## INTRODUCTION TO ORGANIC AGRICULTURE: PRODUCTION, MARKETS, AND POLICY

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## Learning Goals

-To learn some 'stylized facts" about US organic agriculture

- Production and Sales, "Typical" organic farm, Where WI fits in
- To learn the major parts of the US food system and the flow of goods
- Where (organic) farms fit into the US food system
- Let's talk about Organic Ag in the US based on data

Organic Farms and Acres in the US

Number of Certified Organic Farms by State, 2021


Rank \& \%Farms

1. CA $17.5 \%$
2. WI 8.3\%
3. NY $8.1 \%$
4. PA $6.4 \%$
5. OH $4.6 \%$
6. IA $4.6 \%$
7. WA $4.2 \%$
8. IN $4.0 \%$
9. VT $4.0 \%$
10.MN 3.7\%

## All Organic, Cropped, and Pasture Acres by State

|  | State | All Acres | State | Crop Acres | State | Pasture Acres |
| :--- | :--- | ---: | :--- | ---: | :--- | ---: |
|  | US | $4,895,279$ | US | $3,630,594$ | US | $1,264,685$ |
| 1 | California | 813,710 | California | 411,175 | California | 402,535 |
| 2 | New York | 331,438 | Montana | 262,139 | Oregon | 87,848 |
| 3 | Montana | 319,722 | New York | 256,920 | New York | 74,518 |
| 4 | Wisconsin | 245,333 | Texas | 198,990 | Wisconsin | 60,518 |
| 5 | Texas | 240,806 | Wisconsin | 184,815 | Montana | 57,583 |
| 6 | Oregon | 228,152 | Idaho | 177,132 | South Dakota | 56,978 |
| 7 | Idaho | 215,668 | Vermont | 163,608 | Texas | 41,816 |
| 8 | Vermont | 203,083 | lowa | 156,885 | Colorado | 41,082 |
| 9 | Colorado | 190,809 | Colorado | 149,727 | Vermont | 39,475 |
| 10 | lowa | 169,361 | Oregon | 140,304 | Idaho | 38,536 |

## Organic Farms in US

## Organic Acres in US



## Average Total Organic Acres per Farm by State



## Average Organic Crop Acres per Farm by State



## Average Organic Acres per Organic Farm



## Summary: Stylized Facts for 2021

- 17,445 organic farms in the US
- Top States were CA, WI, NY, PA
- CA had more than twice as many as $2^{\text {nd }}$ place WI
- Total number of organic farms is still increasing
- 4.9 million organic acres in the US, 3.6 million crops, 1.3 million pasture
- CA dominates, then NY, MT, WI, TX
- Total organic acres has been flat to decreasing
- US averaged 281 organic acres per organic farm
- Largest averages in west: WY, NV, UT, MT average > 1,500 acres
-WI was $28^{\text {th }}$ with 169 acres on average per farm, 133 cropped acres

Organic Products Sales by Farms

## Value of Organic Sales

| 54\% Crops |  |
| :--- | :---: |
| 46\% Livestock | \$ million |
| Milk | 1,633 |
| Broiler chickens | 1,509 |
| Eggs | 1,221 |
| Apples | 629 |
| Corn for grain | 424 |
| Strawberries | 336 |
| Cattle | 316 |
| Grapes | 309 |
| Lettuce | 276 |
| Soybeans | 242 |


| Top States: Certified Organic Sales |  |
| :--- | :---: |
| \$11.2 sillion Total sales, <br> +13\% from 2019 | $\$$ million |
| 1 California | 3,550 |
| 2 Washington | 1,140 |
| 3 Pennsylvania | 1,094 |
| 4 Texas | 572 |
| $\mathbf{5}$ Oregon | 386 |
| 6 New York | 328 |
| 7 Wisconsin | 313 |
| 8 North Carolina | 308 |
| 9 Michigan | 272 |
| 10 Colorado | 253 |

