




THE TRUTH ABOUT INDUSTRIAL AGRICULTURE:

**A Fragile System Propped up
by Myths and Hidden Costs**



**Family Farm
Action Alliance**



July 2021




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ABOUT US

Family Farm Action Alliance is a thought leader, policy developer, and network builder for farmers and ranchers, food chain workers, consumers, organizations, and policymakers up and down the food supply chain. We are working to build a sustainable, inclusive economy in which everyone has the right to share in the prosperity they help build and that respects our land, natural resources, and neighbors around the world.

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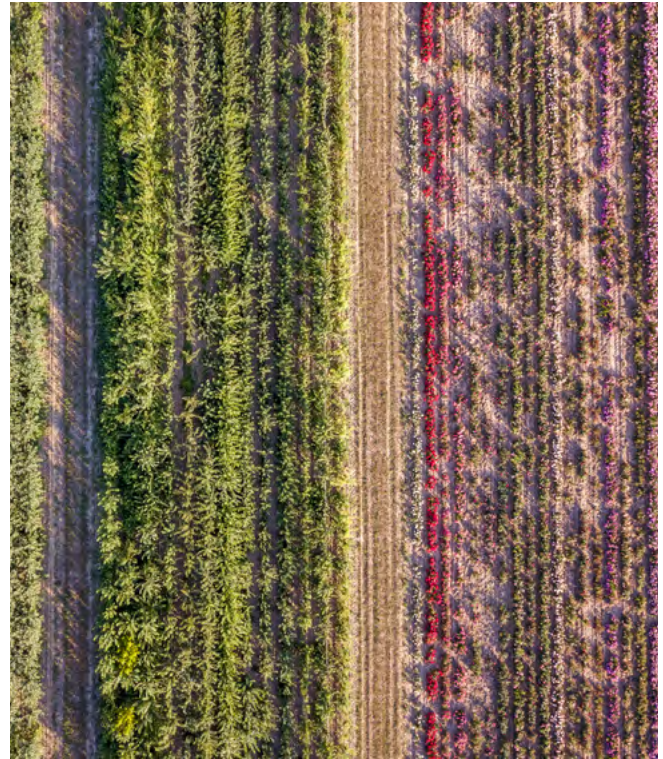
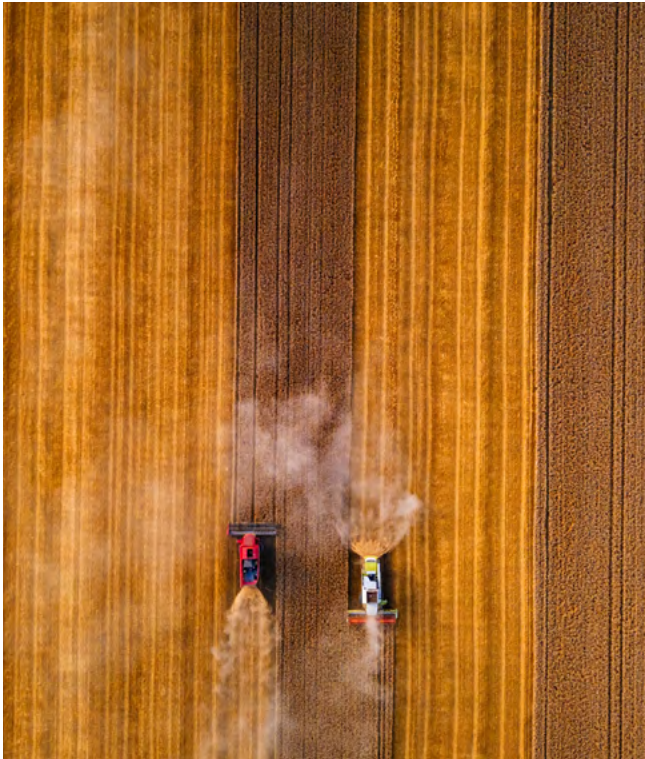


INTRODUCTION

Industrial agriculture is an economically flawed system that survives by externalizing its costs and spending billions of dollars on myth-based marketing campaigns. Industrial agriculture interests externalize, or intentionally evade, costs all along their supply chain. These hidden or evaded costs eventually surface in the form of taxpayer-funded subsidies, a degraded environment, and poor public health outcomes. In this report, we identify the externalized costs of industrial agriculture, dispel their myth campaigns, and recommend a policy path forward for sound, long-term agricultural investment.

