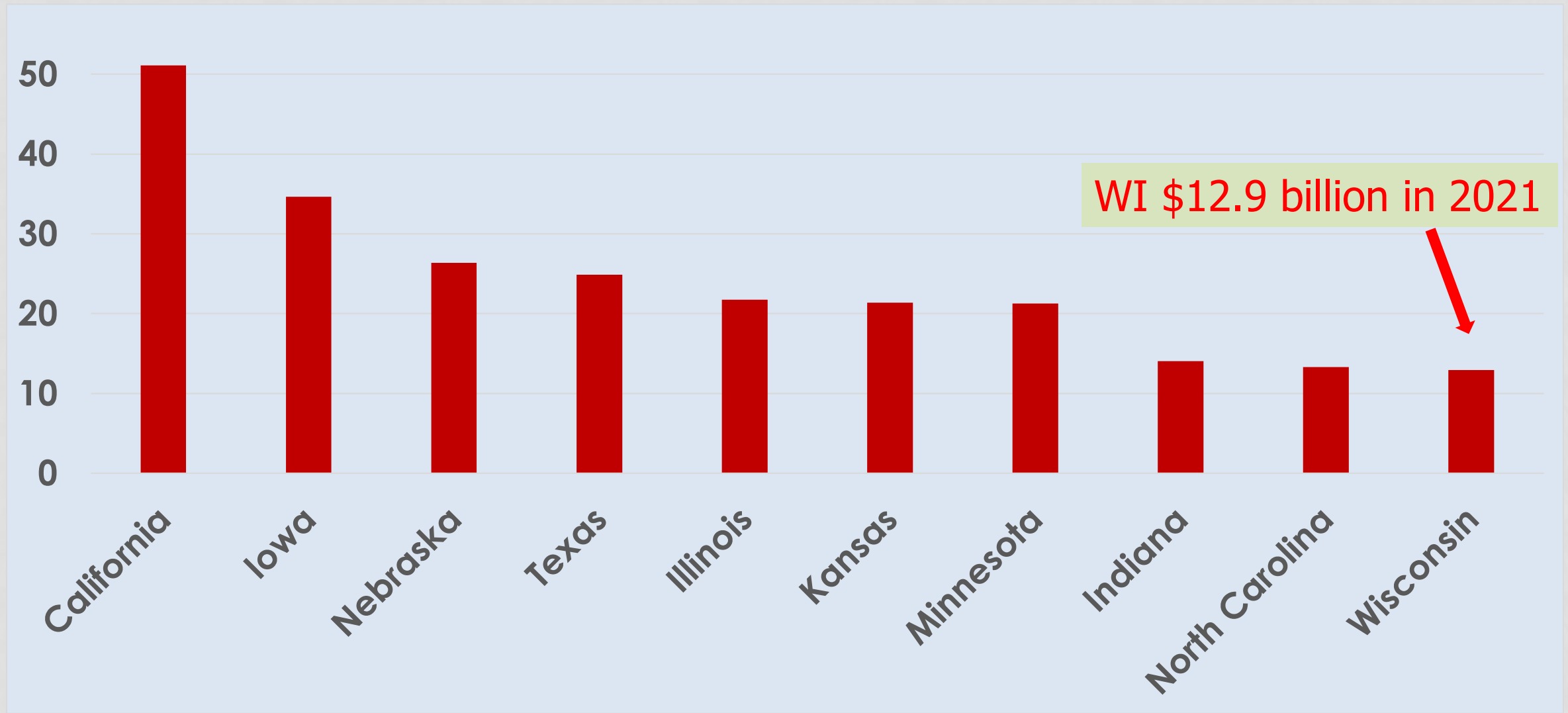
Learning Goals

To become aware of

1. Major agricultural products Wisconsin farmers grow and their relative importance nationally
2. Economic impact of agriculture in Wisconsin
3. Current trends occurring among Wisconsin farms

FARMER CASH RECEIPTS IN 2021

TOP 10 US STATES (\$ BILLION)



Wisconsin is a Major Dairy State (2021)

<u>Dairy</u>	<u>WI Rank</u>	<u>% US</u>	<u>#1 State</u>
Milk production	2	13.8%	California
Cheese, total	1	25.6%	Wisconsin
American	1	19.9%	Wisconsin
Cheddar	1	19.4%	Wisconsin
Hispanic	2	30.2%	California
Italian	1	29.3%	Wisconsin
Mozzarella	2	24.2%	California
Dry whey (food)	1	30.1%	Wisconsin



