

# **FRESH MARKET VEGETABLE PRICING AND FUTURE TRENDS**

## **WISCONSIN FRESH FRUIT AND VEGETABLE CONFERENCE**

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**Dr. Paul D. Mitchell**

Director of the Renk AgriBusiness Institute

Professor of Agricultural and Applied Economics

Extension Funded Faculty in Cropping Systems Management

**January 29-31, 2023    Wisconsin Dells, WI**

608-265-6514    [pdmitchell@wisc.edu](mailto:pdmitchell@wisc.edu)    <https://aae.wisc.edu/pdmitchell/>



# Overview

- Pricing and Cost of Production
- Briefly: Cost and food trends

# Pricing and Cost of Production

- To estimate the prices needed to break even, you need to know your cost of production
- Many costs higher compared to 2022: fertilizer, energy, interest, labor, seed, ...
- Labor the largest cost for most small diversified vegetable farms
  - Not just wages, but availability
- Enterprise budgets: <https://www.extension.iastate.edu/agdm/crops/html/a1-17.html>
- Reality: cost varies a lot across growers, even similar types of operations, due to how they manage labor and their farming methods, inputs and equipment/facilities differ

# Cost of Production: A Necessary Evil

- Veggie Compass spreadsheet tool: <http://www.veggiecompass.com/>
  - John Hendrickson at UW's CIAS leads, with help from Erin Silva and myself
- Makes it **easier (not easy)** to estimate your cost of production



The screenshot shows the homepage of the Compass Toolbox website. The header features the title "Compass Toolbox" in large, bold, black font, followed by the subtitle "whole-farm profit management" in a smaller, grey font. To the right of the subtitle is a circular logo with a blue compass face and a green vine with leaves. Below the header is a horizontal navigation bar with seven teal-colored buttons labeled "HOME", "VEGGIE COMPASS", "LIVESTOCK COMPASS", "OGRAIN COMPASS", "RESOURCES", "CONTACT US", and "NEWS". The main content area is divided into two columns. The left column has a heading "What Are Compass Tools?" in green, followed by a paragraph explaining that these are free downloadable spreadsheets from the Center for Integrated Agricultural Systems at UW-Madison, designed to help farmers manage costs and profits. The right column has a heading "Compass Tool News" in green, followed by three bullet points with green arrows, announcing the availability of the 2021 version of the Livestock Compass, the upcoming Fruit and Nut Compass, and the current availability of the Livestock Compass.

## Compass Toolbox

whole-farm  
profit management

- HOME
- VEGGIE COMPASS
- LIVESTOCK COMPASS
- OGRAIN COMPASS
- RESOURCES
- CONTACT US
- NEWS

### What Are Compass Tools?

Compass Tools are free downloadable spreadsheets created at the Center for Integrated Agricultural Systems, University of Wisconsin-Madison. These tools help farmers actively manage for increased farm profits by helping them understand their cost of production, by product and by market channel. This enables farmers to make strategic decisions to adjust prices, reduce costs, shift market channel focus, reduce or drop unprofitable products, and expand production of their most profitable ventures.

### Compass Tool News

- » New, 2021 version of Livestock Compass is now available
- » Fruit and Nut Compass Coming Soon!
- » Livestock Compass is now available!

**SCHEDULE F**  
**(Form 1040)**

Department of the Treasury  
Internal Revenue Service (99)

**Profit or Loss From Farming**

► Attach to Form 1040, Form 1040NR, Form 1041, or Form 1065.

► Go to [www.irs.gov/ScheduleF](http://www.irs.gov/ScheduleF) for instructions and the latest information.