In spite of the many myths peddled by industrial agriculture, the public increasingly demands change to corporate agricultural practices: 57% of voters want more oversight of industrial agriculture, and 51% of voters support a national moratorium on Concentrated Animal Feeding Operations (CAFOs) after learning about their environmental impacts.¹

Yet, industrial agriculture interests would rather spend billions of dollars on myth-based PR campaigns than alter their wealth-extracting supply chains. They know that if they were required to internalize the costs they currently externalize – that is, if they accounted for the costs and liabilities along their supply chains and then paid those costs – their businesses would no longer be economically viable. Their pervasive and deceptive taglines enter societal and political discourse as fact. Does “Pork, the other white meat,” or “When I say Hillshire, you say ____” ring a bell? These demonstrate just the surface of the power industrial agriculture interests have to shape the discourse surrounding agriculture, which they use to dupe policymakers, externalize their costs, and pocket the profits by any means necessary.



If 270,000 acres of Midwest farmland (about the size of a county) were transitioned from corn-soy rotations to vegetable production, \$882.4 million in farm-level sales would be worth about \$3.3 billion when sold at retail. This form of production would yield roughly 6,000 new jobs and \$345.1 million in wages.

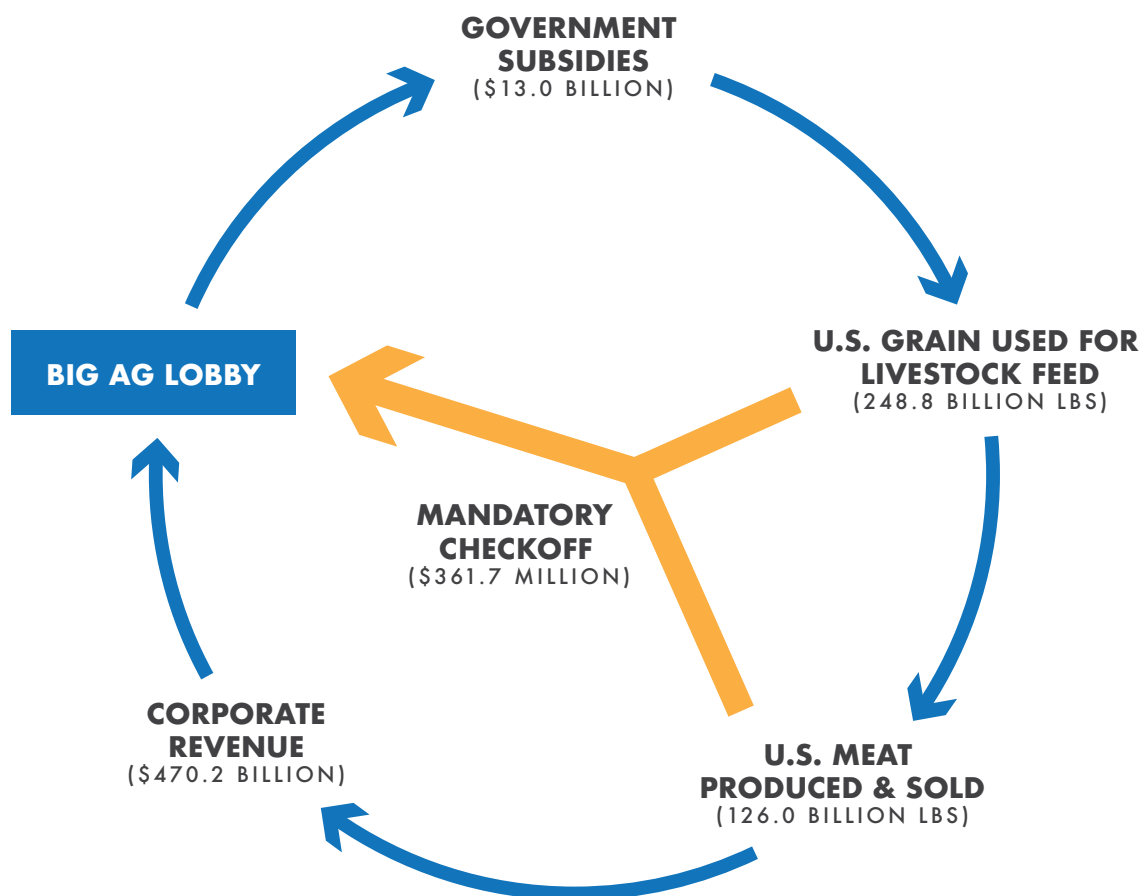
Non-industrial, diversified farms that focus on food crops can produce as much or more food value per acre than specialized, industrial farming operations can.² In a 2010 study, an agricultural economist at the Leopold Center at Iowa State estimated that if 270,000 acres of Midwest farmland (about the size of a county) were transitioned from corn-soy rotations to vegetable production, \$882.4 million in farm-level sales would be worth about **\$3.3 billion** when sold at retail. This form of production would yield roughly **6,000 new jobs** and **\$345.1 million in wages**. Additionally, that same acreage used for vegetable production would provide the population of six Midwest states (Illinois, Indiana, Iowa, Michigan, Minnesota, and Wisconsin) nearly half a year's tomatoes, onions, strawberries, and apples, and about a fourth of their kale, lettuce, and cucumbers.³ Similar conclusions are drawn from Rossi et al. (2017) where they posit that, depending on the region, local food sales can yield substantially higher Gross Domestic Product for local economies than conventional sales. In other words, by relying on alternative forms of agricultural production and markets, wealth and produce could be retained by communities, not extracted by large corporations. Decreasing reliance on industrial agricultural practices makes economic sense.