Wisconsin's Place in US Agriculture (2021)

<u>Livestock</u>	<u>WI Rank</u>	<u>% US</u>	<u>#1 State</u>
Cattle and calves	9	3.7%	Texas
Milk cows	2	13.3%	California
Hogs and Pigs	18	0.5%	Iowa
Sheep	17	1.7%	Texas
Milk Goats	1	17.1%	Wisconsin
Chickens	14	2.0%	Iowa
Broilers	20	0.6%	Georgia
Eggs	15	2.0%	Iowa
Mink Pelts	1	28.8%	Wisconsin
Honey	15	1.5%	North Dakota



Wisconsin's Place in US Agriculture (2021)

<u>Grain/Feed Crops</u>	<u>WI Rank</u>	<u>% US</u>	<u>#1 State</u>
Corn for grain	10	3.6%	Iowa
Corn for silage	1	14.8%	Wisconsin
Oats	3	12.6%	North Dakota
Soybeans	15	2.4%	Illinois
Wheat, winter	21	0.7%	Kansas
Forage (all types)	2	8.8%	Texas



Wisconsin's Place in US Agriculture (2021)

<u>Vegetable Crops</u>	<u>WI Rank</u>	<u>% US</u>	<u>#1 State</u>
Potatoes	3	6.7%	Idaho
Sweet Corn	3	15.9%	Washington
Green Peas	3	20.7%	Washington
Snap Beans	1	38.3%	Wisconsin
Carrots	3	5.8%	California
Cabbage	4	8.7%	California
Cucumber	6	5.9%	Michigan
Pumpkins	12	1.2%	Illinois



Wisconsin's Place in US Agriculture (2021)

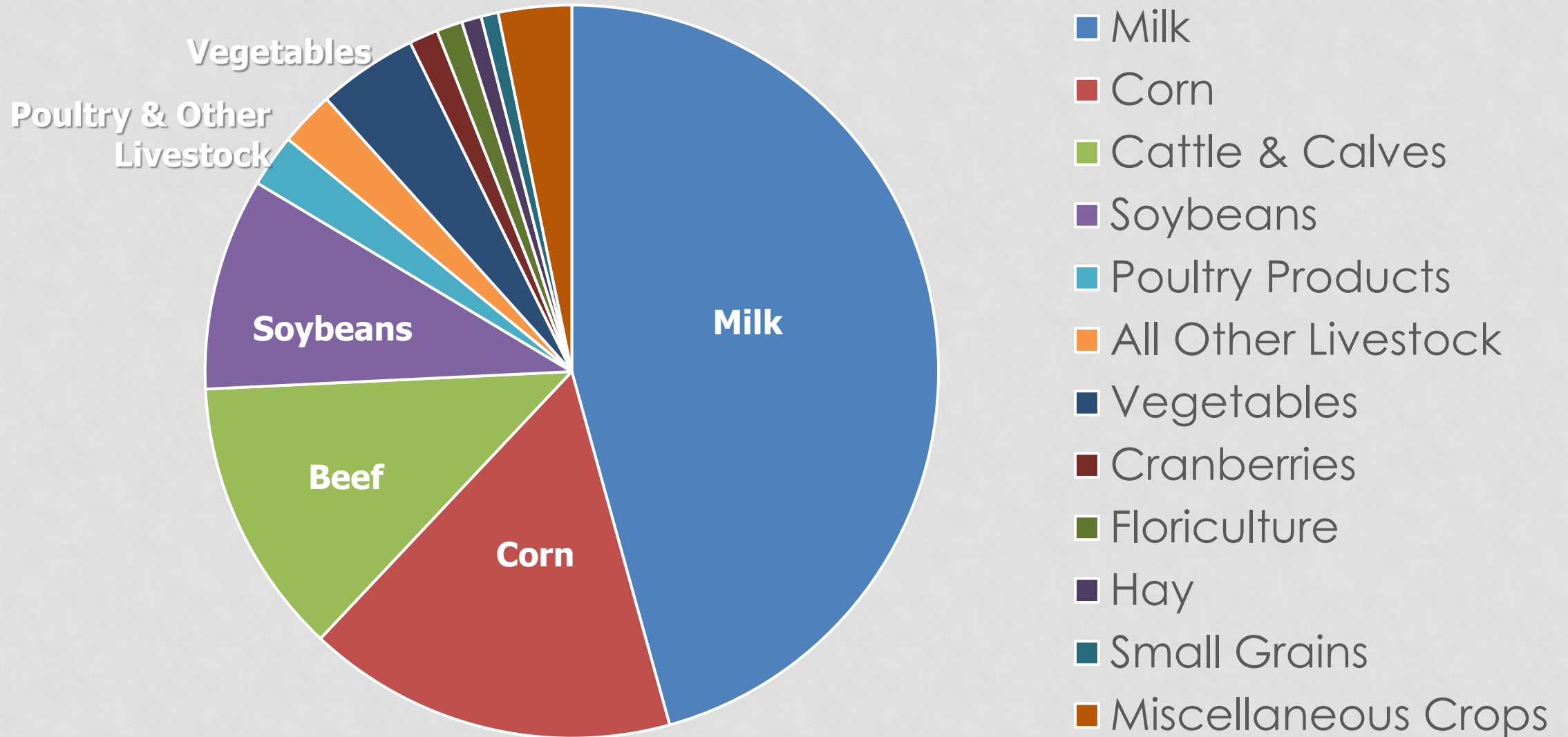
<u>Fruit Crops</u>	<u>WI Rank</u>	<u>% US</u>	<u>#1 State</u>
Cherries, tart	4	7.2%	Michigan
Maple syrup	4	6.4%	Vermont
Cranberries	1	59.3%	Wisconsin
Ginseng	1		Wisconsin