## Total Organic Sales (\$ Billion) from Organic Farms



## Cash Receipts 2018-2022F by Commodity $\$ 436.8$ B in 2021, organic $=2.56 \%$



## 2021 Top Organic Livestock and Livestock Products

| Livestock | Farms | Head | Sales $\$ \mathbf{M}$ | \$/Farm | Head/Farm | \$/Unit |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Broilers | 419 | $234,815,234$ | $\$ 1,509$ | $\$ 3,601,003$ | 560,418 | $\$ 6.43$ |
| Beef Cows | 312 | 7,616 | $\$ 10.3$ | $\$ 32,928$ | 24 | $\$ 1,349$ |
| Other cattle | 2,455 | 228,351 | $\$ 239$ | $\$ 97,495$ | 93 | $\$ 1,048$ |
| Milk Cows | 2,023 | 73,531 | $\$ 66.1$ | $\$ 32,655$ | 36 | $\$ 898$ |


| Product | Farms | Quantity <br> (cwt, doz) | Sales \$M | \$/Farm | Quantity/Farm | \$/Unit |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Milk | 2,478 | $51,964,918$ | $\$ 1,632,652$ | $\$ 658,859$ | 20,971 | \$31.42 |
| Eggs | 1,105 | $544,530,285$ | $\$ 1,220,933$ | $\$ 1,104,916$ | 492,788 | $\$ 2.24$ |

Livestock Product Units:
@16,730 lbs/yr = 125 head/farm
cwt for Milk; doz for Eggs
@300 eggs/layer = 19,712 layers/farm

## 2021 Top Organic Crops

| Crop | Farms | Acres | Quantity | Sales $\$ \mathbf{M}$ | \$/Farm | Ac/Farm |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Corn | 3,962 | 374,977 | $49,467,464$ | $\$ 423,875$ | $\$ 106,985$ | 94.6 |
| Soybeans | 2,591 | 250,495 | $9,505,846$ | $\$ 241,968$ | $\$ 93,388$ | 96.7 |
| Apples | 756 | 31,002 | $9,839,059$ | $\$ 628,773$ | $\$ 831,710$ | 41.0 |
| Strawberries | 546 | 5,301 | $1,495,299$ | $\$ 335,964$ | $\$ 615,319$ | 9.7 |
| Grapes | 774 | 42,283 | 211,477 | $\$ 309,221$ | $\$ 399,511$ | 54.6 |
| Lettuce | 1,140 | 45,964 | $3,925,855$ | $\$ 275,586$ | $\$ 241,742$ | 40.3 |

Units: bu (Corn, Soybean); cwt (Apples, Lettuce, Strawberries); tons (Grapes)

## 2021 Top Organic Crops: Yields and Prices

|  | -------- Yield -------- |  |  | -------- Price -------- |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Crop | Unit/Ac | US Avg | \% Diff | \$/Unit | US Avg | \% Diff |
| Corn | 131.9 | 176.7 | -25\% | \$8.57 | \$6.00 | 43\% |
| Soybeans | 37.9 | 51.7 | -27\% | \$25.45 | \$13.30 | 91\% |
| Apples | 317 | 339 | -6\% | \$63.91 | \$31.70 | 102\% |
| Strawberries | 282 | 540 | -48\% | \$224 | \$128 | 76\% |
| Grapes | 5.0 | 6.7 | -25\% | \$1,462 | \$914 | 60\% |
| Lettuce | 85.4 | 289 | -70\% | \$70.20 | \$43.18 | 63\% |

Units: bu (Corn, Soybean); cwt (Apples, Lettuce, Strawberries); tons (Grapes)

## 2021 Select Production Expenses

| Item | Expense \$ million | $\%$ of Sales |
| :--- | :---: | :---: |
| Certification | $\$ 43.6$ | $0.4 \%$ |
| Livestock Feed | $\$ 1,943$ | $17.3 \%$ |
| Food Safety | $\$ 42.9$ | $0.4 \%$ |
| Hired Labor | $\$ 2,630$ | $23.5 \%$ |
| Seed/Plants | $\$ 672$ | $6.0 \%$ |
| Organic | $\$ 320$ | $2.9 \%$ |
| Non-organic | $\$ 353$ | $3.1 \%$ |
|  | Total | $\$ 5,332$ |


| WI Farm Cash Receipts 2021 |  |
| :--- | ---: |
| Category | Sales $\$ 1,000$ |
| Dairy, Milk | $5,912,788$ |
| Corn | $2,111,200$ |
| Beef | $1,581,642$ |
| Soybeans | $1,210,861$ |
| Vegetables | 568,544 |
| Other Crops | 558,745 |
| Hogs | 187,527 |
| Broilers \& Turkeys | 171,727 |
| Fruit | 170,841 |
| Eggs | 129,357 |
| Other Livestock | 125,194 |
| Hay | 112,113 |
| Small grains | 97,940 |
|  | Total |




