

**There is a Silent Crisis in Farming  
Looming over Us.  
How will we Obtain the Nutritious Food we  
seek when the Family Farms are all Gone?**

**Meryl Nass, MD**

**Save Our Food and Farms ([SOFAF.org](http://SOFAF.org))**

# Please bear with me on this—the information is necessary for all of us eaters to understand

- I am going to bombard you with statistics about how dire the crisis in farming is. **This is a very real, silent crisis**
- It may be boring, but you need to know about it because unless we can turn it around, the foods we want to eat will become hard to get and extremely expensive.
- **Most Americans are eating garbage that slowly poisons them.**
- **We have to create a mass movement of EATERS to change government policies that currently enforce the production of the worst quality food—SOFAF.org will be working on this**
- **We have to support our local farmers so they can stay in business despite everything aimed against them.**





**At least 50% of the foods adults consume and 60% of the foods teens consume are ultra-processed.**

**Over 73% of the US food supply is ultra-processed, according to this study:**

**nature communications**

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Article | [Open access](#) | Published: 21 April 2023

## **Machine learning prediction of the degree of food processing**

[Giulia Menichetti](#), [Babak Ravandi](#), [Dariush Mozaffarian](#) & [Albert-László Barabási](#) 

[Nature Communications](#) **14**, Article number: 2312 (2023) | [Cite this article](#)

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10121643/>

# What are ultra-processed foods?

- "Edible products made from manufactured ingredients that have been extracted from foods, processed, then reassembled to create shelf-stable, tasty and convenient meals." and "**food-like substances**"  
<https://www.npr.org/sections/healthshots/2023/05/25/1178163270/ultra-processed-foods-health-risk-weight-gain>
- Corn and soy are processed to produce **a) starchy material devoid of other nutrients, b) bad fats, c) bad sugars, and nearly all the rest for animal feed or ethanol.**
- The US produces 8 million tons of high fructose corn syrup a year (= **48 lbs. per person per year**).
- >40% of the US corn crop is used for ethanol. Corn oil is also extracted (mostly using a toxic solvent, hexane, that is also a component of gasoline) and the waste material/fiber is used for animal feed. **What's in that delicious corn muffin?**



# 35 bushels of corn are grown for every American. Where does it go?

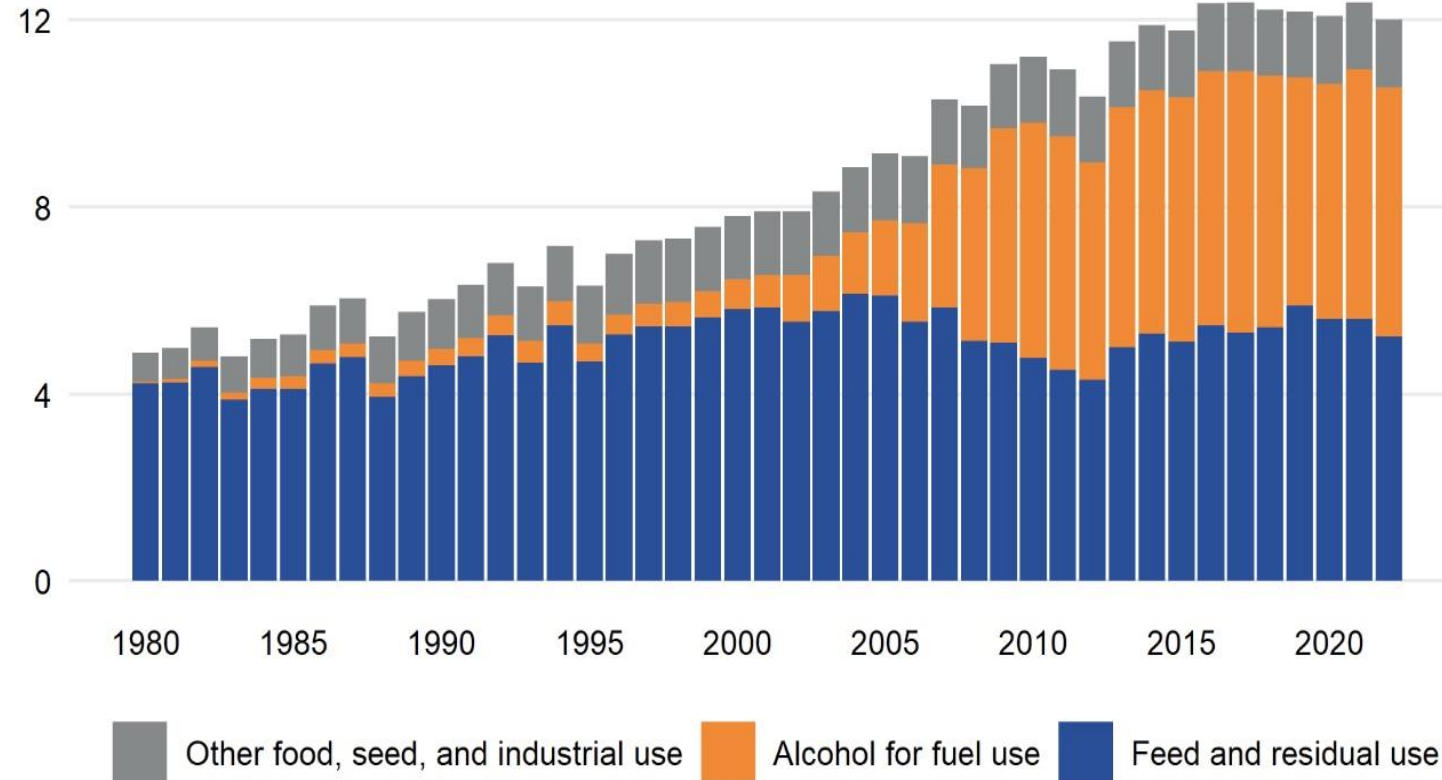
1. 44% used to create ethanol for gasoline or beverages
2. About 46% is used for animal feed
3. About 10% is used for human food: high fructose corn syrup, corn oil, glucose, starch

US farmers rely on export markets (80% of exported grain is corn) but with tariffs imposed, many foreign buyers aren't buying. Foreign population growth has tanked too.

<https://www.ers.usda.gov/topics/crops/corn-and-other-feed-grains/feed-grains-sector-at-a-glance>

## U.S. domestic corn use

Billion bushels



Updated: September 2022.

Source: USDA, National Agricultural Statistics Service.

# Compared to unprocessed foods, ultra-processed foods have:

a) **Less than 20% the nutrient density (nutrition) per calorie**

b) **Twice the calories per ounce**

c) **Only 38% the cost per ounce**

**Conclusion:** Ultra-processed foods tend to be energy-dense, low-cost, and nutrient-poor. Vitamins and minerals are scarce.

Because it is extremely hard to do long-term scientific studies of human diets, we can only say for sure UPFs lead to obesity, diabetes and reduced vitamin and nutrient intake. But they likely have many other bad ramifications for our health.



Front. Nutr., 27 May 2019

Sec. Nutrition and Food Science Technology

Volume 6 - 2019 |

<https://doi.org/10.3389/fnut.2019.00070>

This article is part of the Research Topic  
Food-Based Dietary Guidelines: The  
Relevance of Nutrient Density and a  
Healthy Diet Score

[View all 13 articles >](#)

## Characterizing Ultra-Processed Foods by Energy Density, Nutrient Density, and Cost



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<https://www.frontiersin.org/journals/nutrition/article/s/10.3389/fnut.2019.00070/full>

# What explains the difference between ingredients used in food products in European countries vs. the United States?

- Europeans have long adopted the **precautionary principle**, which means that additives must be proven safe before they can be included in food. U.S. food regulators have been unwilling to adopt this model, even though they have been pressed by consumer groups to do so. **Instead, U.S. food regulation is shaped by a “proof of harm” model that speeds innovation and supports business interests by making it much easier to introduce new ingredients, while placing the burden of navigating a potentially unsafe food environment on consumers** — mainly women — a point made convincingly by Norah MacKendrick in her book *Better Safe than Sorry*, which also provides a thorough overview of US food regulation and its history.
- Another difference in the U.S. may be attributable to what is commonly referred to as the **(FDA's) Generally Recognized as Safe (GRAS) loophole**. In 1997 the FDA – facing a backlog of applications for new additives – made a change to the rules that opened the floodgates and basically sidelined the more stringent process. In the new process companies only needed to notify the FDA after making their own safety assessment. **A 2011 report on food additives by the Pew Charitable Trust found that a third or more of the ten thousand chemicals that could be put in food were never formally reviewed by the FDA.**



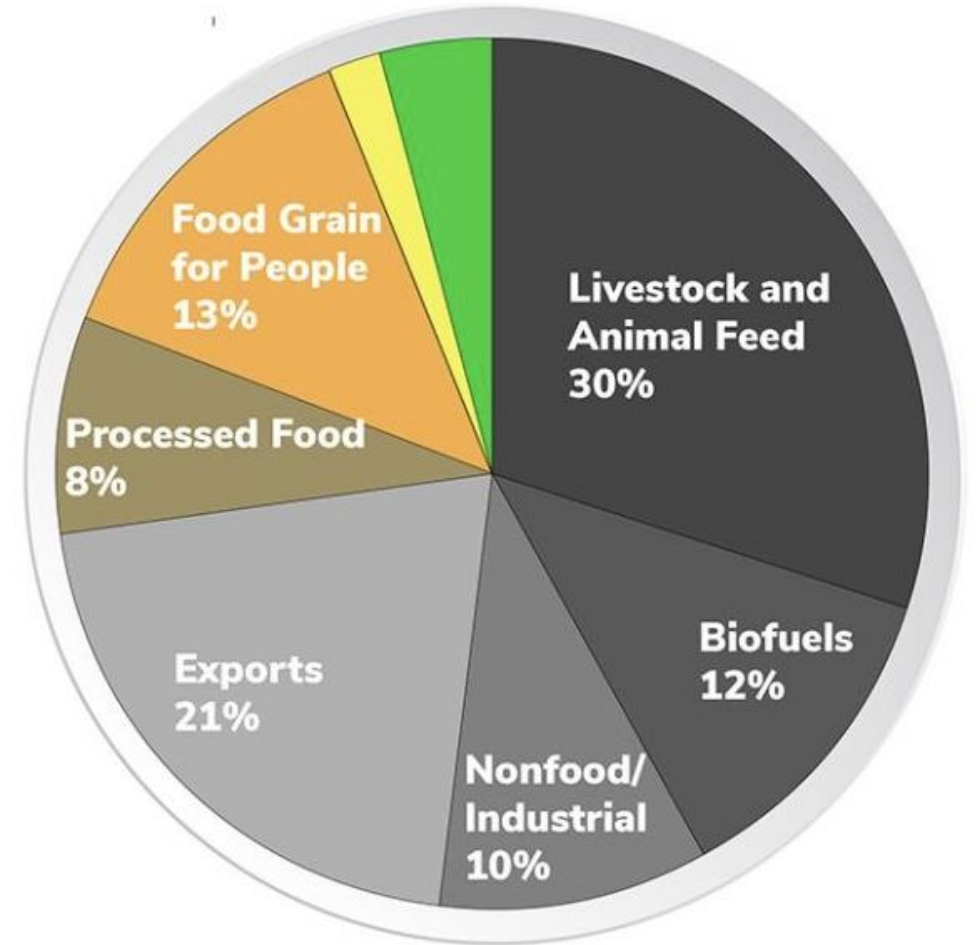
## We Want Food, Not Animal Feed

The USDA recommends filling 50% of your plate with fruits and vegetables. But in 2019, **only 4% of federal farm subsidies supported their production.**

Nearly 90% of the U.S. population falls below the recommended dietary allowance (RDA) for vegetables, and 80% fall below the RDA for fruits.