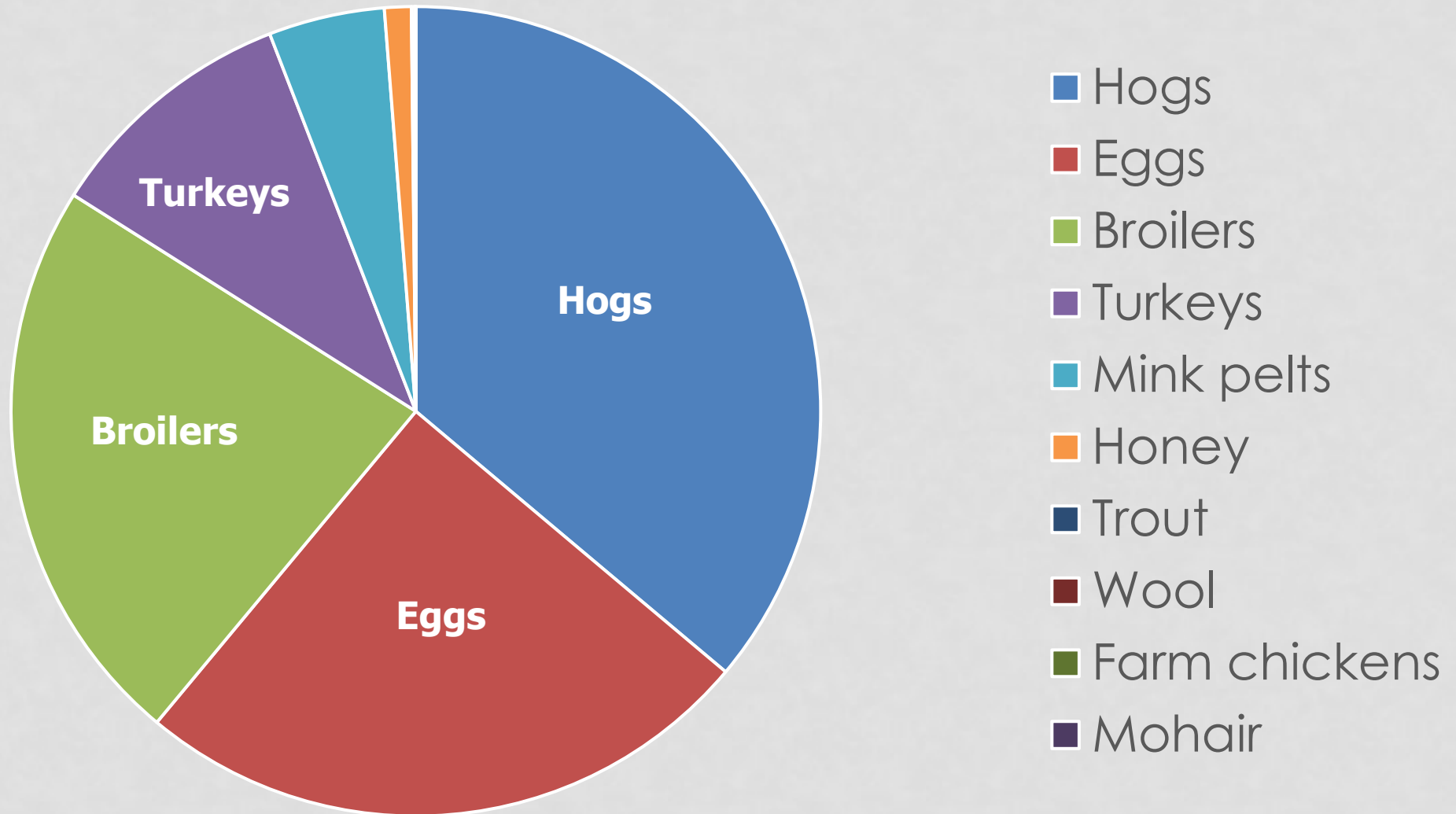
% of WI Farm Cash Receipts by Commodity Category 2011-2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total (\$B)	\$11.3	\$12.0	\$12.1	\$12.9	\$11.3	\$10.7	\$11.3	\$10.9	\$11.2	\$11.3
Livestock	64%	61%	66%	73%	70%	67%	69%	67%	70%	69%
Dairy	46%	44%	46%	52%	45%	47%	48%	46%	50%	51%
Crops	36%	39%	34%	27%	30%	33%	31%	33%	30%	31%
Grains	25%	29%	24%	18%	19%	22%	20%	23%	21%	23%
Vegetables	4%	4%	5%	4%	4%	4%	4%	4%	4%	4%
Fruits	2%	2%	2%	1%	2%	2%	2%	1%	1%	1%