## Average Sales $(\$ 1,000)$ per Farm



## Average Sales \$ per Acre



USDA NASS https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Organic_Production/index.php (Dropped 2011 Survey)

## Summary: Stylized Facts for 2021

- $\$ 11.2$ billion in organic sales from farms, $\sim 2.5 \%$ of all US farm cash receipts
- Livestock and Crops each about half of sales, similar to US farms
- Top Commodities: Milk, Broilers, Eggs, then Apples and Corn
- CA top state in organic sales, 32\% of total sales
- WI ranked $7^{\text {th }}$ with $\$ 313$ million
- Average sales per farm and per acre steadily increasing
- WI ranked $40^{\text {th }}$, lowest of the top 10 states
- Average organic chicken farm (Broilers, Eggs) seems quite large
- Average organic crop yields less than US average
- Average organic apple yield only 6\% below US average
- Remaining crops $25 \%$ to $70 \%$ lower yield
- Organic price premium was $40 \%$ to $100 \%$ across row crops and F\&V

Organic Farm Size by Sales

## Sales by Farm Type and State

|  | \# Farms by Sales Type |  |  | Average Sales (\$1,000/Farm) by Type |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State | Crops | Livestock | Livestock Products | All Sales | Crops | Livestock | Livestock Products |
| US | 14,138 | 3,777 | 3,588 | \$643 | \$435 | \$582 | \$797 |
| California | 2,890 | 182 | 134 | \$1,162 | \$935 | \$2,696 | \$2,666 |
| Washington | 667 | 80 | 69 | \$1,561 | \$1,407 | \$905 | \$1,867 |
| Pennsylvania | 610 | 567 | 458 | \$974 | \$246 | \$1,288 | \$468 |
| Texas | 238 | 27 | 20 | \$2,218 | \$753 | \$1,694 | \$17,358 |
| Oregon | 458 | 50 | 38 | \$787 | \$544 | \$431 | \$3,042 |
| New York | 1,003 | 518 | 564 | \$233 | \$115 | \$60 | \$321 |
| Wisconsin | 1,077 | 559 | 542 | \$215 | \$95 | \$63 | \$322 |
| North Carolina | 228 | 99 | 25 | \$920 | \$243 | \$2,163 | \$1,537 |
| Michigan | 525 | 57 | 64 | \$475 | \$198 | --- | --- |
| Colorado | 241 | 23 | 17 | \$954 | \$441 | \$1,001 | \$7,251 |

Share of Farms and Sales by Farm "Size"