<https://farmaction.us/2022/08/04/putting-our-money-where-our-mouths-should-be-the-great-contradiction-between-u-s-food-subsidies-and-dietary-guidelines/>

## U.S. FARM SUBSIDIES

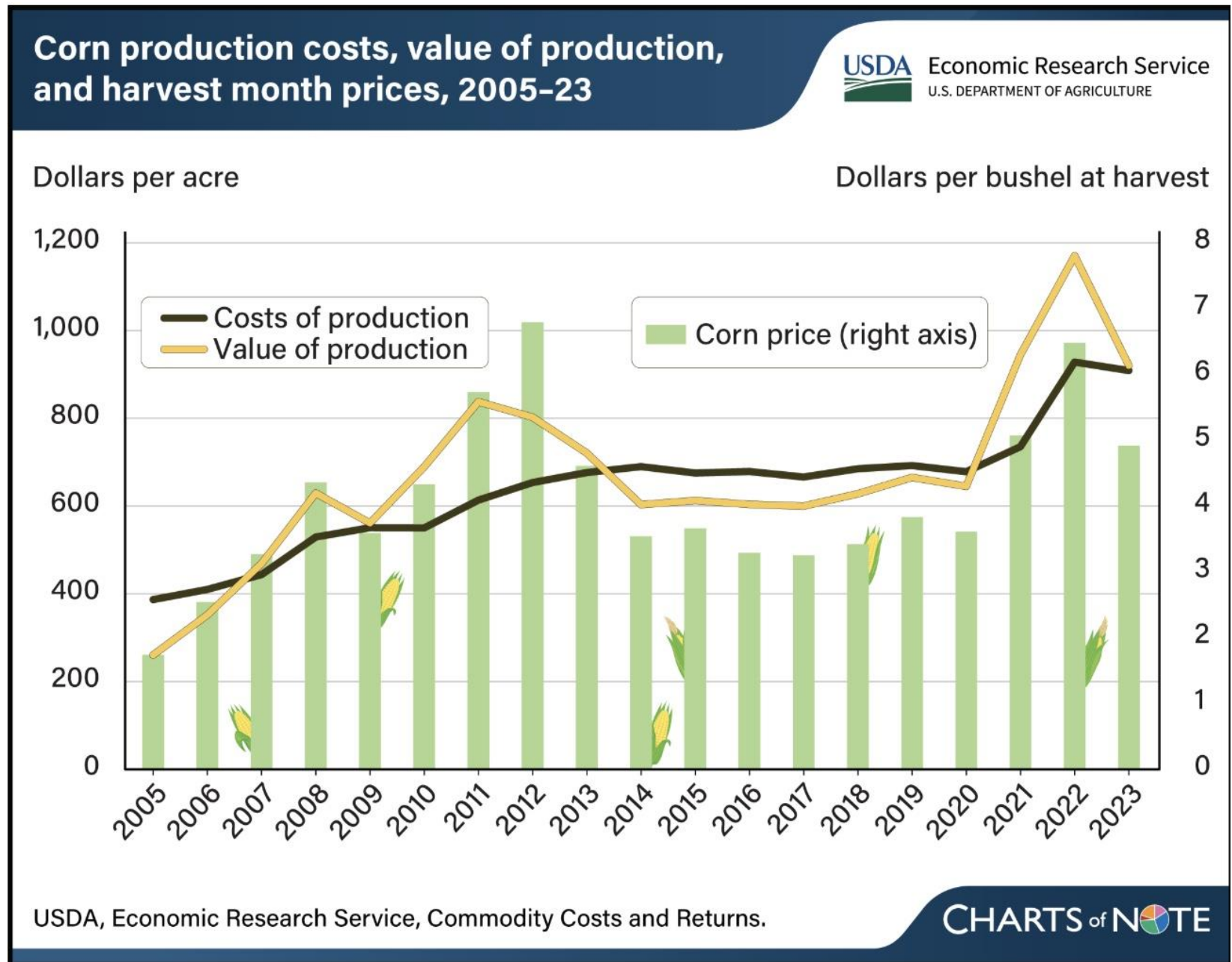


**Fruits and Vegetables 4%**  
**Nuts and Seeds 2%**



Growing corn is a guaranteed way to fail. In half the years from 2005-2022, farmers lost money on corn. In 2023 they barely broke even. But other gov't subsidies make it profitable for the bigger farms, come what may. It's easy money, requiring no innovation.

<https://ers.usda.gov/data-products/charts-of-note?cpid=email&page=2>



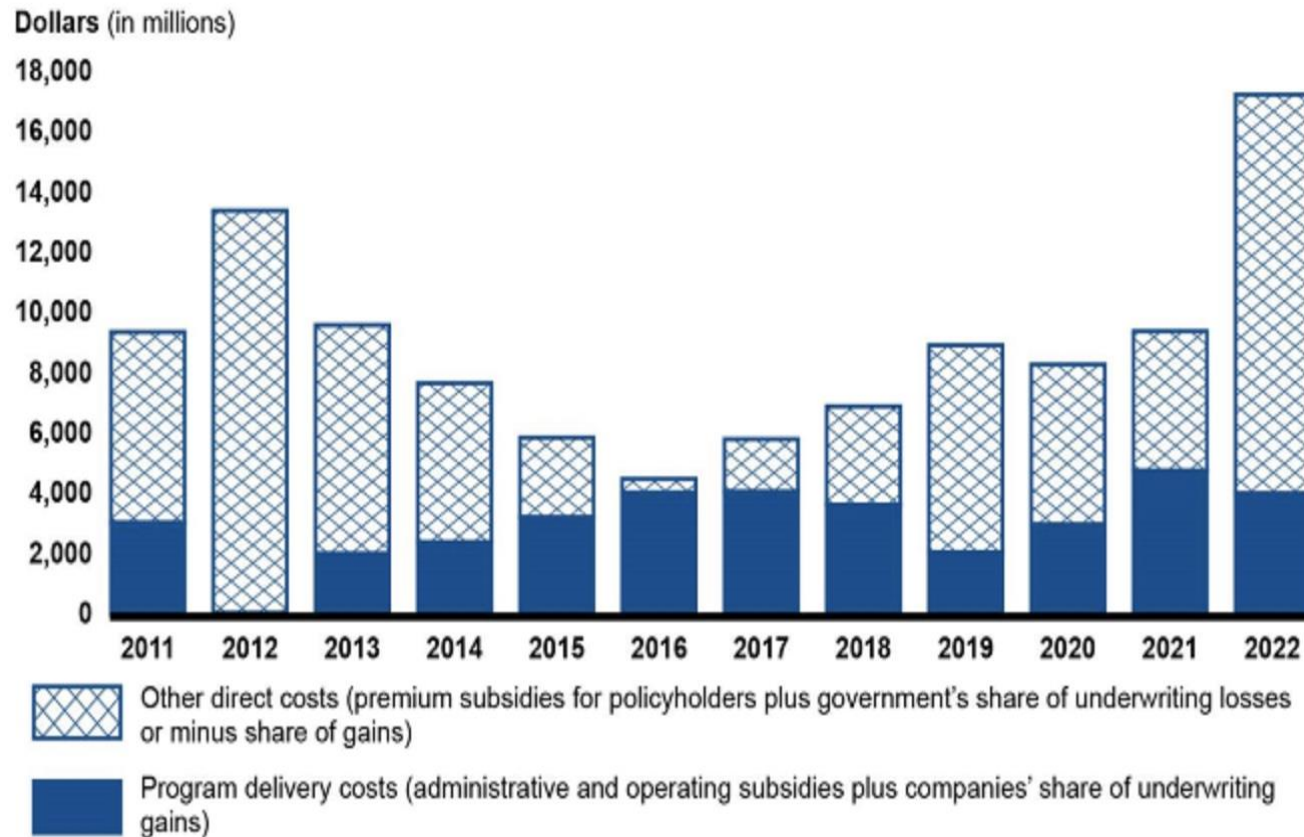
# Crop insurance subsidies: perverse incentives

- The price of land has gone up to reflect the value of the subsidies; and the cost of renting land has soared comparably.
- This keeps would-be farmers out of farming.
- It led to farm consolidation and loss of the small farms.
- Monocrops, especially corn, are grown because the insurance guarantees a return no matter what happens.
- There is no income cap to obtain crop insurance, so most goes to the biggest and richest farms. Only 13% of farmers can access crop insurance.
- Private insurance companies earn 14.5% profits on crops insurance and get a fixed percentage of what they underwrite—making it unprofitable to insure small farms.
- "The main thing is, it's depopulated rural America."

<https://www.cato.org/policy-investigation/farm-bill-sows-dysfunction-american-agriculture#welfare-wealthier-farmers>

# **Crop Insurance:** Meant to solve the boom-bust farm problem, it became a giveaway to the largest farmers

Cost of the Federal Crop Insurance Program, 2011-2022



Source: GAO analysis of Risk Management Agency data. | GAO-24-106086

**Only 13% of farmers can obtain crop insurance, for which the US government pays 62% of the premium.**

**The insurers usually require the farmers to use chemicals like glyphosate for weed control and as a desiccant before harvest, to be eligible for benefits.**