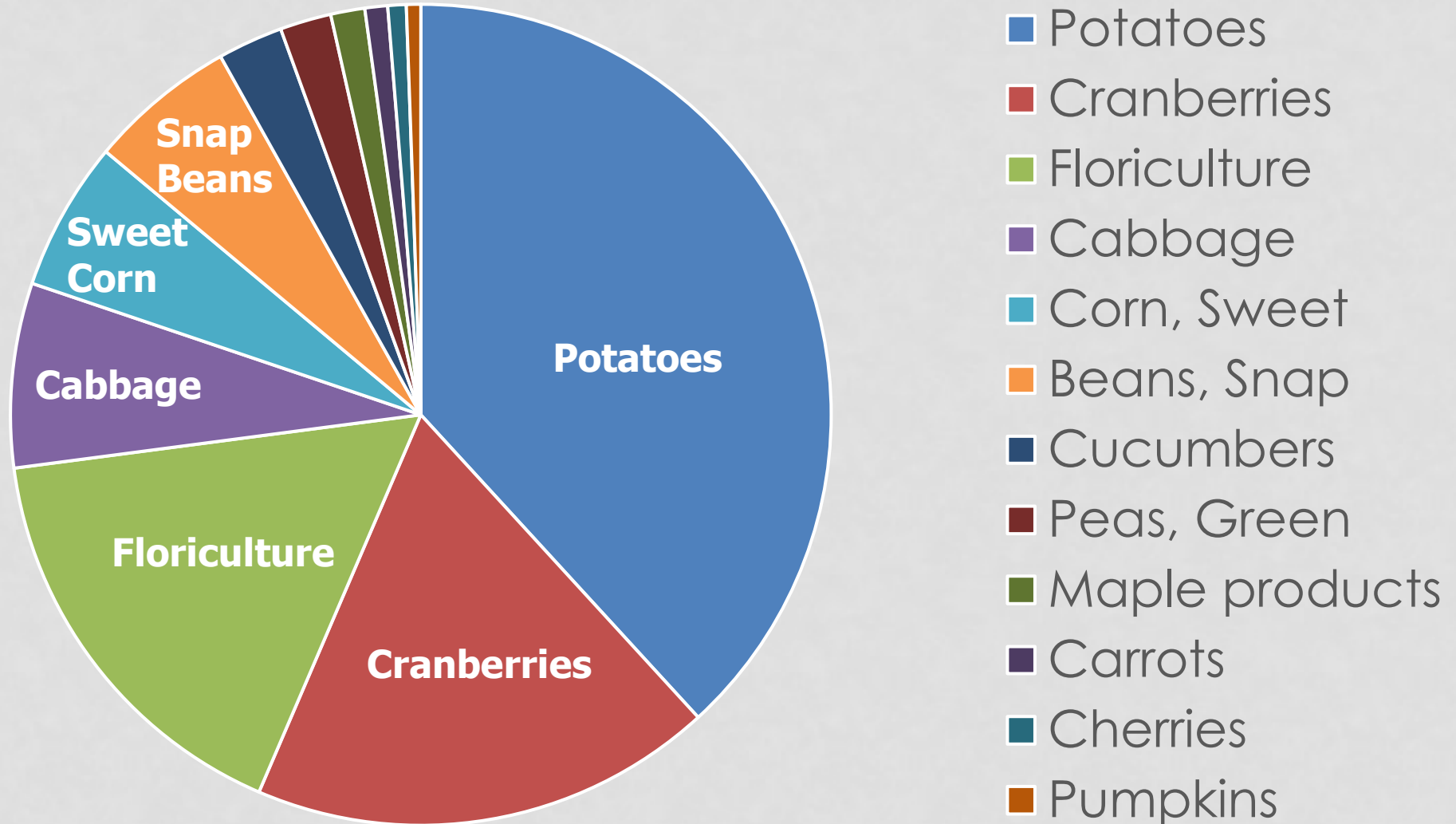
WI Farmer Cash Receipts by Commodity (2021)