OMB No. 1545-0074

**2018**

Attachment  
Sequence No. **14**

**Part II Farm Expenses—Cash and Accrual Method.** Do not include personal or living expenses. See instructions.

<b>10</b>	Car and truck expenses (see instructions). Also attach <b>Form 4562</b>	<b>10</b>		<b>23</b>	Pension and profit-sharing plans	<b>23</b>	
<b>11</b>	Chemicals . . . . .	<b>11</b>		<b>24</b>	Rent or lease (see instructions):		
<b>12</b>	Conservation expenses (see instructions)	<b>12</b>		<b>a</b>	Vehicles, machinery, equipment	<b>24a</b>	
<b>13</b>	Custom hire (machine work) .	<b>13</b>		<b>b</b>	Other (land, animals, etc.) . .	<b>24b</b>	
<b>14</b>	Depreciation and section 179 expense (see instructions) .	<b>14</b>		<b>25</b>	Repairs and maintenance . .	<b>25</b>	
<b>15</b>	Employee benefit programs other than on line 23 . . .	<b>15</b>		<b>26</b>	Seeds and plants . . . . .	<b>26</b>	
<b>16</b>	Feed . . . . .	<b>16</b>		<b>27</b>	Storage and warehousing . .	<b>27</b>	
<b>17</b>	Fertilizers and lime . . . .	<b>17</b>		<b>28</b>	Supplies . . . . .	<b>28</b>	
<b>18</b>	Freight and trucking . . . .	<b>18</b>		<b>29</b>	Taxes . . . . .	<b>29</b>	
<b>19</b>	Gasoline, fuel, and oil . . .	<b>19</b>		<b>30</b>	Utilities . . . . .	<b>30</b>	
<b>20</b>	Insurance (other than health)	<b>20</b>		<b>31</b>	Veterinary, breeding, and medicine	<b>31</b>	
<b>21</b>	Interest (see instructions)			<b>32</b>	Other expenses (specify):		
<b>a</b>	Mortgage (paid to banks, etc.)	<b>21a</b>		<b>a</b>	-----	<b>32a</b>	
<b>b</b>	Other . . . . .	<b>21b</b>		<b>b</b>	-----	<b>32b</b>	
<b>22</b>	Labor hired (less employment credits)	<b>22</b>		<b>c</b>	-----	<b>32c</b>	
				<b>d</b>	-----	<b>32d</b>	
				<b>e</b>	-----	<b>32e</b>	
				<b>f</b>	-----	<b>32f</b>	

**SCHEDULE F**  
**(Form 1040)**

Department of the Treasury  
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				<b>25</b>	Repairs and maintenance . .	<b>25</b>	

- You have strong incentives to track all your costs on Schedule F
- Take these costs and allocate them to your crops, marketing channels, other enterprises, and farm overhead

<b>18</b>	Freight and trucking . . . .	<b>18</b>		<b>32</b>	Other expenses (specify):		
<b>19</b>	Gasoline, fuel, and oil . . .	<b>19</b>		<b>a</b>	-----	<b>32a</b>	
<b>20</b>	Insurance (other than health)	<b>20</b>		<b>b</b>	-----	<b>32b</b>	
<b>21</b>	Interest (see instructions)			<b>c</b>	-----	<b>32c</b>	
<b>a</b>	Mortgage (paid to banks, etc.)	<b>21a</b>		<b>d</b>	-----	<b>32d</b>	
<b>b</b>	Other . . . . .	<b>21b</b>		<b>e</b>	-----	<b>32e</b>	
<b>22</b>	Labor hired (less employment credits)	<b>22</b>		<b>f</b>	-----	<b>32f</b>	

# What's missing from Schedule F?

- Depreciation: tax depreciation not always accurate (section 179)
  - If you have larger capital expenses for buildings or equipment, may want to estimate “true” costs and allocate to multiple seasons
- Prepaid Expenses: things you paid for in previous years
  - Add things bought early (before Jan 1) as per usual
  - Add things bought in previous years and put in inventory to be used over multiple seasons
  - Subtract things bought this year to use in later years
- Accrued Expenses: interest, property taxes, income taxes
- You can ignore any of these, especially if they are small

### Step 1: Expense Input Page

First, enter the amount spent on each expense in the Total Cost column. Then, allocate each cost to the appropriate farm activities. For example, under wages, the total cost for Clerical & Office labor may be \$15,000 but that should be distributed over General Mgmt. & Admin, CSA, Farmer's Market, Wholesale, Restaurant, Resell as appropriate. All greenhouse, field growing and harvest & pack labor should be recorded in the Pink Production Labor column. Be sure and allocate repair and maintenance of buildings and equipment over the various farm activities as necessary. You may not need all the rows or columns to track expenses on your farm, so use the level of detail that best fits your operation.