| \% Farms | US | CA | CO | MI | NY | NC | OR | PA | TX | WA | WI |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| <\$10 | $11 \%$ | $19 \%$ | $16 \%$ | $10 \%$ | $8 \%$ | $9 \%$ | $20 \%$ | $4 \%$ | $2 \%$ | $8 \%$ | $8 \%$ |
| $\$ 10-\$ 25$ | $12 \%$ | $14 \%$ | $5 \%$ | $12 \%$ | $13 \%$ | $7 \%$ | $12 \%$ | $9 \%$ | $7 \%$ | $10 \%$ | $14 \%$ |
| $\$ 25-\$ 50$ | $12 \%$ | $10 \%$ | $12 \%$ | $15 \%$ | $14 \%$ | $10 \%$ | $9 \%$ | $11 \%$ | $7 \%$ | $10 \%$ | $17 \%$ |
| $\$ 50-\$ 100$ | $14 \%$ | $12 \%$ | $12 \%$ | $23 \%$ | $16 \%$ | $16 \%$ | $9 \%$ | $13 \%$ | $9 \%$ | $13 \%$ | $17 \%$ |
| $\$ 100-\$ 250$ | $20 \%$ | $14 \%$ | $12 \%$ | $16 \%$ | $27 \%$ | $13 \%$ | $19 \%$ | $26 \%$ | $12 \%$ | $16 \%$ | $26 \%$ |
| $\$ 250-\$ 500$ | $12 \%$ | $9 \%$ | $18 \%$ | $12 \%$ | $13 \%$ | $6 \%$ | $10 \%$ | $17 \%$ | $17 \%$ | $10 \%$ | $9 \%$ |
| $\mathbf{> 5 0 0}$ | $18 \%$ | $22 \%$ | $24 \%$ | $12 \%$ | $8 \%$ | $39 \%$ | $21 \%$ | $21 \%$ | $46 \%$ | $32 \%$ | $9 \%$ |
| \% Sales | US | CA | CO | MI | NY | NC | OR | PA | TX | WA | WI |
| $\mathbf{< \$ 1 0}$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ |
| $\$ 10-\$ 25$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $1 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $1 \%$ |
| $\$ 25-\$ 50$ | $1 \%$ | $0 \%$ | $0 \%$ | $1 \%$ | $2 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $0 \%$ | $3 \%$ |
| $\$ 50-\$ 100$ | $2 \%$ | $1 \%$ | $1 \%$ | $3 \%$ | $5 \%$ | $1 \%$ | $1 \%$ | $1 \%$ | $0 \%$ | $1 \%$ | $5 \%$ |
| $\$ 100-\$ 250$ | $5 \%$ | $2 \%$ | $2 \%$ | $6 \%$ | $20 \%$ | $2 \%$ | $4 \%$ | $5 \%$ | $1 \%$ | $2 \%$ | $20 \%$ |
| $\$ 250-\$ 500$ | $6 \%$ | $3 \%$ | $6 \%$ | $9 \%$ | $20 \%$ | $3 \%$ | $4 \%$ | $6 \%$ | $3 \%$ | $2 \%$ | $14 \%$ |
| $\$ 500$ | $86 \%$ | $94 \%$ | $90 \%$ | $80 \%$ | $53 \%$ | $93 \%$ | $90 \%$ | $88 \%$ | $96 \%$ | $95 \%$ | $56 \%$ |

## Farms with Sales > \$500,000 per Year

| State | Farms | Sales \$1,000 | \% Org Farms | \% Org Sales | $\$ 1,000 /$ Farm |
| :--- | :---: | :---: | :---: | :---: | :---: |
| US | 3,109 | $\$ 9,616,458$ | $18 \%$ | $86 \%$ | $\$ 3,093$ |
| CA | 681 | $\$ 3,334,097$ | $22 \%$ | $94 \%$ | $\$ 4,896$ |
| CO | 64 | $\$ 227,550$ | $24 \%$ | $90 \%$ | $\$ 3,555$ |
| MI | 70 | $\$ 218,644$ | $12 \%$ | $80 \%$ | $\$ 3,123$ |
| NY | 117 | $\$ 172,262$ | $8 \%$ | $53 \%$ | $\$ 1,472$ |
| NC | 129 | $\$ 287,804$ | $39 \%$ | $93 \%$ | $\$ 2,231$ |
| OR | 103 | $\$ 348,554$ | $21 \%$ | $90 \%$ | $\$ 3,384$ |
| PA | 234 | $\$ 963,057$ | $21 \%$ | $88 \%$ | $\$ 4,116$ |
| TX | 119 | $\$ 547,997$ | $46 \%$ | $96 \%$ | $\$ 4,605$ |
| WA | 235 | $\$ 1,082,339$ | $32 \%$ | $95 \%$ | $\$ 4,606$ |
| WI | 133 | $\$ 174,588$ | $9 \%$ | $56 \%$ | $\$ 1,313$ |

## All US Farms in 2016



- Retirement farms. Small farms whose principal operators report they are retired, although they continue to farm on a small scale (366,812 farms; 17.9\% of U.S. farms in 2016).