**The Crop Insurance program cost taxpayers \$17 Billion in 2022: \$50 from every American**



# US mortality compared to comparable nations

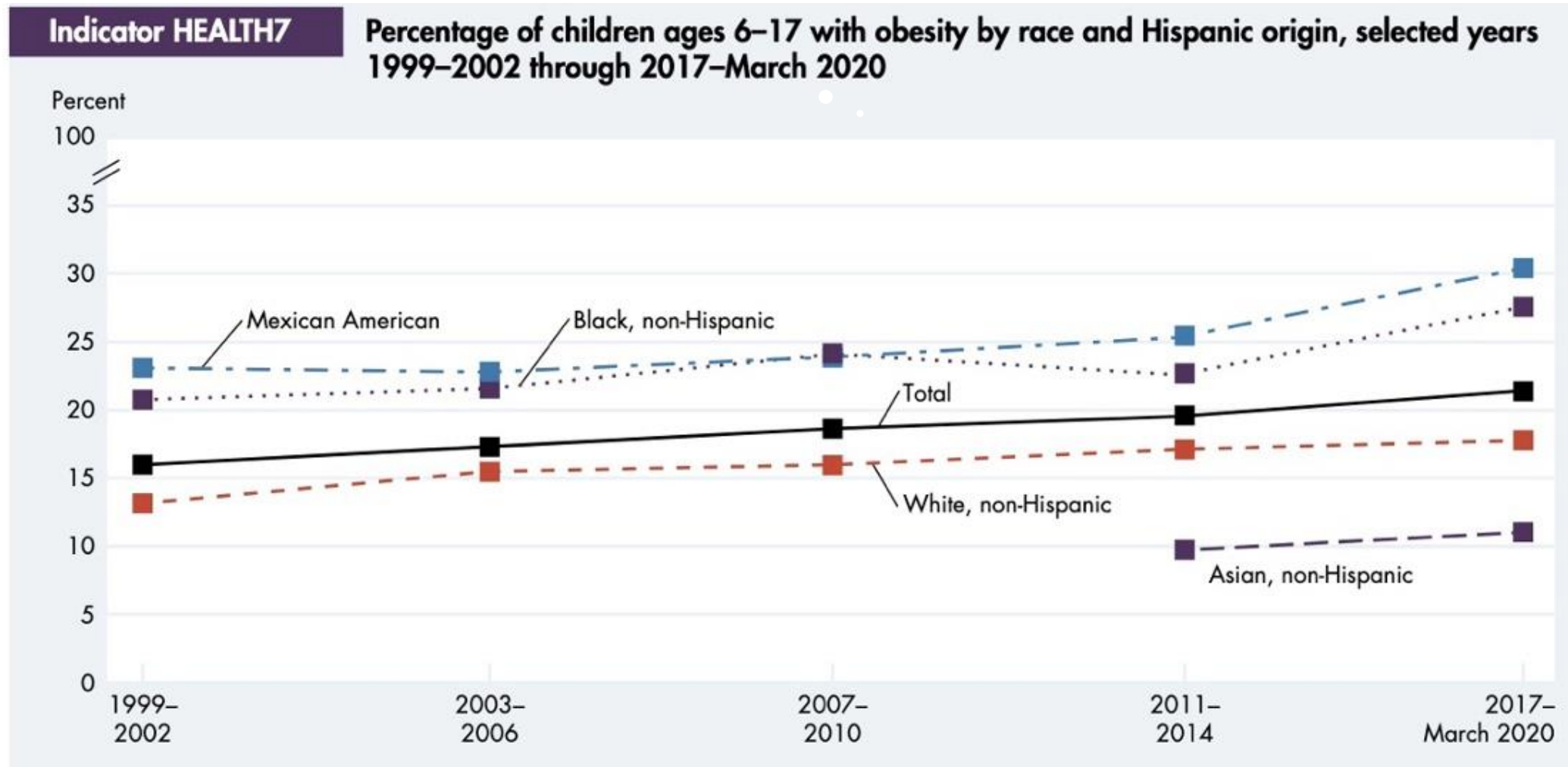
Life expectancy and per capita healthcare spending (PPP adjusted), 2023

\$15,000 pppy in 2025

Country	Life expectancy ▲	Health spending, per capita
 United States	78.4	\$13,432
 Germany	80.6	\$8,441
 United Kingdom	81.1	\$6,023
 Austria	81.6	\$7,811
 Canada	81.7	\$7,013
 Netherlands	82.0	\$7,737
 Belgium	82.5	\$7,380
<b>Comparable Country Average</b>	<b>82.5</b>	<b>\$7,393</b>
 Australia	83.1	\$6,931
 France	83.1	\$7,136
 Sweden	83.4	\$7,522
 Japan	84.1	\$5,640
 Switzerland	84.2	\$9,688

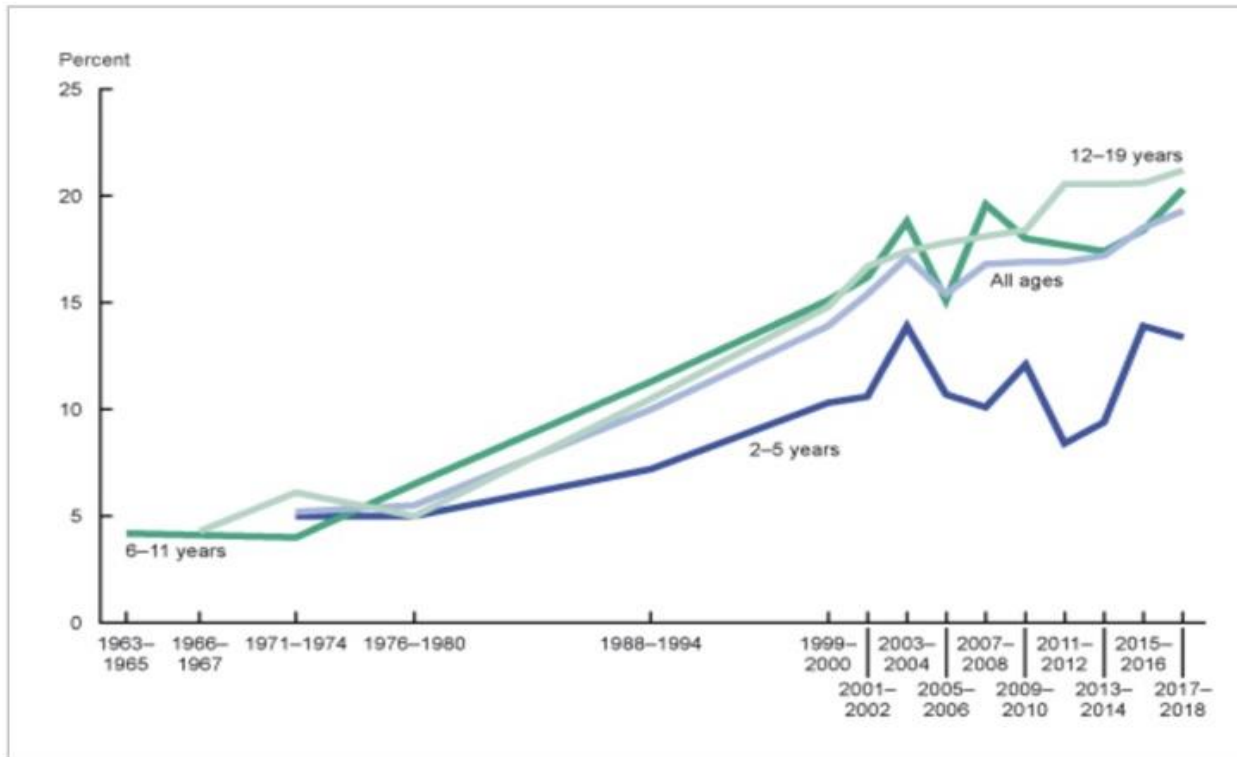
Notes: Health spending per capita data represent health consumption spending per capita. Comparable countries include: Australia, Austria, Belgium, Canada, France, Germany, Japan, the Netherlands, Sweden, Switzerland, and the U.K. 2023 U.K. life expectancy data is only for England and Wales. See Methods [section](#) of "How does U.S. life expectancy compare to other countries?"

**US Childhood obesity rates increased by over 33% in just 20 years for all demographics. The rate of Type 2 diabetes doubled.**



# Childhood obesity skyrocketed over 55 years

Figure. Trends in obesity among children and adolescents aged 2–19 years, by age: United States, 1963–1965 through 2017–2018



**For kids aged 6-19, the obesity rate jumped from 4% to over 20% in 50 years. [CDC data]**

NOTE: Obesity is body mass index (BMI) at or above the 95th percentile from the sex-specific BMI-for-age 2000 CDC Growth Charts.

SOURCES: National Center for Health Statistics, National Health Examination Surveys II (ages 6–11), III (ages 12–17); and National Health and Nutrition Examination Surveys (NHANES) I–III, and NHANES 1999–2000, 2001–2002, 2003–2004, 2005–2006, 2007–2008, 2009–2010, 2011–2012, 2013–2014, 2015–2016, and 2017–2018.



## The World's Largest Food and Beverage Companies in 2022

Food Rank	Global 2000 Rank	Company	Country	Industry	Spec.
1	46	Nestle S.A.	Switzerland	Food, Drink & Tobacco	Food Processing
2	86	PepsiCo, Inc.	United States	Food, Drink & Tobacco	Beverages
3	93	Anheuser-Busch InBev SA	Belgium	Food, Drink & Tobacco	Beverages
4	114	Coca-Cola Co.	United States	Food, Drink & Tobacco	Beverages
5	222	Mondelez International	United States	Food, Drink & Tobacco	Food Processing
6	237	Archer-Daniels-Midland Company	United States	Food, Drink & Tobacco	Food Processing
7	287	Diageo plc	United Kingdom	Food, Drink & Tobacco	Beverages
8	292	Kweichow Moutai Co., Ltd. Class A	China	Food, Drink & Tobacco	Beverages
9	318	Tyson Foods, Inc. Class A	United States	Food, Drink & Tobacco	Food Processing
10	330	Danone SA	France	Food, Drink & Tobacco	Food Processing

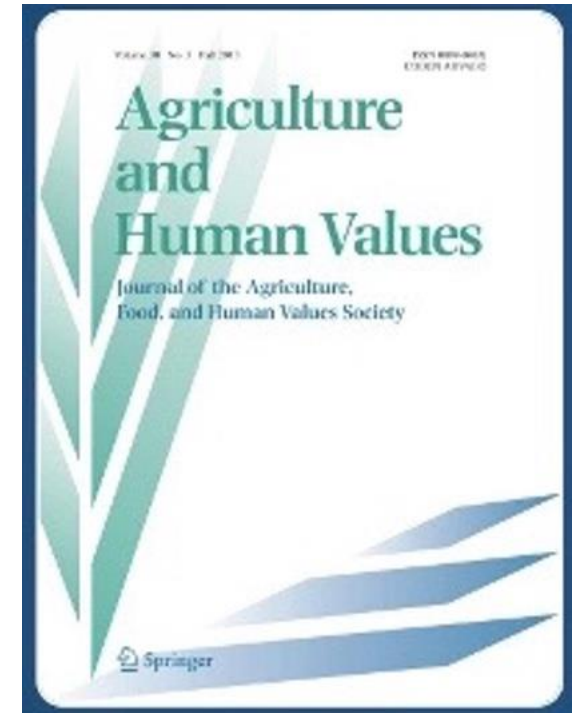
World's 5 largest food companies make mostly junk foods with poor nutritional content or beer

<https://www.forbes.com/sites/chloesorvino/2022/05/12/the-worlds-largest-food-companies-in-2022/>

# The rise of multi-stakeholderism, the power of ultra-processed food corporations, and the implications for global food governance: a network analysis

- **Multistakeholder institutions that advise on global food issues are stuffed with advisers /board members from the largest industrial food companies: Unilever, Nestlé, PepsiCo, Coca-Cola, Mars, Dannon—and the WEF**
- More than half these institutions' board members come from only 4 countries (US, UK, Netherlands and Switzerland)
- **These institutions influence the food policies of the UN, research institutions, national governments and NGOs**