Expenses	Total Costs \$	General Mgmt. & Admin.	Seed	Green house	Field Growing	Harvest & Packing	Production Labor	CSA	Farmer's Market	Wholesale	Stand	Resale	Check
<b>Labor Expense:</b>			No labor costs should be allocated to these categories because Veggie Compass performs this calculation in later steps based on information you include in STEP 3.										
<b>Wages:</b>													0
Clerical & Office													0
Management (owner/other)													0
Machine Shop													0
Production Labor													0
Distribution Labor													0
Work Exchange Labor													0
Worker Bonuses/Gifts													0
<b>Employee Benefits:</b>													0
Food													0
Employee Housing													0
Visa h2A expense													0
Health & other Personal Ins.													0
Retirement Plan													0
Other													0
<b>Payroll Taxes</b>													
FICA - Social Security													
Worker's Comp													
FUTA - Fed Unemp													
SUTA - State Unemp													
<b>Insurance:</b>													
Crop													
Auto													
Farm													



Veggie Compass

<http://www.veggiecompass.com/>

### Step 3: Production Input Page

Enter the seed cost and number of plants raised in the greenhouse for each crop. Specify the area planted to each crop as acres, row feet or square feet. The same unit must be used for each crop. Then enter the labor hours Field Growing and Harvest & Packing for each crop. If there are Field Growing and/or Harvest & Packing supplies specific to certain crops enter those values here. From labor records, enter the total Greenhouse labor hours, and the Not Crop Specific (NCS) hours for Field Growing and Harvest & Packing in the blue boxes to the right. The value in the bright yellow box is a calculation of your costs per hour.

		costs per hour		Area Planted Pick a Unit	Field Growing		Harvest & Packing		
Crops / Products	Unit of Measure	Seed Cost (\$)	# of Plants in Greenhouse	Row Feet	Total Labor hrs by crop	Crop Specific Field Costs - nonlabor (\$)	Total Labor hrs - Harvest & Packing	Crop Specific Harvest & Packing Costs - nonlabor (\$)	Production Labor Cost per Hour
	0 0								Total Hrs worked in Greenhouse *
	0 0								
	0 0								
	0 0								Total Non-Crop Specific Hrs spent Field Growing *
	0 0								
	0 0								
	0 0								Total Non-Crop Specific Hrs spent Harvest & Packing *
	0 0								
	0 0								

Veggie Compass makes it **EASIER**, NOT EASY to estimate your costs

Let's look briefly at Veggie Compass

# Pricing and Cost of Production

- Once you know your costs, you can think more strategically about pricing
- Does your cost of production include
  - Paying yourself and your family for management and labor? (Salary/Wages)
  - Paying for assets like land, equipment and buildings? (Rent, Depreciation)
- Labor is largest cost for most small vegetable growers, but yield also matters
  - Think about how adjusting labor changes yield
  - If cut labor, but yields also falls, you may not reduce labor per pound
- Do you lose money on some products because they help you make more money on other products? (Loss Leaders)
- What are you a low-cost producer for? Should you expand in those products?
- Do you invest in mechanization to reduce labor use per pound?