## \% of Farms by Farm Type (All US Farms)

| Farm Type | \% Farms | Category | Gross Revenue |
| :--- | ---: | :--- | :--- |
| Retirement | $17.9 \%$ | Small | $<\$ 350 \mathrm{k}$ |
| Off Farm Job | $41.9 \%$ | Small | $<\$ 350 \mathrm{k}$ |
| Low Sales | $24.7 \%$ | Small | $<\$ 150 \mathrm{k}$ |
| Moderate Sales | $5.4 \%$ | Small | $\$ 150 \mathrm{k}-\$ 350 \mathrm{k}$ |
| Mid-Sized | $6.0 \%$ | Mid-Sized | $\$ 350 \mathrm{k}-\$ 1$ million |
| Large | $2.6 \%$ | Large | $\$ 1-\$ 5$ million |
| Very Large | $0.3 \%$ | Large | $>\$ 5$ million |
| Non-Family | $1.2 \%$ | Non-Family | Non-Family |


| Farm Size | \% of Farms | \% of Land | \% of Prod |
| :---: | :---: | :---: | :---: |
| Small | 89.9\% | 50.6\% | 22.6\% |
| Mid-Sized | 6.0\% | 21.2\% | 22.7\% |
| Large Scal | 2.9\% | 18.0\% | 45.2 |
| Non-Family | 1.2\% | 10.3\% | 9.6 |
| Most of the Farms and Land are small family farms Large scale family farms use $18.0 \%$ of the land to produce $45.2 \%$ of the production value Small family farms use $50.6 \%$ of the land to produce $22.6 \%$ of the production value |  |  |  |

## Farms by operating profit margin (OPM) and farm type, 2016

Percent of farms in each group

All US Farms


[^0]
## Summary: Stylized Facts

- Average sales by farms selling Livestock Products are above average
- A few states have livestock product farms with very large average sales
- WI, NY, PA: lots livestock product farms with relatively low average sales
- About 3,100 Farms (18\%) have Annual Sales $>\$ 500,000$ (Full-time farmers)
- $50 \%$ of farms have $<\$ 100,000$ in sales (part-time farmers)
- WI: $9 \%>\$ 500,000$ : much smaller than US average, $2^{\text {nd }}$ lowest of top 10
- $86 \%$ of organic sales from farms with $>\$ 500,000$ in sales
- Top 10 states, TX, WA, CA, NC: >92\% of sales from farms with >\$500,000
- WI: $56 \%>\$ 500,000:$ much smaller than US average, $2^{\text {nd }}$ lowest of top 10
- My guess: $\sim 1 / 3$ of the $>\$ 500,000$ sales farms likely have profit margins $<10 \%$


## US Food System and Organic Ag

## Conceptual Model of the U.S. Food Supply Chain

- Give Examples for Boxes
- What's missing?


Source: Nesheim et al. (2015) Figure 2.1

## US Consumer Spending on Food



## US Consumer

## Spending on <br> Organic Food

- \$52 Billion in 2021
- $2.45 \%$ of the $\$ 2.12$ Trillion spent on food by US
- Fruits \& Vegetables $\$ 21$ Billion (40\%)
- Dairy \& Eggs \$6.8 Billion (13\%)
- Breads and Grains \$4.9 Billion (9.4\%)
- Meat \$2.1 Billion (4.0\%)
U.S. organic food retail sales by category, 2001-21

Billion 2021 dollars


Note: Nutrition Business Journal estimates of U.S. organic food sales are typically
somewhat lower than Organic Trade Association estimates.
Source: USDA, Economic Research Service using data from Nutrition Business Journal, 2022. Values are adjusted for inflation (to 2021 dollars) using the CPI-U.

## What Do We Eat? Calories by Source (2011)

United States Average


## Where is the Value Generated?

Estimated value added to GDP by sectors of the US food supply chain 2005-2012


## Where is the Value Generated?



## Distribution of value added across subsectors of food supply chain 1993-2012

## How is the Value Generated - By Capital or Labor?

Distribution of value added by factor of production across US subsectors, 2012


## How Much of Food Expenditures Do Farmers Keep?



Note: The food dollar estimates provide the average farm share and marketing share of each dollar spent on domestically produced food in a year.
Source: USDA, Economic Research Service, Food Dollar Series.