<https://link.springer.com/article/10.1007/s10460-024-10593-0>

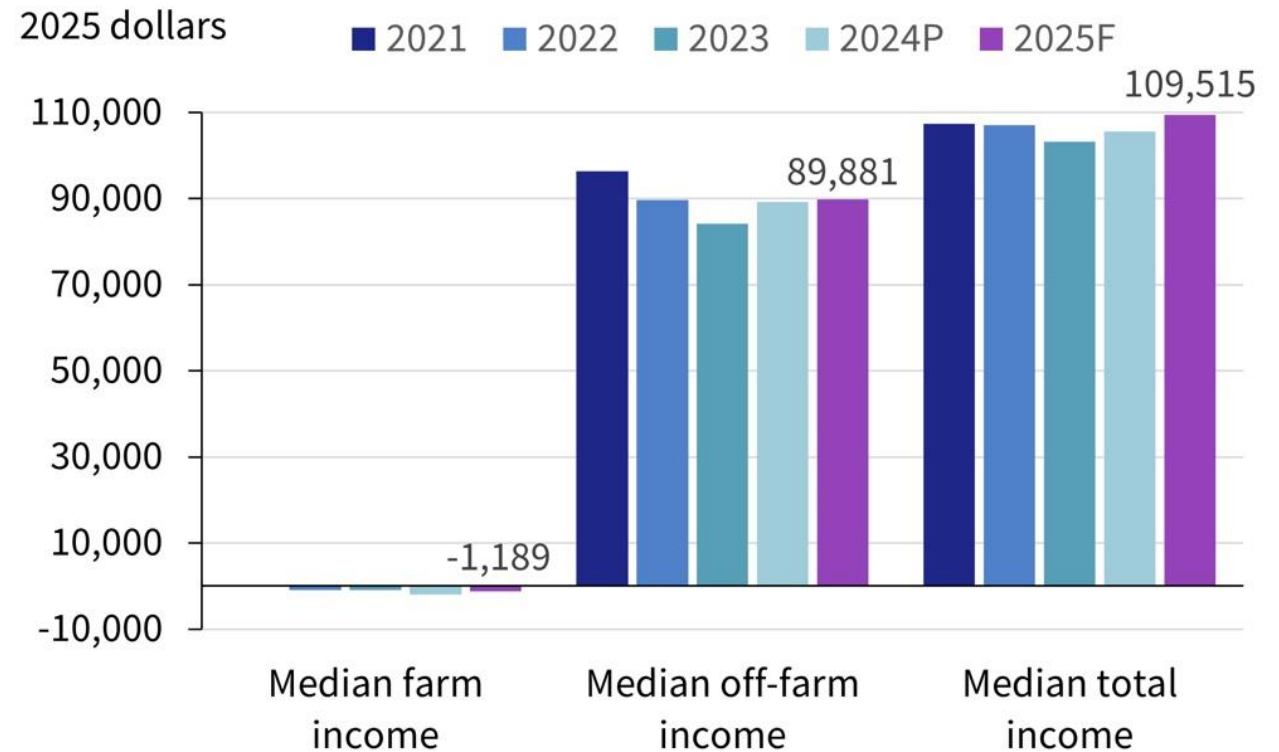


# Median Farm Income Negative for past 5 years

"Farm households typically receive income from farm and off-farm sources. Median farm income earned by farm households was -\$1,830 in 2024 and is forecast to increase to -\$1,189 in 2025. Many farm households primarily rely on off-farm income. **Median off-farm income was \$86,900 in 2024**, an increase of 8.8 percent (6.1 percent after inflation) from 2023. In 2025, median off-farm income is forecast to increase by a further 3.4 percent (0.6 percent after inflation) to \$89,881."

<https://ers.usda.gov/topics/farm-economy/farm-sector-income-finances/highlights-from-the-farm-income-forecast>

## Median farm income, off-farm income, and total income of farm households, 2021–25F



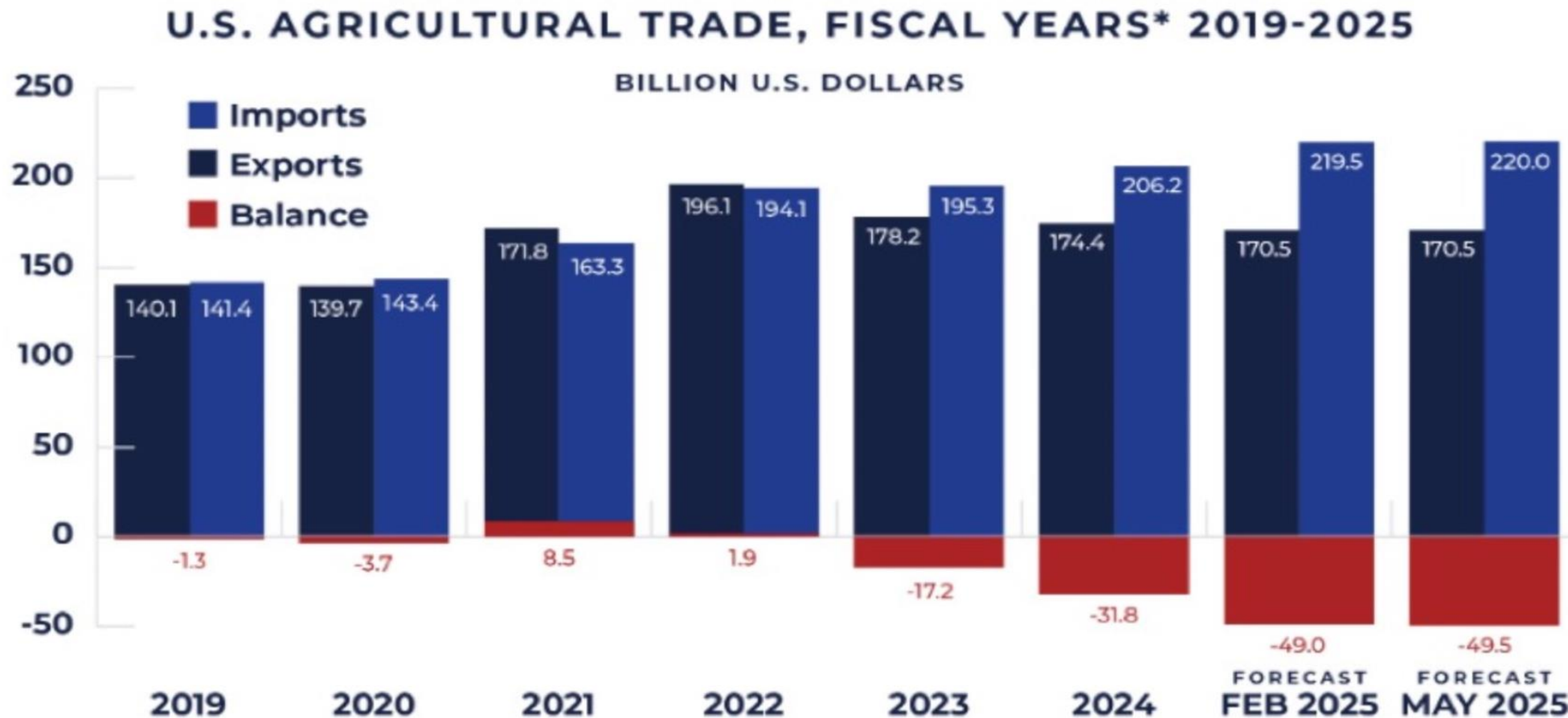
Note: P = preliminary, F = forecast. Values are adjusted for inflation using the U.S. Department of Commerce, Bureau of Economic Analysis Personal Consumption Expenditure Price Index (BEA API series code: DPCERG) rebased to 2025 by USDA, Economic Research Service. The median is the income level where half of all households have lower income and half have higher incomes. Because farm and off-farm income are not distributed identically for every farm, median total income will generally not equal the sum of the median off-farm and median farm income.

Source: USDA, Economic Research Service, Farm Income and Wealth Statistics. Data as of September 3, 2025.



Agricultural trade deficits are relatively new. Until recently, the U.S. agricultural sector enjoyed a **consistent agricultural trade surplus** annually. In 2011, for example, the U.S. experienced a record \$40 billion agricultural trade surplus. The sudden pivot to drastic, consistent trade deficits over the past four years has forced U.S. farmers and ranchers to adjust rapidly or be left behind, forcing them to accept ever-diminishing returns.

<https://www.americafirstpolicy.com/issues/driving-rural-prosperity-by-reducing-the-u.s-agricultural-trade-deficit>





United States Department of Agriculture  
National Agricultural Statistics Service

## Even *before* COVID, farmers were hit with massive inflation for farming inputs

- According to the 2022 USDA Census data, **the US lost 8% of its farms between 2017 and 2022.**
- Yet the cost of farming "inputs" overall rose **30%** during those 5 years, higher than overall inflation.
- The cost of **chemical inputs** rose **34%** in those 5 years.
- The cost of **contract labor** rose **33%**.
- **Since 2017, the US has lost, on average, 63 farms *per day***

# Ag Lender Warns Farm Finances Under Greatest Stress Since the 1980s

With most input prices still record or near-record high, farmers in parts of the country have seen eroding balance sheets for four straight years. Now the concern is more farmers will be forced out of farming this year, unless they see some type of market or government intervention.



By **Tyne Morgan**

Updated September 19, 2025 03:11 PM

<https://www.agweb.com/news/policy/ag-economy/ag-lender-warns-farm-finances-under-greatest-stress-1980s>

"As combines chew through this year's crops, farmers are faced with a bleak reality: this crop they're harvesting is coming at a steep financial loss. And for some, this marks the fourth year in a row they won't make any money."

"What the general public doesn't realize is these things have not just occurred over the last six months. This started in 2021 and 2022," says Tommy Young, who farms in Newport, Ark. "In our particular situation, we started noticing shortfalls in 2021 and 2022 simply because of the input costs." ...