However, control of agricultural markets and concentration of power has proven to be a lucrative business for industrial agrifood corporations. The erosion of antitrust enforcement, unbridled mergers and acquisitions, and monopolistic control of the agrifood system from local to global markets have yielded highly concentrated markets and corporations with unprecedented political and economic power.⁴

Currently, corporate agrifood CEOs decide who gets to farm, how they farm, and ultimately, who gets to eat.

There is no more compelling evidence for the artificiality of agricultural markets than the feed-meat complex.⁵ The feed-meat complex is a cycle of constant feed-grain monocultures and CAFO-raised livestock. Over decades of farm market erosion and political influence, industrial agrifood corporations have created the demand in domestic and foreign markets for commodities, trapped farmers into constrained production practices and contracts, and created taxpayer subsidies and mandatory producer fees⁶ to fund the entire system — all while targeting links of exploitation and profit extraction within the supply chain.

To protect this lucrative and deceptive model, corporate interests spend vast sums on industry front groups.⁷ Without a reckoning for the current critical food supply chain risks caused by this short-term cost accounting, the long-term viability of the agrifood system will be threatened, guaranteeing that higher costs, both financial and human, will be paid in the future. In the following section, we identify the externalized costs of the industrial agrifood supply chain.



¹ John Hopkins Center for a Livable Future. December 10, 2019. "National Survey on Concentrated Animal Feeding Operations (CAFOs)." Available at <https://clf.jhsph.edu/sites/default/files/2019-12/CAFO-moratorium-survey-results.pdf>

² Peter M. Rosset. September 1999. "The Multiple Functions and Benefits of Small Farm Agriculture In the Context of Global Trade Negotiations." Food First, The Institute For Food And Development Policy. Available at https://foodfirst.org/wp-content/uploads/2013/12/PB4-The-Multiple-Functions-and-Benefits-of-Small-Farm-Agriculture_Rosset.pdf

³ Dave Swenson. 2009. "Investigating the Potential Economic Impacts of Local Foods for Southeast Iowa." Leopold Center at Iowa State. Available at <https://www.leopold.iastate.edu/files/pubs-and-papers/2010-01-investigating-potential-economic-impacts-local-foods-southeast-iowa.pdf>

⁴ Mary Hendrickson, Phillip Howard, Emily Miller, and Douglas Constance. 2020. "The Food System: Concentration and Its Impacts." Special Report to Family Farm Action Alliance. Available at https://farmactionalliance.org/wp-content/uploads/2021/05/Hendrickson-et-al.-2020-Concentration-and-Its-Impacts_FINAL_Addended.pdf

⁵ Family Farm Action Alliance. November 16, 2020. "The Feed-Meat Complex: Unpacking the Truth About How Big Meat Pockets Billions in Farm Subsidies." Available at <https://farmactionalliance.org/2020/11/16/the-feed-meat-complex/>

⁶ Family Farm Action Alliance. January 28, 2021. "Chasing Checkoff Dollars: The Corruption Continues." Available at <https://farmactionalliance.org/2021/01/28/chasing-checkoff-dollars-the-corruption-continues/>