WI Non-Cattle Livestock Farm Cash Receipts (2021)



WI Specialty Crop Farm Cash Receipts (2021)



Nationally Important Agriculture in Wisconsin

- Dairy is very important: Milk, cheese, whey, milk cows and milk goats
- Field crops: silage, corn, oats, forage
- Vegetables: Potatoes and Processing Vegetables (sweet corn, snap beans, green peas, carrots, cucumbers, cabbage)
- Fruits: cranberries, cherries
- Ginseng
- Main Point: Wisconsin Agriculture is more diverse than in many other midwestern “ag” states

Discussion Pause

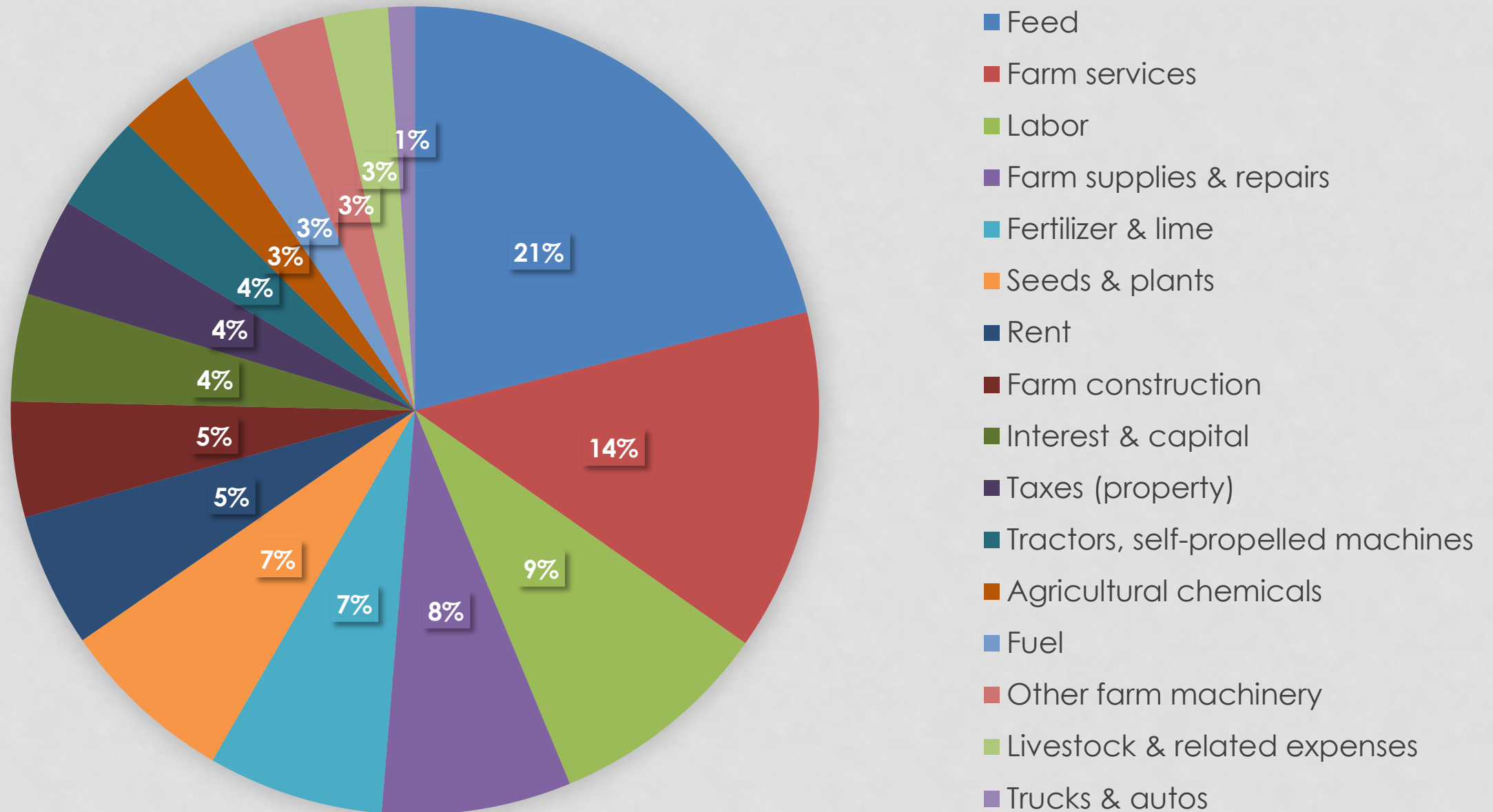
- Was Wisconsin's importance in any of these crops or livestock products surprising to you?
- Do any of you have experience with these crops or livestock?
- What crops or livestock products are missing?