## Visualizing Consolidation in the Global Seed Industry: 1996–2008

by Philip H. Howard 

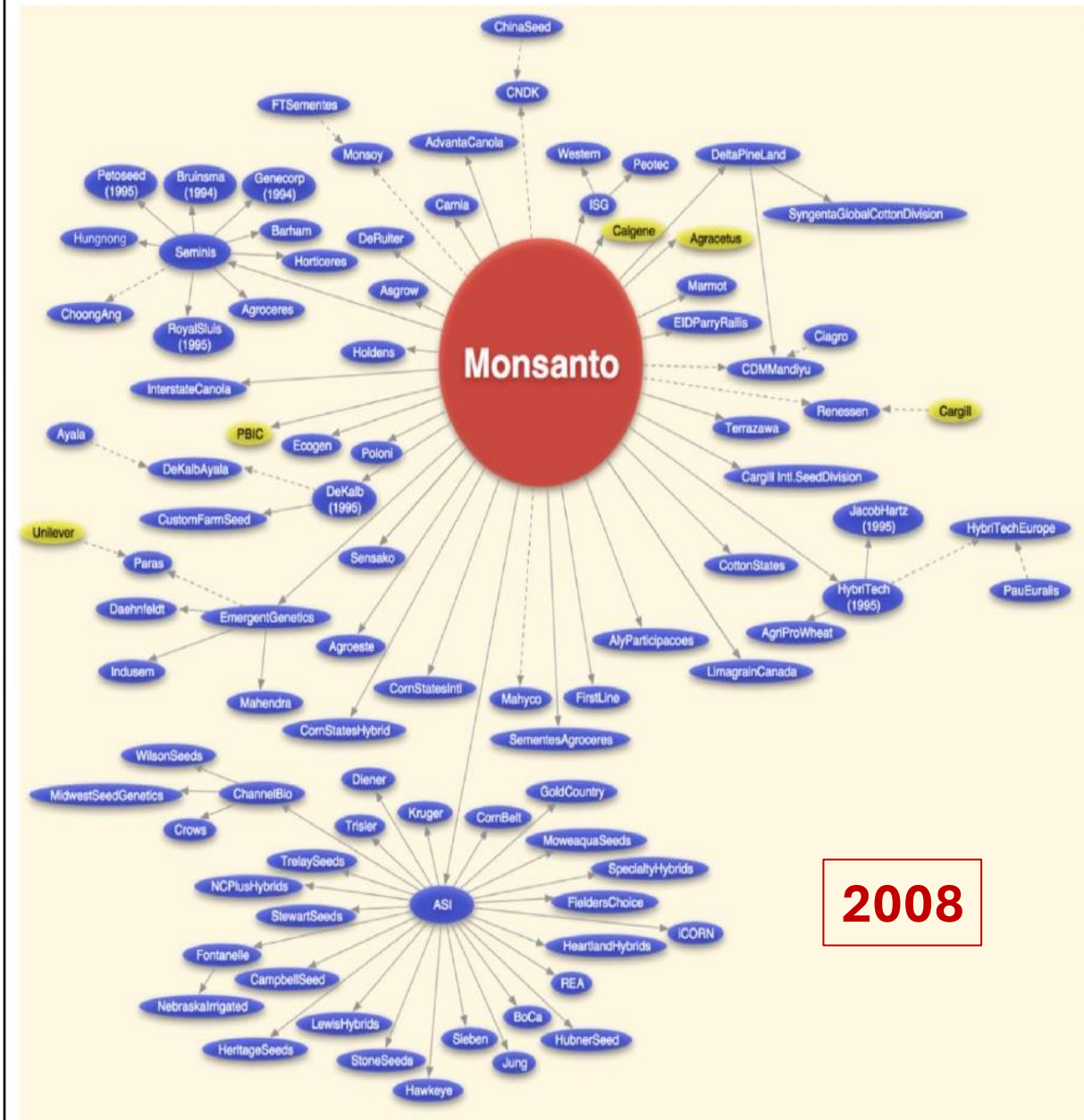
Department of Community, Agriculture, Recreation and Resource Studies, Michigan State University, 316 Natural Resources, East Lansing, MI 48824, USA

*Sustainability* **2009**, *1*(4), 1266–1287; <https://doi.org/10.3390/su1041266>

"Since the commercialization of transgenic crops [GMOs] in the mid-1990s, the sale of seeds has become dominated globally by Monsanto/Bayer, DuPont and Syngenta/Chem China...."

<https://www.mdpi.com/2071-1050/1/4/1266#>

Figure 3. Monsanto seed company ownership ties.



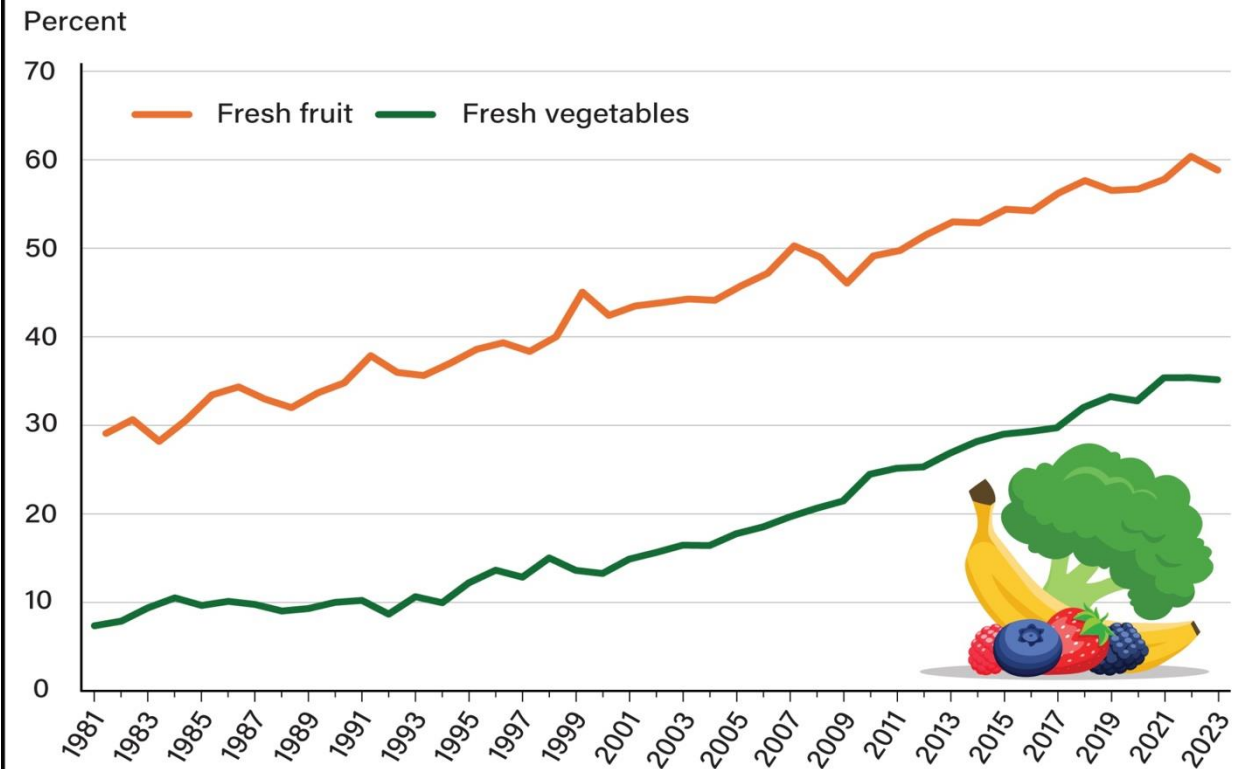
# Over 40 years, the US went from importing 30% of its fruit to 60%, and 10% of its vegetables to 35%

- Mexico accounts for 51% of the United States' fresh fruit imports and 69% of its fresh vegetable imports.
- Until now, NAFTA and then the US-Mexico-Canada agreement of 2020 made fresh fruits and vegetables **tariff free for 30 years**.
- Given that Mexican farmworkers earn an average wage of about \$2 per hour, compared to about \$18 per hour in the US, how could American growers of healthy produce remain competitive?

<https://www.ers.usda.gov/data-products/charts-of-note/chart-detail?chartId=110713>

Imports as a share of U.S. fresh fruit and vegetable availability, 1981–2023

USDA Economic Research Service  
U.S. DEPARTMENT OF AGRICULTURE



Note: Availability is calculated as production minus exports plus imports and is measured in terms of volume. The calculation for vegetables excludes potatoes, sweet potatoes, and mushrooms.

Source: USDA, Economic Research Service Fruit and Tree Nuts and Vegetable and Pulses data products.

CHARTS of NOTE

# In 1970, ranchers could live well. They kept 70% of the price you paid for beef at the grocery store



- How much of that money makes it to the farmers who grow and raise your food today?
- In 1970, 70% of what you paid for meat at the grocery store went to the rancher. In 2025, only about 30% gets back to the rancher.
- The rest goes to Big Ag and Big Food, due to consolidation and monopolization in food industries
- And USDA prevents farmers from slaughtering their own animals and selling direct to consumers, forcing them to use middlemen

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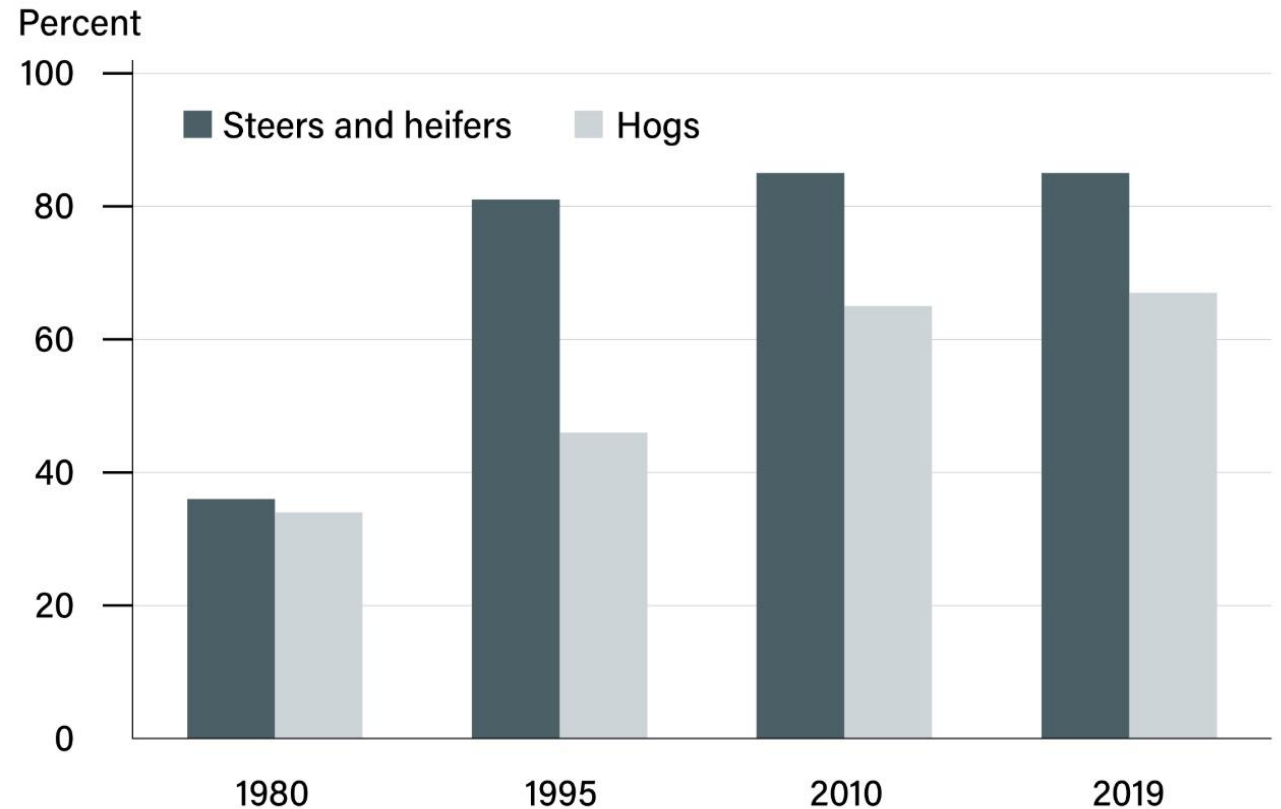
<https://farmaction.us/behind-the-brands-the-meatpacking-monopoly-and-the-illusion-of-choice/>



# What Happened?

- In 1980, the four largest beef packers accounted for 36 percent of all purchases of steers and heifers, while the four largest pork packers (a different group of firms) accounted for 34 percent of all purchases of market hogs.
- Over 1,800 small and mid-sized slaughterhouses closed since 1990
- By 1995, the largest four firms accounted for 81 percent of steer and heifer purchases.  
Concentration in hogs grew more slowly, but by 2019 the four largest packers accounted for 67 percent of all hog purchases.