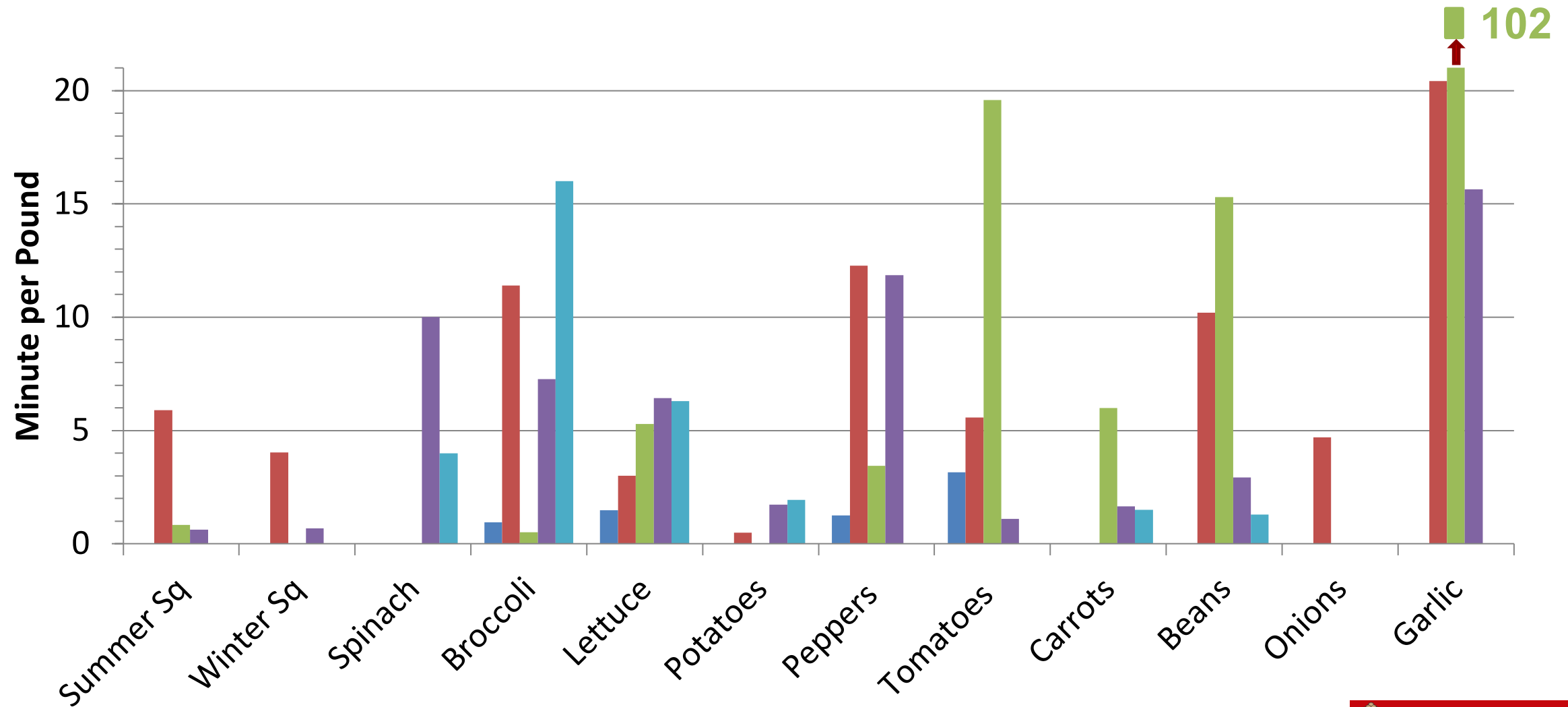
# 1. Why you need your cost of production

- Study in 2010 of small diversified vegetable farmer's labor use
  - Detailed tracking of labor time by crop
- Labor cost per pound varied tremendously across farms in WI

# 2. Can mechanization or expansion reduce labor costs?

- Labor productivity on organic vegetable farms: 10 farms in WI over 2 years (2014-2015), sizes from 2.5 to 48 acres (Weil et al. 2017)
  - “Pulse” study of Transplanting, Harvesting and Wash/Pack
- Labor use varied tremendously across farms in Wisconsin

# Labor Minutes per Pound by Crop and Farm (2010)



Activity	Crop	Size	Mechanization
Transplant	Broccoli	0	0
	Carrot	nd	nd
	Lettuce	+	+
	Pepper	0	+
	Squash	nd	+
Harvest	Broccoli	nd	0
	Carrot	+	+
	Lettuce	+	nd
	Pepper	+	nd
	Squash	0	0
Wash/Pack	Broccoli	nd	nd
	Carrot	0	+
	Lettuce	+	nd
	Pepper	0	0
	Squash	+	0

**+ Increased, 0 no consistent effect, nd no data**

## Can I expand or mechanize to reduce labor costs?

- Mechanization increased labor productivity for Lettuce, Pepper and Squash transplanting and Carrot harvest and wash/pack
- Why is Broccoli transplanting different?
- Do similar crops have similar effects?
  - Potatoes & Beets like Carrots?
- Larger farms (20+ acres) had higher labor productivity for all Lettuce activities, plus Carrot and Pepper harvest and Squash wash/pack
- Weil et al. 2017

# Price information during the season

- Auction Reports
  - Recent wholesale prices
  - Track trends over time
- Central WI Produce Auction, Withee  
<http://www.cwpauction.com/index.php/cwpa-auction-reports>
- Fennimore Produce Auction
- Platteville Produce Auction
- Growers Produce Auction, Cashton
- Tri-County Produce Auction, Dalton