Impact of Agriculture on the WI Economy

- Contribution of Agriculture to the Wisconsin Economy: Updated for 2017 Deller (2019): <https://go.wisc.edu/i6947n>
 - Agriculture in WI = \$105 billion, 16% of total sales in the state, 12% of jobs, 12% of income
 - On-Farm: \$22 billion, 4% of jobs, 3% of income
 - Processing: \$83 billion, 8% of jobs, 9% of income
 - Dairy (farm & processing): \$46 billion, 4% jobs, 5% income
 - US's 2nd largest processed vegetable industry

WI Farm Production Expenditures in 2020 by Category

\$10.8 Billion in 2020, \$168,000/farm



Wisconsin Agricultural Statistics 2021

- https://www.nass.usda.gov/Statistics_by_State/Wisconsin/Publications/Annual_Statistical_Bulletin/2021AgStats-WI.pdf
- In Wisconsin, in 2020, there were
 - 64,400 farms
 - 14,300,000 acres in farms
 - Average 222 acres/farm
 - Produced \$12.7 billion in production value
 - Generated \$3.72 billion in net farm income
 - Profit margin = $3.72/12.7 = 29.3\%$ (good year, 18.5% in 2019)

WI Farms by Annual Sales 2020

Gross Value of Sales	Number of Farms	% of Total	Average Size (ac)
\$1,000-\$9,999	28,700	44%	66
\$10,000-\$99,999	20,100	31%	144
\$100,000-\$249,999	6,900	11%	304
\$250,000-\$499,999	4,250	7%	494
\$500,000-\$999,999	2,400	4%	750
> \$1,000,000	2,050	3%	1,707
Total for WI	64,400	100%	222

Number of WI Farms by Annual Gross Sales 2014-2020

Gross Sales (\$1,000's)	2014	2015	2016	2017	2018	2019	2020
\$1 - \$10	29,900	29,600	29,200	28,700	28,800	29,000	28,700
\$10 - \$100	20,600	20,400	20,200	20,100	20,100	20,200	20,100
\$100 - \$250	7,300	7,100	7,000	7,000	6,900	7,000	6,900
\$250 - \$500	4,700	4,600	4,400	4,300	4,300	4,250	4,250
\$500 - \$1,000	2,800	2,700	2,700	2,550	2,550	2,400	2,400
> \$1,000	2,200	2,200	2,200	2,150	2,150	2,050	2,050
Total	67,500	66,600	65,700	64,800	64,800	64,900	64,400
> \$100	17,000	16,600	16,300	16,000	15,900	15,700	15,600
> \$250	9,700	9,500	9,300	9,000	9,000	8,700	8,700
> \$500	5,000	4,900	4,900	4,700	4,700	4,450	4,450