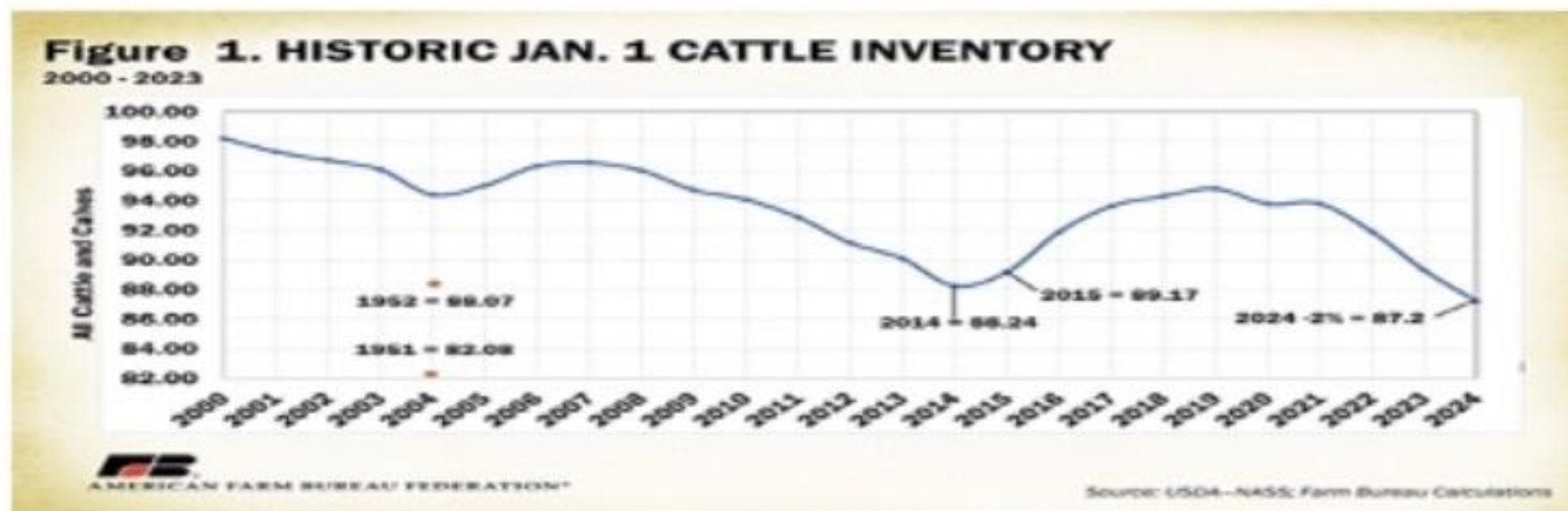
**Four largest meatpackers' share of cattle and hog purchases surged after 1980**



Source: USDA, Agricultural Marketing Service.

<https://www.ers.usda.gov/amber-waves/2024/january/concentration-in-u-s-meatpacking-industry-and-how-it-affects-competition-and-cattle-prices>

# U.S. Cattle Inventory is Smallest since 1951



<https://www.fb.org/market-intel/u-s-cattle-inventory-smallest-in-73-years>

THE WALL STREET JOURNAL

Monday, May 12, 2025 | B3

## BUSINESS NEWS

# Beef Prices Climb to New Records

Consumer demand remains robust, as cattle inventories are lowest in years

By KIRK MALTAIN



## **After 2015, excess meat processing capacity disappeared, enabling processors to squeeze both ranchers and consumers**

- Total U.S. beef production in 2015 was only 5% greater than it was in 1977, despite the population growing 55%
- The meat processing industry concentrated rapidly in the 1980s and 1990s, with most facilities closing due to expensive new regulations, and competition for slaughterhouse space became intense.
- Reduced competition among meatpackers led to ranchers receiving lower prices for livestock
- Sharply increased spreads between prices paid for cattle and wholesale beef resulted: farmers were paid less while consumers paid more
- <https://www.ers.usda.gov/amber-waves/2024/january/concentration-in-u-s-meatpacking-industry-and-how-it-affects-competition-and-cattle-prices>



**Between 2017 and 2022, 20 million acres of harvested crop land, including 3 million irrigated acres, stopped being farmed**

- The US saw a net loss of farms of every size, except for farms above 5,000 acres
- **142,000 farms went under, 8% of the total number of American farms**
- And you didn't hear a thing about it from the media

[https://www.nass.usda.gov/Publications/AgCensus/2022/Full\\_Report/Volume\\_1,\\_Chapter\\_1\\_US/st99\\_1\\_009\\_010.pdf](https://www.nass.usda.gov/Publications/AgCensus/2022/Full_Report/Volume_1,_Chapter_1_US/st99_1_009_010.pdf)



United States Department of Agriculture  
National Agricultural Statistics Service



# We Will Soon Run Out of Farmers and Family Farms

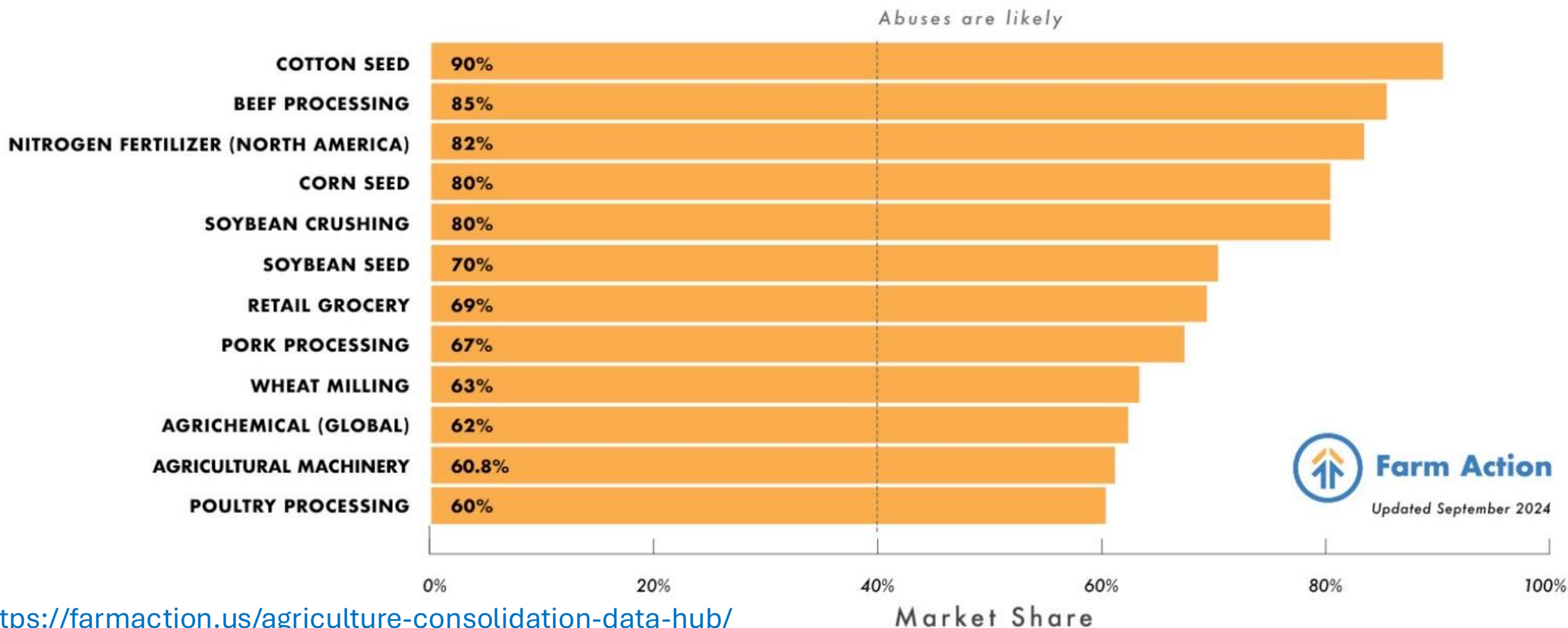
- There are 1.88 million farms in the USA
- 98% are family farms
- Family farms produce 87% of US food
- The average age of farmers in the US is 58+
- 39% of US farmers are over age 65
- Half of their children won't continue to farm
- And most of the parents have debt and can't afford to leave the farms to their children
- Young people cannot afford to go into farming

<https://agamerica.com/investing-in-agriculture/investor-insights/farmland-ownership-transition/>



# Near monopolies in every part of the food system

## Percentage of U.S. Market Controlled by Top Four Corporations



# Monopolies and near-monopolies invariably abuse us

- "Antimonopoly [is] ...basically a corollary to how we think about the need for checks and balances in our political sphere. There was a recognition that, **in the way we overthrew a monarch to safeguard core liberties and freedoms, we had to protect ourselves from autocrats of trade...** so we passed the antitrust and antimonopoly laws as a way to try to safeguard those freedoms."
- "Evidence shows time and time again that **when you have a reduction in competition in markets, firms can abuse that power.** It can result in **higher prices** for consumers. It can mean **lower wages** for workers. It can mean **fewer opportunities for small businesses and independent businesses.**"
- "It can also ultimately lead people to feel less free if, in their day-to-day lives, they feel they don't have real choice and firms can get away with abusing their power."
- "So there can be a range of problems more generally that emerge when you have markets that are dominated by a handful of firms that are not checked either by competition or by rules."

Lina Khan, Chair, Federal Trade Commission 2021-25

<https://www.nytimes.com/2025/06/19/opinion/lina-khan-monopolies-trump.html>

The New York Times

# Guess what is in your industrial-raised chicken!

- Arsenic (in 90% of US broilers)
- Benadryl
- Tylenol
- Caffeine
- Banned antibiotics (fluoroquinolones)
- The active ingredient in Prozac, found in chicken from China

"It turns out that arsenic has routinely been fed to poultry (and sometimes hogs) because it reduces infections and makes flesh an appetizing shade of pink. There's no evidence that such low levels of arsenic harm either chickens or the people eating them, but still..."