Farmer's share larger for Food At Home


2021 nominal food dollar by industry group


## Different way to allocate food dollar: by industry group

## Food dollar differences explained:

 https://www.ers.usda.g ov/webdocs/publication s/44825/7759 err114.p $\mathrm{df} ? \mathrm{v}=1106.2$
## Farmer's Share of Food Spending for Specific Foods

Did you know that farmers and ranchers receive only $14.6^{*}$ cents of every food dollar that consumers spend? According to the USDA, off farm costs including marketing, processing, wholesaling, distribution and retailing


| Food | Share |
| :--- | ---: |
| Milk | $43.5 \%$ |
| Eggs | $53.5 \%$ |
| Top Sirloin | $17.5 \%$ |
| Bacon | $10.7 \%$ |
| Potatoes | $17.5 \%$ |
| Apples | $23.7 \%$ |
| Lettuce | $10.0 \%$ |
| Carrots | $49.5 \%$ |
| Beer | $0.4 \%$ |

## Organic vs Conventional Farmer's Share

|  |  |  | Organic Category |  | Farm | Consumer | Farmer's |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ${ }_{1}^{1212}$ |  |  | Sales | Spending |  |
| Vegetelesisintepen | ${ }_{1}^{1,94}$ |  | Fruits \& Vegetables |  | \$4.113 | \$20.897 | 19.7\% |
|  |  |  | Dairy \& |  | \$2.858 | \$6.770 | 42.2\% |
| , | 2,99 |  | Total |  | \$11.205 | \$52.013 | 21.5\% |
| $\begin{aligned} & \text { Apples } \\ & \text { Strawberries } \\ & \text { Grapes } \end{aligned}$ |  |  | Food 2020 | Share | - Organic vs conventional Fruit \& Vegetables and Dairy \& Eggs have about same farmer's share <br> - Aggregate organic share of $21.5 \%$ beats the $14.5 \%$ or $7.4 \%$ conventional average by a lot |  |  |
|  |  |  | Mik | 43.5\% |  |  |  |
|  | 2.197 |  | Eggs | 53.5\% |  |  |  |
| Sole |  | ${ }^{539}$ | Potatoes | 17.5\% |  |  |  |
|  |  |  | Apples | 23.7\% |  |  |  |
| combe |  | 139 | Lettuce | 10.0\% |  |  |  |
|  | 11205 |  | Carrots | 49.5\% |  |  |  |

## Summary: Stylized Facts

- Consumers spend over $\$ 2.12$ Trillion on food - $55 \%$ on food away from home (FAFH), $45 \%$ on food at home (FAH)
- Consumer spending on organic food just over $\$ 50$ billion, about $2.5 \%$ of total
- Most of the value in the food system is generated after the farmgate
- Food Services, plus Food Processing, Retail and Wholesale Trade
- Post-farmgate is where the jobs are and the economic impact is generated
- Farmer's share of food dollar is small, $14.5 \%$ or $7.4 \%$ on average
- Larger share for milk and eggs than for most fruits and vegetables
- Organic farmer's share of the food dollar is larger, $21.5 \%$ on average
- Farming is more capital intensive on average than rest of supply chain


## Organic Direct Marketing

## Organic Marketing: 2021 Census of Agriculture

| Market Channel | Farms | \% Farms | Sales \$ million | \% Sales |
| :---: | :---: | :---: | :---: | :---: |
| Direct to Consumer | 3,261 | 18.7\% | 310 | 2.8\% |
| Direct to Retailer, Institution, or Food Hub as Local/Regional | 3,309 | 19.0\% | 2,021 | 18.0\% |
| Direct Total |  |  | 2,330 | 20.8\% |
| Community Supported Agriculture (CSA) | 1,432 | 8.2\% |  |  |
| Value Added Products Sold | 1,455 | 8.3\% | 697 | 6.2\% |

## Direct Farm Sales of Food

 HighlightsResults from the 2020 Local Food Marketing Practices Survey

|  | Sales $\$$ Billion |  |
| :--- | :---: | :---: |
| Buyer | 2020 | 2015 |
| Consumer | $\$ 2.9$ | $\$ 3.0$ |
| Retailer | $\$ 1.9$ | $\$ 2.3$ |
| Intermediary | $\$ 4.1$ | $\$ 3.4$ |
| Total | $\$ 9.0$ | $\$ 8.7$ |

## Where do Farms Direct Sell?

Direct-to-Consumer Sales by Marketing Practice, 2020 ( $\$$ million)

2) $\mathbf{2 0 2 0}$ was a pandemic year

Farmers Markets Selling Vegetables by State in 2020


## Farmers Markets Selling Vegetables per Million People



## Farmers Markets National Trend



Notes: Data from 1994 to 2008 are available only for even-numbered years. Odd-numbered years were estimated by taking the average of the prior and following year, denoted by the lighter green color. Source: USDA, Economic Research Service using data from USDA, Agricultural Marketing Service, National Agricultural Statistics Service, Farmers Market Surveys and National Farmers Market Directory, accessed July $6,2022$.