Average Acres per WI Farm by Annual Gross Sales 2014-2020

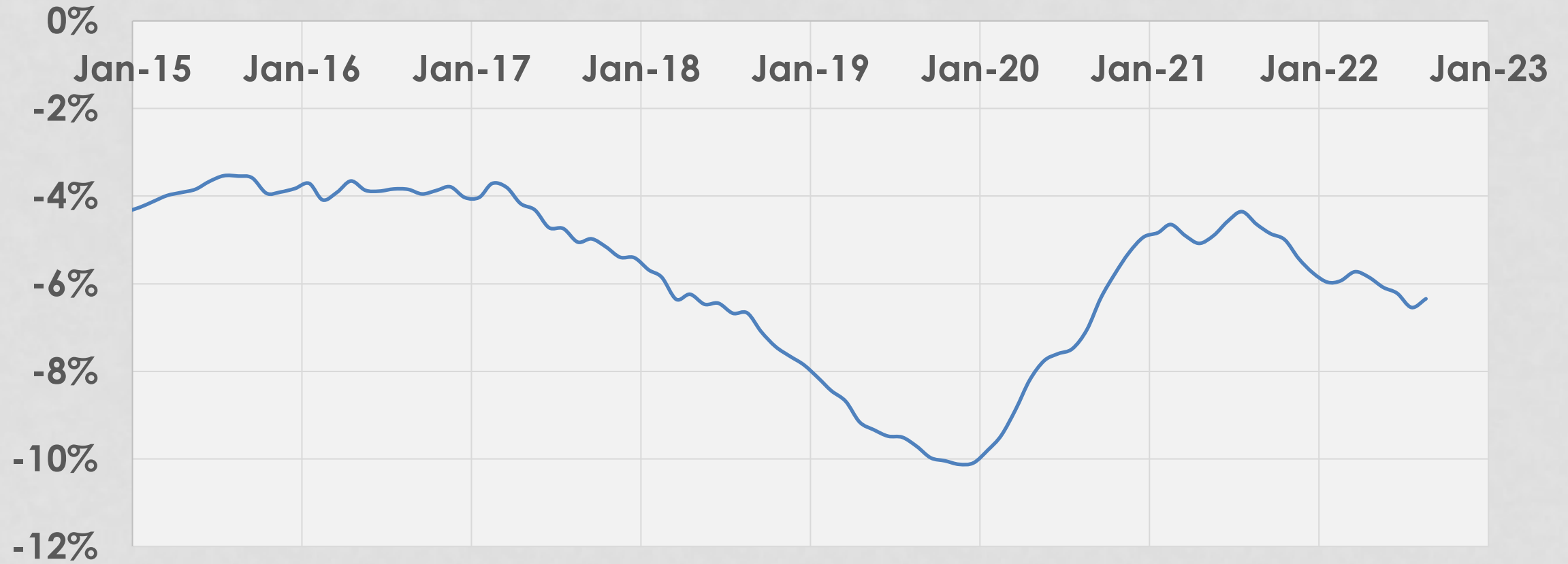
Gross Sales (\$1,000's)	2014	2015	2016	2017	2018	2019	2020
\$1 to \$10	67	64	65	63	63	66	66
\$10 to \$100	141	142	144	144	144	144	144
\$100 to \$250	274	282	300	300	304	300	304
\$250 to \$500	426	435	455	465	465	494	494
\$500 to \$1,000	714	741	704	745	745	750	750
> \$1,000	1,636	1,636	1,636	1,674	1,674	1,707	1,707
All Farms	215	216	219	221	221	222	222

% Change 2014 to 2020

Gross Sales (\$1,000's)	Number of Farms	Average Acres/Farm
\$1 - \$10	-4.0%	-1.5%
\$10 - \$100	-2.4%	2.1%
\$100 - \$250	-5.5%	10.9%
\$250 - \$500	-9.6%	16.0%
\$500 - \$1,000	-14.3%	5.0%
> \$1,000	-6.8%	4.3%
Total	-4.6%	3.3%