⁷ Kari Hamerschlag, Anna Lappé, and Stacy Malkan. 2015. "Spinning Food: How Food Industry Front Groups and Covert Communications are Shaping the Story of Food." Friends of the Earth. Available at <http://www.foe.org/projects/food-and-technology/good-food-healthy-planet/spinning-food#sthash.8Xhj3lqt.dpuf>



EXPOSING THE HIDDEN COSTS OF INDUSTRIAL AGRICULTURE

By evading responsibility for the consequences of their production models, agrifood corporations are externalizing costs from their supply chains and hiding the total cost of production. Someone else ultimately pays these hidden costs: a recent report found that while U.S. consumers spend \$1.1 trillion on food each year, the true cost — which takes into account the impact industrialized food production has on the environment, human health, workers, and more — is actually three times that amount, and must be paid in the form of healthcare costs, subsidies, and repairs to ecological disasters.⁸ Meanwhile, independent farmers and ranchers typically internalize their own costs of production, further widening the profit gap. For farmers who sell directly to the consumer or to retail, this discrepancy widens the gap of the price point paid by the consumer.

If industrial agriculture interests were required to internalize their costs and mitigate these risks, they would not be economically competitive with independent farmers and ranchers. In the next section, we outline the true costs of industrial agriculture, and examine who actually pays them.

COSTS TO FARMS, FARMERS, AND WORKERS

Large, concentrated supply chains allow labor to be standardized, automated, and deskilled. In the short term, natural concentration due to technological and scientific advancements had its benefits; however, the trend of industrial agriculture has gone too far. Originally a tactic to increase production and feed more people, it is now used to keep the cost of production as low as possible so agrifood corporations can pocket the extra profit margin. Among other long-term consequences, concentrated supply chains have led to fewer full-time farmers earning lower farm-derived income, and more lower-paid workers along the supply chain.

From Uniformity to Diversity is a 2016 Food and Agricultural Organization of the United Nations (FAO) study by an International Panel of Experts in Sustainability. This work by FAO cited more than 350 studies documenting the failures of industrial agriculture and supporting the need for a fundamental change to more sustainable farming systems. The study concluded that “[t]oday’s food and farming systems have succeeded in supplying large volumes of foods to global markets, but are generating negative outcomes on multiple fronts: widespread degradation of land, water and ecosystems; high GHG emissions; biodiversity losses; persistent hunger and micro-nutrient deficiencies alongside the rapid rise of obesity and diet-related diseases; and livelihood stresses for farmers around the world.”⁹

FARMS

For the sake of corporate profit, demand for ever-larger production volumes has resulted in large, specialized farms that have displaced other, relatively smaller farms; this naturally leads to fewer farmers, fewer rural residents, and depopulated rural communities. In 1970, 4.4% of the U.S. labor force was employed in farming,¹⁰ but by 2019 it dropped to 1.4%.¹¹ Per dollar invested or per unit of production, industrial agriculture employs far fewer fairly-paid people than the independent farmers and ranchers who are inevitably displaced.

FARMERS

Industrial agriculture has resulted in fewer full-time farmers earning lower farm-derived income. In 2018, median farm income was -\$1,524 for farms grossing less than \$350,000 with a primary on-farm operator.¹²⁻¹³ In early 2019, median farm income was \$296¹⁴ while the farmer's share of the consumers' food dollar hit an all-time low of **14.6 cents** of each consumer dollar.¹⁵ In 2020, federal disaster payments to farmers accounted for a record 39% of net farm income, which is projected to fall in 2021. Also in 2021, cash receipts are expected to decrease while the cost of production is expected to increase. According to the latest data available, the top four meatpackers (Tyson Foods, JBS SA, Cargill, Smithfield) pocketed nearly \$219 billion in net revenue, and the top six grain traders (Cargill, COFCO Group, ADM, Bunge, Wilmar Int'l, Louis Dryfus Company) topped in at \$377 billion in 2018.¹⁶

Industrial agriculture corporations increase their revenue by trapping farmers in constraining production contracts and liability arrangements. In the CAFO system, farmers finance anything that depreciates in value (buildings, manure from animals, manure management, equipment) while **the integrator owns the only thing that increases in value: the animals.** The contracts mitigate short-term market risks for the corporations, but leave farmers vulnerable to the long-term risks of financing with borrowed money, and to disruptions anywhere in the food supply chain. Insulated from the costs of infrastructure upkeep and market risks, agrifood corporations are free to reap profits while contracted farmers are trapped in a never-ending cycle, forced to use this year's production to cover last year's debt.