<https://www.nytimes.com/2012/04/05/opinion/kristof-arsenic-in-our-chicken.html>

The New York Times

Opinion

## Arsenic in Our Chicken?



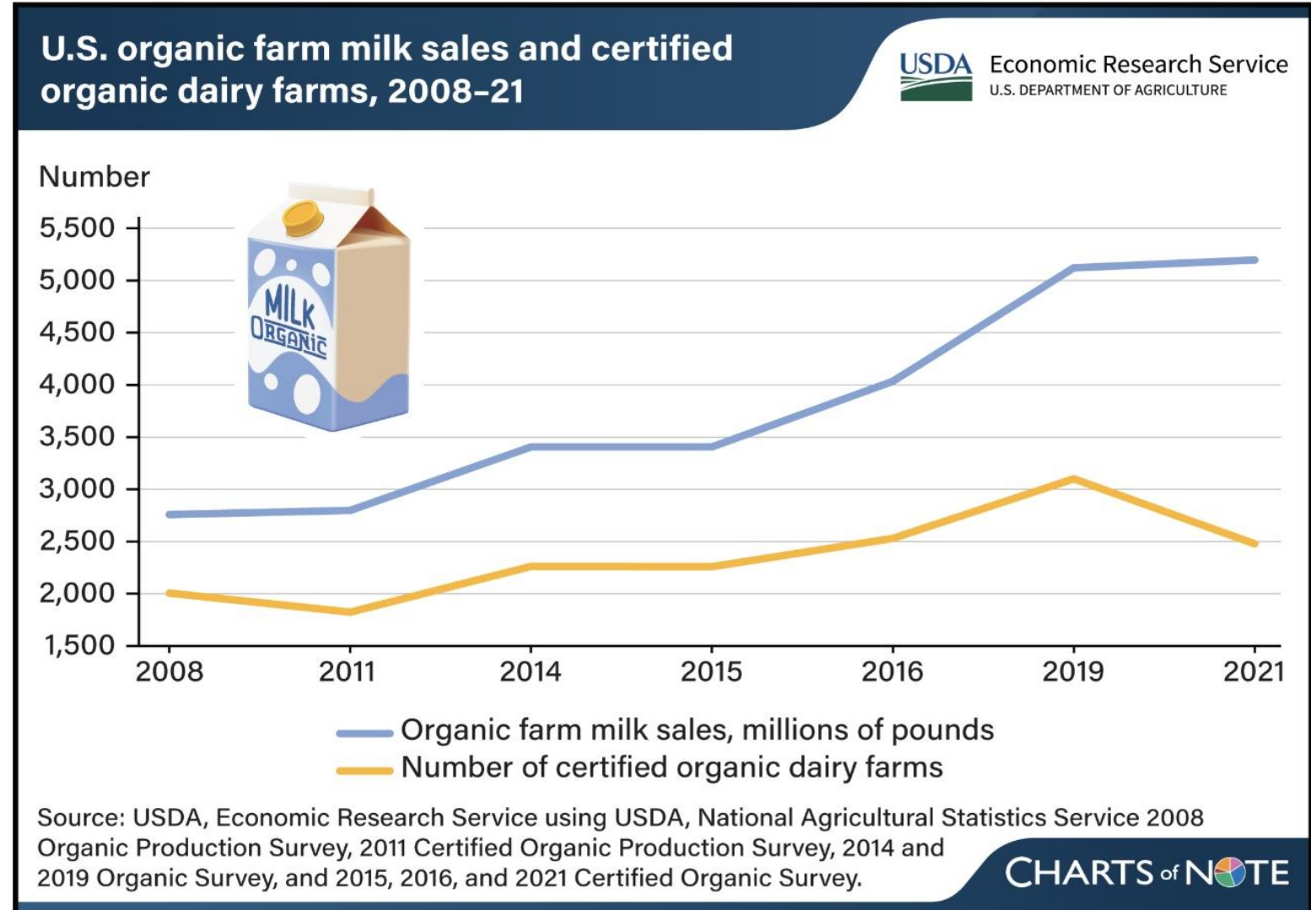
By Nicholas Kristof

April 4, 2012



# Demand for high quality, organic milk up over 80% between 2008 and 2021

The trend is clear:  
Americans have noticed the reduction in food quality, and are seeking out higher quality food for their families





World Health  
Organization

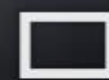
"Our food systems are harming the health of people and planet. Food systems contribute to over 30% of greenhouse gas emissions, and account for almost one third of the global burden of disease. Transforming food systems is therefore essential."

2023

<https://www.youtube.com/watch?v=kHXJ5O5EDlc>



0:00 / 2:13



# Are the globalists **really** coming after our Food?

1. **Inducing famines** through WTO rules that prevent national grain storage
2. **Reducing food quality** through harmful additives, hormones, chemicals
3. **Reducing the number of cows, pigs, sheep, goats, bison** **allegedly** to reduce methane and nitrogen releases (Holland, Ireland, Denmark, Canada)
4. **Reducing land available for farming** via "return to nature" and "protecting biodiversity" programs (Natura 2000; 30 x 30, NACs) and solar and wind "farms"
5. **Reducing inputs like fertilizer** (Ukraine origin, inability to transport it, nitrate pollution)
6. **Government-enforced "organic" farming** (Sri Lanka) reduced rice production by half
7. **Claiming food grown in factories has a smaller carbon footprint** (like electric vehicles are promoted for their low carbon footprint by ignoring the energy to manufacture them)—it is too soon to know if this is true
8. **Increasing regulations** (electronic ear tags, insufficient meat inspectors, no raw dairy)
9. **One Health**: Imposes international standards on developing nations to reduce exports
10. **Geoengineering** being used to modify weather and rainfall, pollute soil
11. **Fake meat, milk and other foods** from mealy worms, crickets and lab experiments



**In 2019, the United became a partner of  
the W.E.F. to accelerate the SDGs!**

<https://weforum.ent.box.com/s/rdlgipawkjxi2vdaidw8npbtyach2qbt>



## **The United Nations -World Economic Forum Strategic Partnership Framework for the 2030 Agenda**

The United Nations and the World Economic Forum are committed to accelerate implementation of the 2030 Agenda for Sustainable Development - the world's plan for peace, prosperity, and a healthy planet.

Recognising the ambition of the 2030 Agenda, the United Nations and the World Economic Forum seek to strengthen their partnership by focusing on jointly selected priorities and by pursuing a more strategic and coordinated collaboration, by leveraging their respective strengths and broadening their combined impact, building on existing and new collaborations by UN entities.

The partnership envisions for the United Nations (hereinafter "UN") and the World Economic Forum (hereinafter "Forum") to help each other increase their outreach, to share networks, communities, knowledge and expertise, to foster opportunities for innovation, and to encourage a wide understanding of and support for priority issues among their relevant stakeholders.



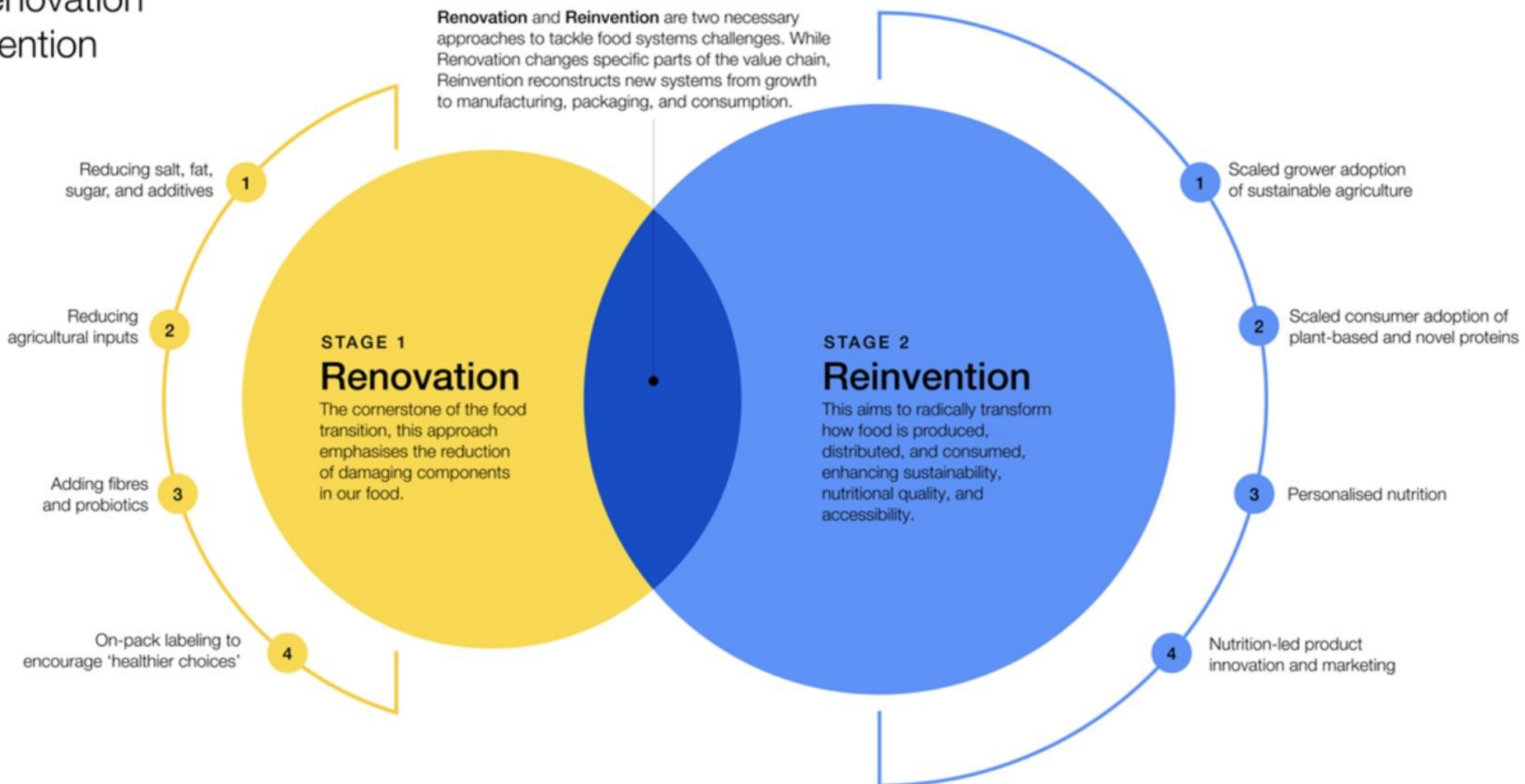
# Renovation and reinvention are key to saving our food system. Here's why

Jun 13, 2024

<https://www.weforum.org/agenda/2024/06/renovation-reinvention-food/>

## REINVENTION VS. RENOVATION

### From Renovation to Reinvention





- "The food transition requires comprehensive transformation.
- **Renovation** involves **incremental changes** to **recipes** and **packaging** that will **gradually** impact public health." [SOFT FOOD COUP]
- **Reinvention** means **systemic industry-level changes** to **production, distribution and consumption of food.** [HARD FOOD COUP]
- "The food transition aims to reshape the way society produces, distributes, consumes and discards food – a transformation that will impact the mutual advancement of human and environmental health. The scale of change is akin to the energy transition."
- "Rapid advancements in plant-based R&D as well as bio-identical plant or animal proteins, fats and oils produced through precision fermentation and cell-cultivated biotechnologies, are opening up spaces for Reinvention."

<https://www.weforum.org/agenda/2024/06/renovation-reinvention-food/>

# Edible insect "farms" for human consumption in the US and Canada



[Anim Front.](#) 2023 Aug; 13(4): 16–25.