- Nationally farmers markets are saturating
- Wisconsin has a farmers market culture
- Wisconsin farmers markets getting more competitive?
- Caveat: these data are all from before the pandemic


## Summary: Stylized Facts

- Most (79\%) organic food is sold through the conventional food system
- <3\% direct to consumers
- $18 \%$ direct marketed as "local foods" direct to retailers and intermediaries
- Of all the food direct marketed to consumers, about $1 / 4$ is organic
- Farmers markets and direct consumer marketing seem to be slowing
- Growth in organic sales coming from the conventional food system


## Let's Talk about Organic Food Systems

- On next three pages, look at the figures of the US Food Supply Chain and the pie chart of US farmer production expenditures


## Discussion Questions

- How is Organic Ag different from and similar to conventional ag?
-What needs does it have that are different from conventional ag?
- What needs does it have that are similar to conventional ag?
- What jobs does it have that are different from conventional ag?
- What jobs does it have that are similar to conventional ag?


## Conceptual Model of the U.S. Food Supply Chain



Source: Nesheim et al. (2015) Figure 2.1

## Food Systems and Environmental \& Social Systems



Source: Nesheim et al. (2015) Figure 2.8

## US Farm Production Expenditures in 2019



- Feed
- Farm services
- Labor

■ Supplies, repairs \& construction

- Fertilizers \& chemicals

■ Machinery, vehicles \& fuel

- Interest, taxes \& misc capital
- Seeds \& plants

■ Livestock \& related expenses

- Rent


## Discussion Questions

-What is the Organic Ag Value Proposition?
-What values or benefits does it bring to consumers and society?

- Are its values "real" or "perceived" by consumers and so subject to change?


## What is Climate Smart Agriculture?



Climate Smart Agriculture Outcomes

- Increased Productivity and Farm Returns
- Improved Input Use Efficiency
- Reduced Greenhouse Gas Emissions
- More Resilient Systems
- Improved Equity and Social Inclusion


## Short Answer

- Rebranding of BMP adoption and adding climate change mitigation and adaptation


## USDA Partnerships for Climate Smart Commodities





\$3.1 Billion on 141 Projects

- Edge Dairy Farmer Coop: \$50 M
- Organic Valley (CROPP): \$25 M
- Carbon A List (Danone) \$70 M
- The DeLong Co: \$40 M
- Fox-Wolf Watershed Alliance \$5 M
- Dairy Grazing Apprenticeship \$4.8 M
https://www.usda.gov/climate-solutions/climate-smartcommodities/projects


## Our Goal Today

- Hear from academics and practioners to get us talking to each other about the future and Climate Smart Dairy
-What are people doing?
-What's coming?
-Where does Wisconsin fit in?
-What are we good at?
-Where are we behind?


## Academics

- Michel Wattiaux, ADS
- John Lucey, Food Sci/CDR
- Frank Mitloehner, UC-Davis


## Practioners

- Wade Miller, Organic Valley
- Jamie Fisher, Edge Dairy Coop
- Mark Crave, Crave Brothers

Presentations and Videos: https://renk.aae.wisc.edu/2023-agricultural-outlook-forum/

## Re-Energization of Agricultural Conservation

## Inflation Reduction Act

- \$18 Billion for ag conservation on working lands over 4 years
- EQIP \$8.45 Billion
- Regional Conservation Partnerships \$5 Billion
- Conservation Stewardship Program \$3.25 Billion
- Ag Conservation Easement Program: \$1.4 Billion


## Wisconsin Initiatives

- Dairy Innovation Hub: Stewarding Land \& Water Resources Priority
- New Extension specialist funding
- Producer-Led Watershed Groups
- Commercial Nitrogen

Optimization Pilot Grants

- Crop Insurance Rebates for Planting Cover Crops


## Discussion Questions

-Will climate smart agriculture become more interesting to consumers than organics?
-Will climate smart commodities erode the value of organics?
-How can organic agriculture respond to this?


[^0]:    Source: https://www.ers.usda.gov/webdocs/publications/86198/eib-185.pdf