FARM AND MEATPACKING WORKERS

In order to be profitable, industrial agriculture relies on an increasing number of low-wage workers along the supply chain. Agrifood corporations externalize labor costs by **denying workers fair wages, fair labor standards, and safety precautions.** In the U.S. agrifood supply chain, immigrants and people of color are overrepresented in U.S. food chain worker demographics. In meatpacking, 44.4% of workers are Hispanic, and 25.2% are Black.¹⁷ Of all farm laborers, 64% are Hispanic.¹⁸ Of these groups, women disproportionately face extra risks associated with reproductive health,¹⁹ imbalanced bargaining power with their male counterparts, and sexual assault while working.²⁰ Industrial agriculture externalizes the costs of fair labor practices, including but not limited to: personal protective equipment, breaks during shifts, livable full-time wages, health care, sick leave, pension, maternity leave, or stable immigration statuses.

In 1970, 4.4% of the U.S. labor force was employed in farming, but by 2019 it dropped to 1.4%. Per dollar invested or per unit of production, industrial agriculture employs far fewer fairly-paid people than the independent farmers and ranchers who are inevitably displaced.



Excessive influence over immigration and labor policy²¹ helps industrial agriculture maintain their imbalanced power and employment relationships with workers experiencing precarious immigration statuses and a lack of social safety net. Short-term profits for agricultural corporations result in long-term costs for workers along the supply chain and their families.²²

Demonstrating the lengths to which corporations will go to source cheaper meatpacking labor, Cargill found U.S. labor laws too costly for compliance, and sought international labor in China's Anhui Province.²³ There, state-sponsored forced laborers in "re-education" internment camps likely staff Cargill's processing plants. The social and ethical costs of low-wage, dangerous, and exploitative labor are great. Despite this knowledge, industrial agriculture interests choose to ignore supply chain externalities wherever possible to the detriment of the long-term well-being and safety of workers.



SUMMARY COSTS TO FARMS, FARMERS, AND WORKERS

Even with the vast economic savings that come from scale, industrial agriculture externalizes and circumvents the fair costs of labor, leaving farmers and food workers along the supply chain unable to support themselves. The current industrial agrifood system is an unstable model for food production and distribution, reliant upon workers who cannot afford the product they produce.

EXTERNALIZED COSTS:

- ☐ Fair wages for labor
- ☐ Worker safety
- ☐ Worker healthcare costs
- ☐ Displaced farms and farmers
- ☐ Depopulated rural communities
- ☐ Farm income and debt
- ☐ Manure management
- ☐ Building maintenance
- ☐ Equipment
- ☐ Market risks

8 The Rockefeller Foundation. 2021. "True Cost of Food: Measuring What Matters to Transform the U.S. Food System." Available at <https://www.rockefellerfoundation.org/report/true-cost-of-food-measuring-what-matters-to-transform-the-u-s-food-system/>

9 IPES – Food. 2016. "From Uniformity to Diversity: A paradigm shift from industrial agriculture to diversified agroecological systems." International Panel of Experts on Sustainable Food Systems. Available at http://www.ipes-food.org/_img/upload/files/UniformityToDiversity_FULL.pdf

10 Federal Reserve Bank of St. Louis- Economic Research, Employment in Agriculture. Available at <https://fred.stlouisfed.org/series/USAPEMANA>

11 The World Bank, Employment in Agriculture-United States. Available at <https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?end=2019&locations=US&start=1991>

12 USDA-ERS. "Farm Household Income and Characteristics." Available at <https://www.ers.usda.gov/data-products/farm-household-income-and-characteristics/>

13 This figure includes farms that are capable of producing \$1000 in sales, whether or not they achieve that threshold. As such, the data includes primary operators where farm income is not a substantial source of household income. Critics of this data point claim that it exaggerates the financial hardship of U.S. farmers, and furthermore masks income inequities between farms of differing structures and between farmers and workers along the supply chain.