## Auction Report for July 20, 2022

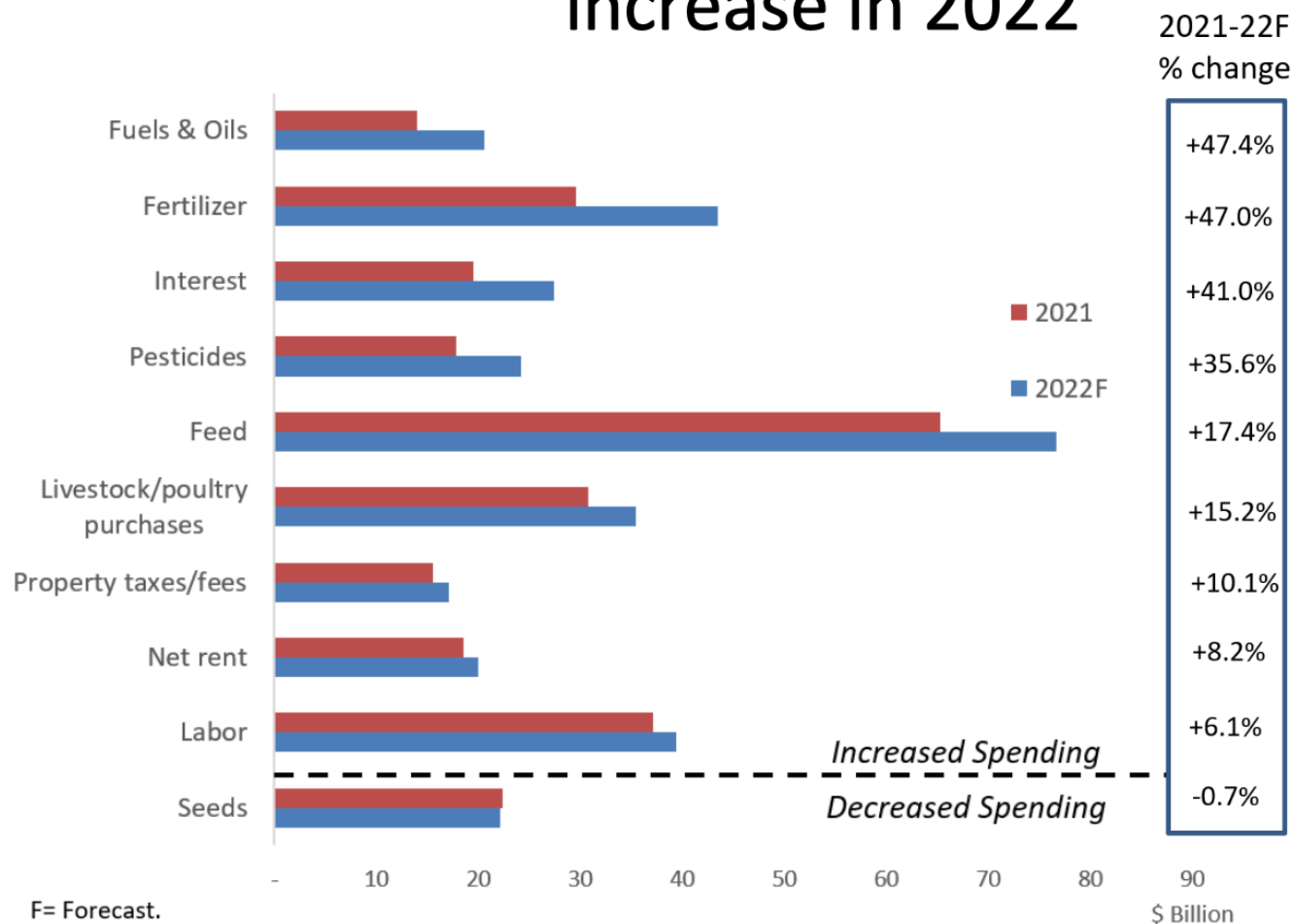
ITEMTYPE	Total Sold	High Price	Low Price	Avg Price
Cabbage heads	225	\$1.85	\$0.05	\$0.96
Cauliflower Heads	429	\$3.00	\$0.50	\$1.48
Cherry Tomatoe Flat	13	\$33.00	\$24.00	\$27.67
Cucumbers 1/2bu	115	\$25.00	\$5.00	\$14.50
Garlic Bunches	70	\$1.60	\$0.50	\$1.05
Green Beans 1/2bu	107	\$25.00	\$8.00	\$17.47
Kolhrabi 1/2bu	15	\$21.00	\$9.00	\$14.17
Onion Bunches	561	\$2.50	\$0.40	\$1.28
Onions 1/2bu	21	\$17.00	\$10.00	\$13.60
Peas 1/2 (sweet)	12	\$6.00	\$6.00	\$6.00
Peas 1/2bu (hulls)	8	\$43.00	\$43.00	\$43.00
Peppers(Bell) Bu	11	\$23.00	\$17.00	\$20.00
Pickles 1/2 sm	44	\$36.00	\$1.00	\$24.40
Pickles 1/2bu Lg	120	\$11.00	\$5.00	\$7.89
Pickles 1/2bu med	43	\$26.00	\$7.00	\$18.13
Potatoe 8Qt Flats	21	\$13.00	\$10.00	\$11.60
Potatoes 1/2bu	44	\$24.00	\$17.00	\$20.50
Radish Bunches	54	\$0.50	\$0.50	\$0.50
Raspberry Flats	12	\$31.00	\$31.00	\$31.00
Red Beets 1/2bu	2	\$16.00	\$16.00	\$16.00
Tomato 10Lb	14	\$27.00	\$24.00	\$25.50
Tomatoes 25lb #1	5	\$40.00	\$40.00	\$40.00
Tomatoes 25lb #2	131	\$52.00	\$35.00	\$40.68
Tomatoes 25lb canners	25	\$37.00	\$18.00	\$31.17
Watermelon Seedless	285	\$4.50	\$3.50	\$3.83