Published online 2023 Aug 14. doi: [10.1093/af/vfad047](https://doi.org/10.1093/af/vfad047)

PMCID: PMC10425141

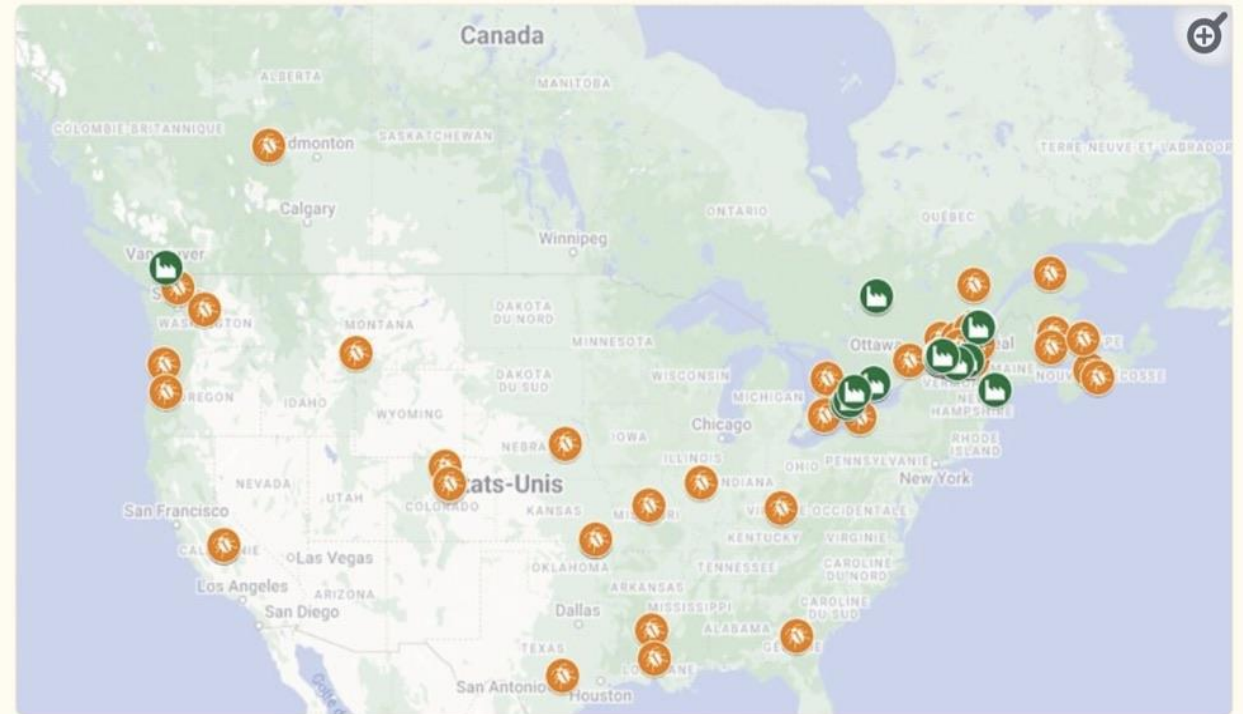
PMID: [37583805](https://pubmed.ncbi.nlm.nih.gov/37583805/)

## The edible insect sector in Canada and the United States

[Jennifer Larouche](#), [Barbara Campbell](#), [Louise Hénault-Éthier](#), [Ian J Banks](#), [Jeffery K Tomberlin](#), [Cheryl Preyer](#), [Marie-Hélène Deschamps](#), and [Grant W Vandenberg](#)<sup>✉</sup>

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Jennifer Larouche, Ribozome, Québec City, QC, Canada;



**Figure 1.**

Map of edible insect producers (orange beetle, excluding producers of live insects for the pet market and research centers) and processors (green facility) in Canada and the United States.



**The Lancet**  
sponsored the  
**EAT**  
**Commission.**

It claimed  
there could be  
**\$5-10 trillion**  
**dollars in**  
**annual**  
**benefits** for  
transforming  
the food  
system.

"Food systems have the potential to nurture human health and support environmental sustainability; **however, they are currently threatening both.**"



[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(18\)31788-4/abstract](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(18)31788-4/abstract)



Download the full report [HERE](#).

- Transforming global food systems could create 5-10 trillion USD of economic benefits every year.
- Food systems are currently destroying more value than they create – with inefficient and fragmented policies leading to hidden health and environmental costs upwards of 10 trillion USD per year.
- Fixing food systems requires an overhaul of food system policies, investment in innovation and enabling people to eat healthier and more environmentally sustainable diets.
- The cost of transformation is small compared to its multi-trillion dollar benefits.
- New economic modelling finds that food systems are a uniquely powerful means of addressing global climate, nature and health emergencies at the same time – while offering a better life to hundreds of millions of people.

The global food system does the crucial work of producing and distributing food to a growing population, but its hidden costs – caused by undernutrition, productivity loss and environmental damage – are currently estimated as equivalent to 10% of global GDP annually, higher than the system's contribution to economies.



# Target 1

## Healthy Diets

Healthy diets have an optimal caloric intake and consist largely of a diversity of plant-based foods, low amounts of animal source foods, contain unsaturated rather than saturated fats, and limited amounts of refined grains, highly processed foods and added sugars.

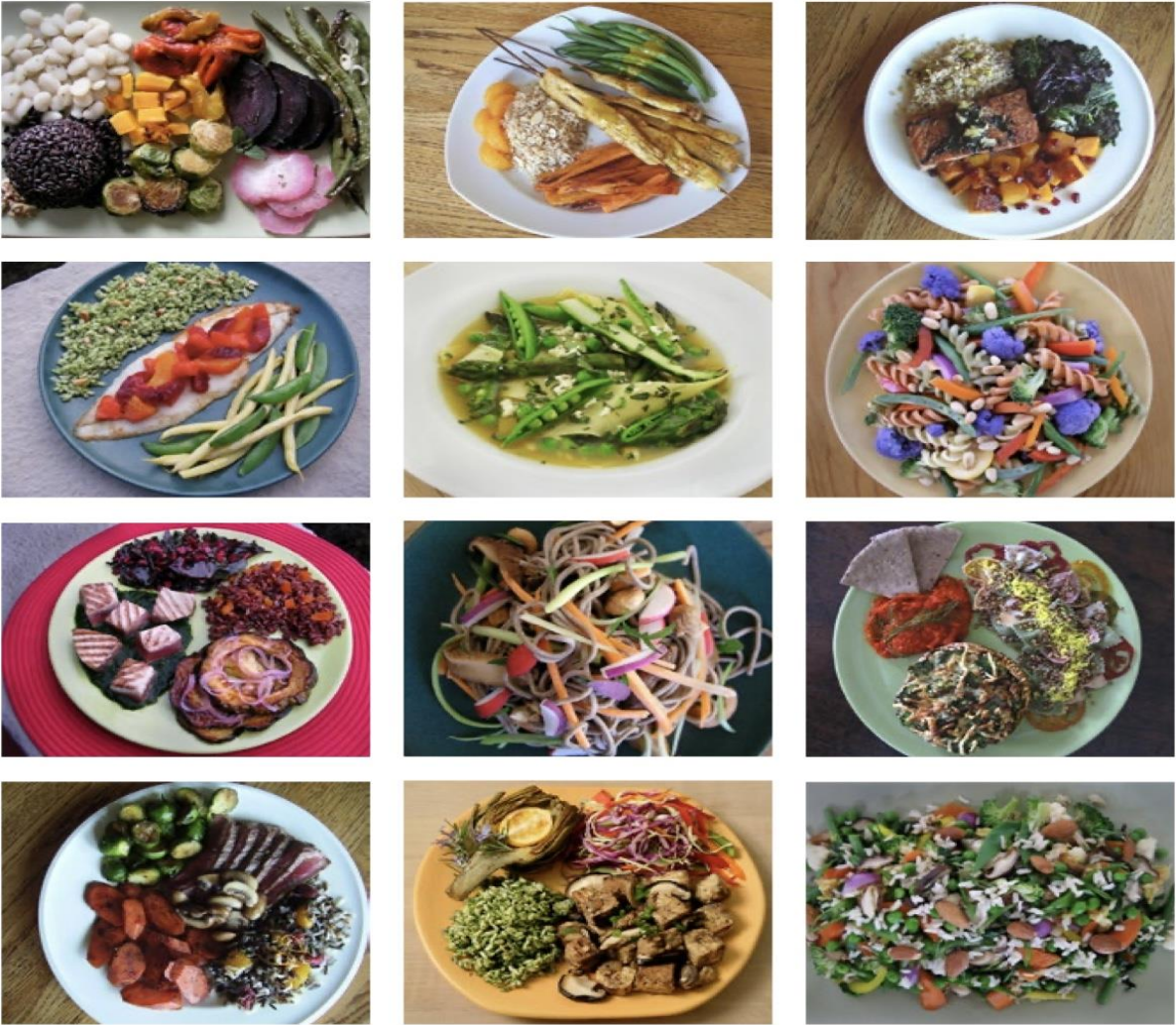
	Macronutrient intake grams per day (possible range)	Caloric intake kcal per day	
 Whole grains Rice, wheat, corn and other	232	811	
 Tubers or starchy vegetables Potatoes and cassava	50 (0–100)	39	
 Vegetables All vegetables	300 (200–600)	78	
 Fruits All fruits	200 (100–300)	126	
 Dairy foods Whole milk or equivalents	250 (0–500)	153	
 Protein sources	Beef, lamb and pork	14 (0–28)	30
	Chicken and other poultry	29 (0–58)	62
	Eggs	13 (0–25)	19
	Fish	28 (0–100)	40
	Legumes	75 (0–100)	284
	Nuts	50 (0–75)	291
 Added fats	Unsaturated oils	40 (20–80)	354
	Saturated oils	11.8 (0–11.8)	96
 Added sugars All sugars	31 (0–31)	120	

Table 1  
Scientific targets for a planetary health diet, with possible ranges, for an intake of 2500 kcal/day.

Although the planetary health diet, which is based on health considerations, is consistent with many traditional eating patterns, it does not imply that the global population should eat exactly the same food, nor does it prescribe an exact diet. Instead, the planetary health diet outlines empirical food groups and ranges of food intakes, which combined in a diet, would optimize human health. Local interpretation and adaptation of the universally-applicable planetary health diet is necessary and should reflect the culture, geography and demography of the population and individuals.

The plates below are examples of a planetary health diet. This is a flexitarian diet, which is largely plant-based but can optionally include modest amounts of fish, meat and dairy foods.

EATS Commission  
Report from last  
week







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[Defense Advanced Research Projects Agency](#) > [DARPA's ReSource Program Turns Waste into Purified Products, Food](#)

## DARPA's ReSource Program Turns Waste into Purified Products, Food

*Next phase of program to focus on developing integrated systems and scale-up capabilities for producing on-demand stocks from military waste*

OUTREACH@DARPA.MIL  
11/29/2021



Is this a clue to  
what the  
globalists want  
for us?

**The Solution for all of us who EAT requires us to 1) bring the family farm back to life, 2) produce less fake food from commodity monocrops and 3) STOP the Globalist takeover of the food supply.**

1. Farmers have to borrow money to buy their inputs each season—but banks find them too risky and won't lend to them--or charge high interest rates and require up to 125% collateral. **FINANCING is desperately needed.** Can the fed govt capitalize credit unions for small farm loans?
2. **The Agriculture monopolies need to be reeled in through antitrust enforcement.**
3. The Wholesome Meat Act of 1967 prevents farmers from butchering and selling their own animals directly, requiring them to go through USDA-inspected facilities for interstate sales.
4. **Legislation could expand access to your local livestock:**
  - a) Congressman Massie's **PRIME Act** to allow custom slaughterhouses to sell meat in-state
  - b) An act that would permit on-farm slaughter so customers could buy meat locally without government inspection and interference—just passed the New Hampshire House
5. **Purchasing food-like substances feeds the beast while starving us of nutrition. EATERS must demand, seek out and buy healthy food.**