14 USDA-ERS. "Farm Income and Wealth Statistics." Available at <https://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/>

15 USDA-ERS. "Food Dollar Series." Available at <https://www.ers.usda.gov/data-products/food-dollar-series/>

16 Pat Mooney. 2019. "Mapping Corporate Power in Big Food: Corporate concentration by sector and industry rankings by 2018 revenue." Available at https://etcgroup.org/sites/www.etcgroup.org/files/files/etc_plate_techonics_a4_nov2019_web.pdf

17 Shawn Fremstad, Hye Jin Rho & Hayley Brown. April 29, 2020. "Meatpacking Workers are a Diverse Group Who Need Better Protections." Center for Economic and Policy Research. Available at <https://cepr.net/meatpacking-workers-are-a-diverse-group-who-need-better-protections/>

18 USDA-ERS. "Farm Labor." April 22, 2020. Available at <https://www.ers.usda.gov/topics/farm-economy/farm-labor/>

19 Charlene Galarneau. 2013. "Farm Labor, Reproductive Justice: Migrant Women Farmworkers in the US." Health and Human Rights, Vol. 15, No. 1. Available at <https://cdn2.sph.harvard.edu/wp-content/uploads/sites/13/2013/08/Galarneau-FINAL.pdf>

20 Ariel Ramchandani. January 29, 2018. "There's a Sexual-Harassment Epidemic on America's Farms." The Atlantic. Available at <https://www.theatlantic.com/business/archive/2018/01/agriculture-sexual-harassment/550109/>

22 The National Agricultural Law Center. "Labor - An Overview." Available at <https://nationalaglawcenter.org/overview/labor/>

23 Muzaffar Chishti and Jessica Bolter. April 24, 2020. "Vulnerable to COVID-19 and in Frontline Jobs, Immigrants Are Mostly Shut Out of U.S. Relief." Migration Policy Institute. Available at <https://www.migrationpolicy.org/article/covid19-immigrants-shut-out-federal-relief>



COSTS TO TAXPAYERS

Taxpayers pay both local and federal costs for damage caused by industrial agriculture. Locally, taxpayers pick up the tab from damage caused by individual industrial agriculture sites. Federally, taxpayers fund farm payments and programs designed specifically to mitigate the risks for industrial agriculture, and to protect their current production chains from external meddling. If all costs of production were internalized by industrial supply chains, those entities would be responsible for the costs associated with preventing or repairing the damage caused by their operation — not taxpayers. Because agrifood corporations have been so successful at externalizing their costs and convincing policymakers to give them a free pass, taxpayers are stuck with the ever-increasing bill for the industrial agriculture model and all the messes it makes.

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LOCAL TAXES

CAFOs are particularly damaging for local taxpayers and property values. Short-term benefits for industrial farmers implementing CAFOs are quickly offset by the long-term costs to an entire community. The commercial nature of CAFOs allows them to be treated simultaneously as an industrial entity and as a farm by regulations and tax codes. Industrial agriculture representatives and attorneys pick and choose how CAFOs are defined under code. The resulting local tax contribution of a CAFO is more than offset by increased tax costs of infrastructure replacement. For example, the cost of maintaining rural roads and bridges due to the heavy truck traffic associated with CAFOs is not matched by the CAFO's tax contribution. One Iowa community estimated that the presence of CAFOs finishing 45,000 hogs annually increased road gravel costs by \$20,000 a year.²⁴ Similarly, a Colorado study estimated that a 20,000-head cattle feedlot increased local road repair costs by \$6,447 per mile from trucks hauling feed and livestock.²⁵



Industrial agriculture negatively impacts surrounding property values. A 2015 study reviewed thousands of assessed property values for residences located within a seven-mile radius from CAFOs. The review concluded that “[o]verall, the new studies confirm the [negative] valuation impacts reported in earlier studies, as they range from 3.1% to 26% losses depending on multiple factors, and that properties immediately abutting an AO [CAFO] can be diminished as much as 88%.”²⁶ While industrial agriculture benefits from debates regarding property rights, they do not consider the property rights of others they harm. By externalizing its costs, **industrial agriculture increases the tax burden of a community while it decreases a community’s property values.**

FEDERAL TAXES

Billions of federal taxpayer dollars ensure industrial agriculture remains insulated from market risks in its supply chain, while independent agricultural entities internalize these risks. Alternative forms of agriculture see relatively little support from government programs. In the 2018 Farm Bill, \$202.2 billion was set aside for government programs that overwhelmingly support feed grain and livestock market payments to ensure a stable, low-cost supply of domestic feed grains for corporate CAFO operations, and to generate foreign market demand for the inevitable over-supply of livestock. Government loan guarantees make low-cost loans readily available to finance construction and expansion of CAFO operations. Finally, government “disaster payments” compensate livestock and poultry producers for losses due to droughts, floods, disease outbreaks, and market disruptions. All funded by taxpayers, these are just a few examples of how the federal government supports industrial agriculture over other agricultural systems.