# All Producers in the Economy are Paying Higher Costs

## (Inflation = Higher Costs)



# Almost all individual expense items forecast to increase in 2022



F= Forecast.

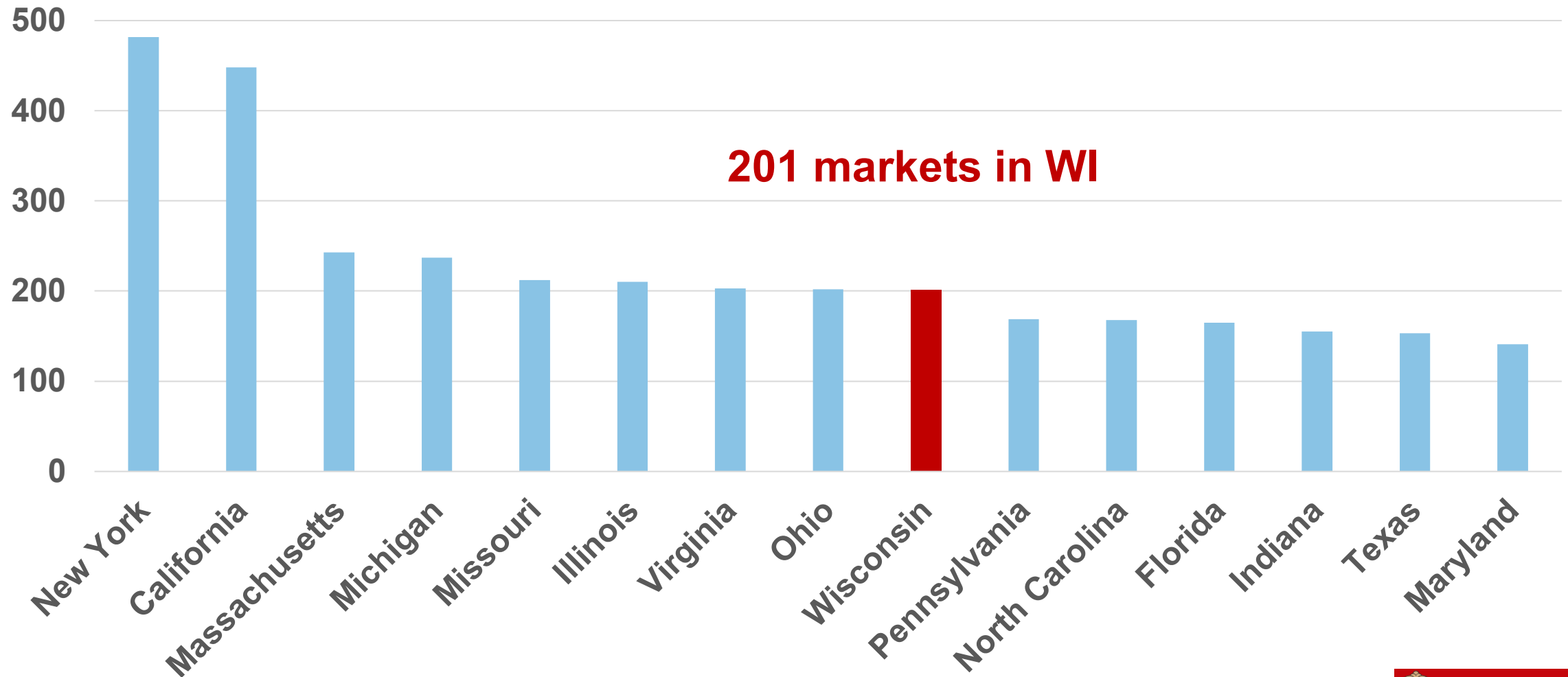
Source: USDA, Economic Research Service, Farm Income and Wealth Statistics