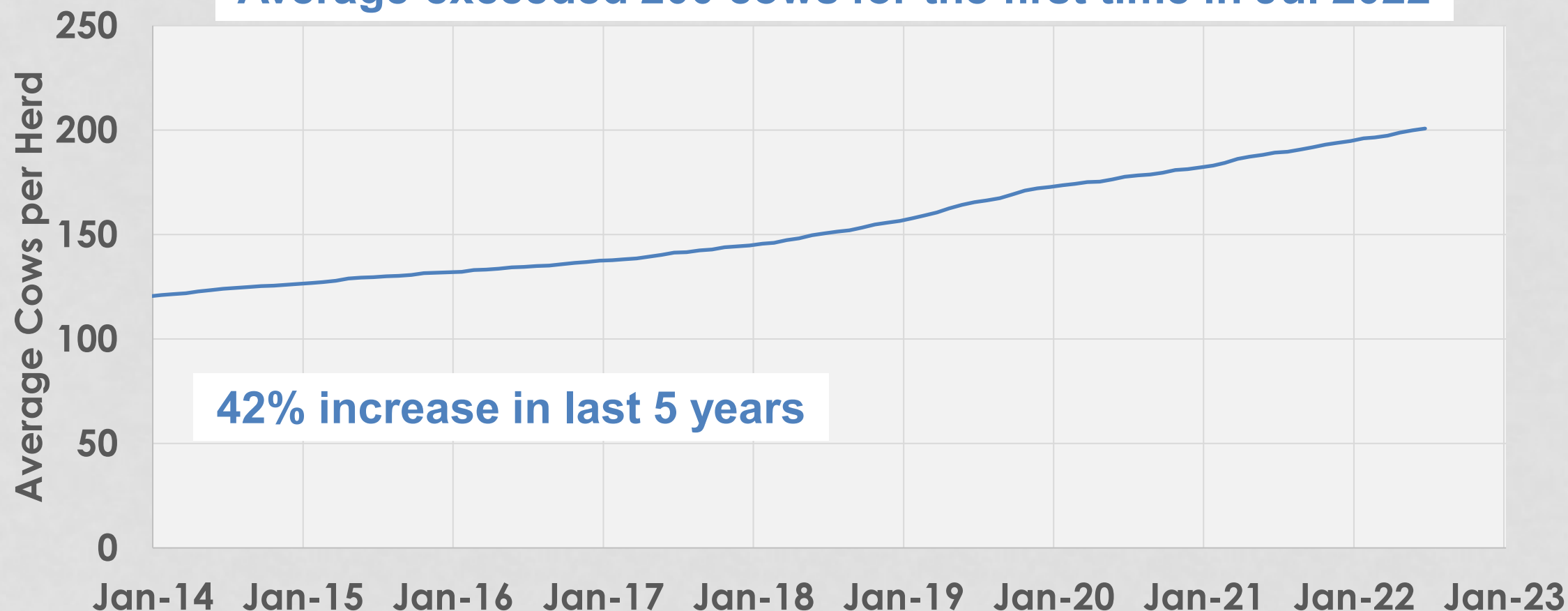
- Number of farms has declined 4.6% and they are 3.3% larger on average
- Larger farms declined faster in number and increased in size faster than smaller farms, especially in mid-sized

WI Annual Dairy Herd Attrition Rate by Month (Jan 2015 to Sep 2022)



Average Number of Cows per Herd in WI Jan 2014 to Sep 2022

Average exceeded 200 cows for the first time in Jul 2022



Summary of Trends: What's Happening in WI?

- Lots of small farms, but the number of full-time farmers is small, around 10 to 15%
 - Most households with small farms have substantial off-farm income, not “full-time” farmers
 - We will examine Rural residents vs Rural poor in farming later
- Number of farms is slowly declining, faster for larger farms than for smaller farms, especially for mid-sized farms
- Average farm size slowing increasing, especially for mid-sized farms
- Dairy farms have been consolidating at a faster than average rate

Discussion Pause

- What are some ways that the management goals and practices of small/part time farmers differ from full-time farmers?
 - Would you use different sales/buying strategies to sell to/buy from them?
- What are the ABM implications of farm consolidation?
- Course Question: Should we have policies and programs to help keep people in farming?
 - Do we need farm support programs?
 - Should they differ for part-time vs full-time?