Data as of December 1, 2022

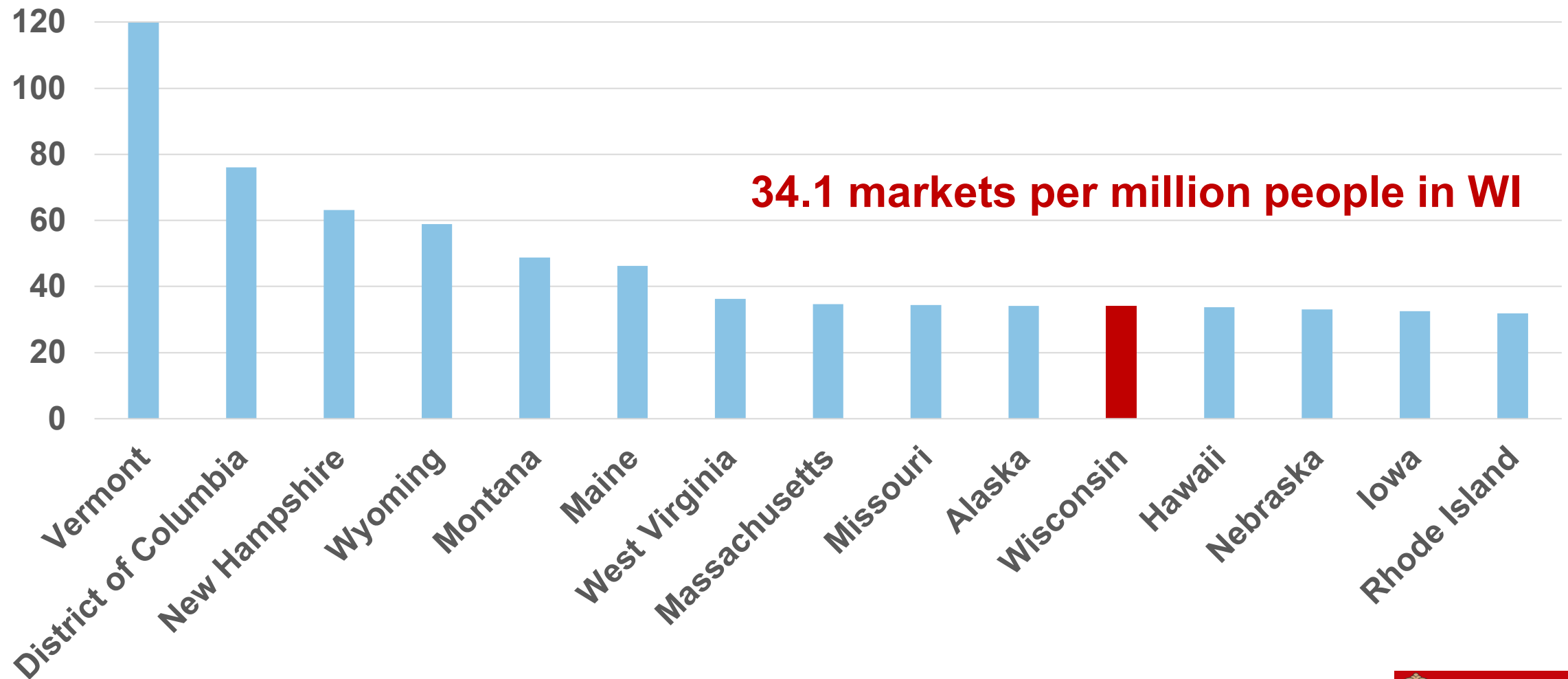
Fertilizer and feed are expected to see largest dollar increases.

- **Corn and Soybean costs for 2023 up 10% to 20% from 2022**
- **Margins are getting thin even with high prices**

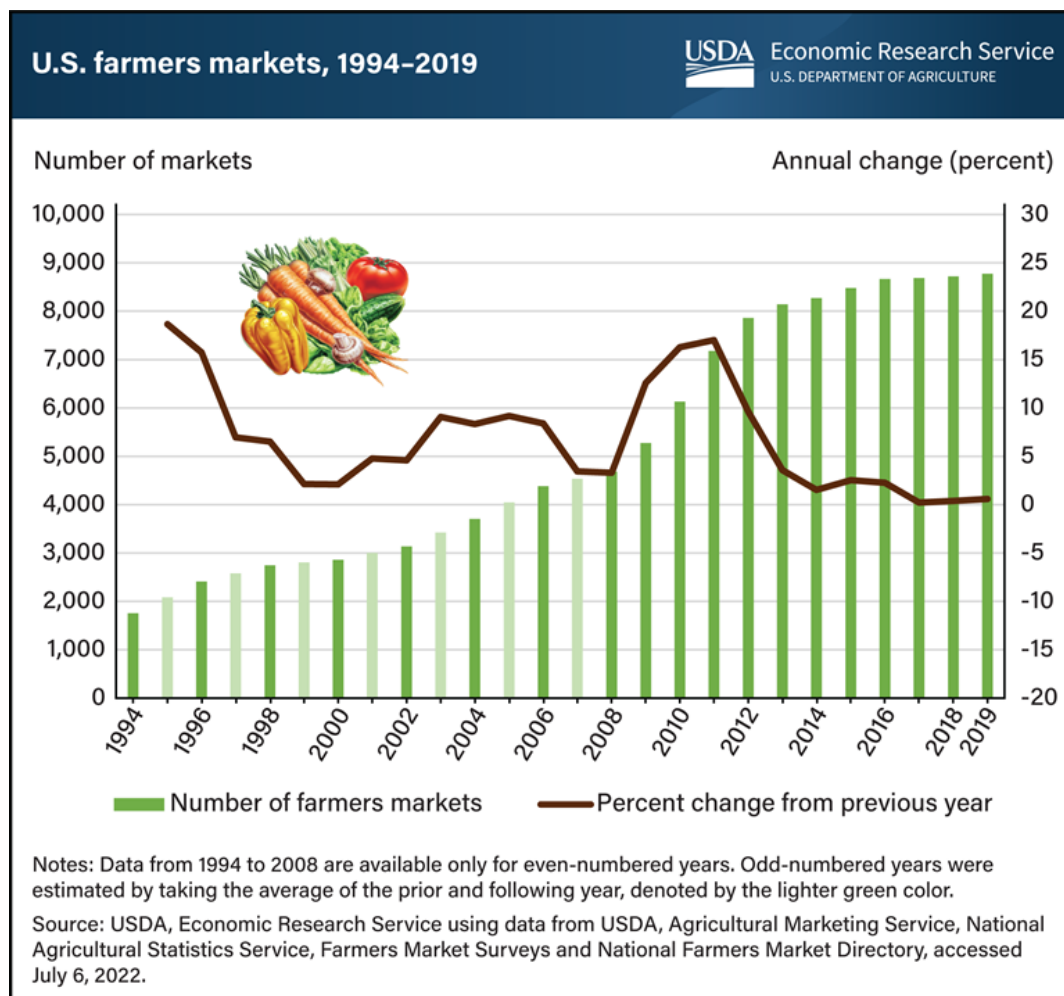
# Farmers Markets Selling Vegetables by State in 2020



# Farmers Markets Selling Vegetables per Million People



# Farmers Markets National Trend



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

# 2023 Food Trends

- Climate Conscious or Climate Smart
  - Get your farm story clear
- Plant-based proteins
- Mushrooms
- Thrifty foods: SNAP/EBT, small sizes
- Nostalgic foods
- Mocktails, low alcohol, medicinal drinks
- Purple yams (ube)
- New cultures: Nigerian, Filipino, ...



Efo ewuro Bitter leaf



Winged Beans



Efo amunututu  
Malabar spinach

# Summary

- Estimate cost of production while doing taxes and update for 2023
- Lots of variability across farms, why you need your cost
- Veggie Compass may help:  
<http://www.veggiecompass.com/>
- Do some strategic thinking
- Mechanization seems to reduce labor costs for transplanting and root vegetable harvest and wash/pack
- Larger farms seem to have lower labor costs for lettuce
- Are farmers markets getting more competitive?
- You may need to up your game with new ideas, new products

## Questions? Comments?

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Professor of Ag & Applied Econ, UW-Madison  
Director Renk AgriBusiness Institute  
UW Extension Funded Faculty

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