What’s more, government farm subsidies are not all allocated among farmers with any sense of equity or justice. USDA statistics for 1995 to 2020 indicate that 78% of total government payments go to the largest 10% of recipients — in general, to those with the largest farming operations. The 80% of recipients receiving the smallest government checks received only 9% of the total government money distributed through the USDA. During 2020, nearly 69% of U.S. farmers received no government payments at all.



Photo by Laura Martelliti

Among those who did receive payments, some commodities were subsidized more heavily than others. Between 1995 and 2020, more than 56% of all farm payments went to producers of five crops: corn, wheat, cotton, rice, and soybeans.²⁷ Apples were the only fruit or vegetable crop that ranked among the top 20 in subsidies. Although many crops could be grown for human consumption, industrial agriculture's influence on policymakers results in acres of commodity crops grown to increase corporate profit margins.

SUMMARY COSTS TO TAXPAYERS

Industrial agriculture could not persist without billions of taxpayer dollars. Taxpayer dollars ought to be supporting an agricultural system that benefits the public good by regenerating and increasing the independent farmer's capacity to produce food, not one that picks and chooses commodities and extracts from the nation's food supply chains. In economic terms alone, the COVID-19 pandemic may only cost a fraction of future compounded pandemics and weather events unless more resilient, self-reliant forms of food provisioning are supported and encouraged to flourish.

EXTERNALIZED COSTS:

- ☐ Net local tax base decreases
- ☐ Lowered property values
- ☐ Increased local infrastructure maintenance taxes
- ☐ Increased utility maintenance (water filtration)
- ☐ Commodity payments for below cost-of-production prices
- ☐ Industrial recovery from natural disasters
- ☐ Industrial recovery from market disruptions

²³ Carrie Freshour. 2019. "Cheap Meat and Cheap Work in the U.S. Poultry Industry: Race, Gender, and Immigration in Corporate Strategies to Shape Labor." Pp. 121-140 in *Global Meat: Social and Environmental Consequences of the Expanding Meat Industry*, edited by Bill Winders and Elizabeth Ransom. Cambridge, MA: MIT Press.

²⁴ William J. Weida. May 18, 2002. "The CAFO and Depopulation of Rural Agricultural Areas: Implications for Rural Economies in Canada and the US." For presentation at the International Conference on The Chicken—Its Biological, Social, Cultural and Industrial History, May 17-19, 2002, Yale University. Available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.604.9352&rep=rep1&type=pdf>

²⁵ Id. 24

²⁶ John A. Kilpatrick. 2015. "Animal Operations and Residential Property Values" *The Appraisal Journal*, pp 41-50. Available at <http://www.greenfieldadvisors.com/wp-content/uploads/2015/08/animaloperationsJKwinter2015.pdf>

²⁷ Environmental Working Group. "Farm Subsidy Database." Available at <https://farm.ewg.org/>



RETAIL COSTS

While agrifood interests justify industrialization with claims of lower retail costs, in reality the retail price paid by consumers does not reflect the net savings achieved by externalizing the costs of food production. Any benefits from short-term savings are pocketed by the corporations and distributed to the shareholders, while consumers see “sticky” consumer prices that do not often come down once they have been raised.²⁸ This section demonstrates the minimal difference between the cost to the consumer for industrially-produced food versus food produced by non-industrial systems. If the agrifood system continues to hide the true supply chain costs, consumer prices are subject to increase in the long-term; but if industrial agriculture voluntarily internalized costs, prices would stabilize in the long-term.

INDUSTRIALIZATION AND RETAIL PRICES

An economically competitive market would respond to increased supply with falling consumer prices, passing savings on to consumers and allowing markets to clear as consumers respond to those lower prices. However, vertical, horizontal, and backward integration allow corporations to funnel higher profits from lower farm-level prices into increased profits for their shareholders, rather than reduce prices for consumers. Between the 1970s and late 1990s — years of rapid agricultural industrialization — there were significant reductions in the percentage of income spent on food in the U.S. However, **since 2000, food prices overall have risen 59.23% and prices of red meat, poultry, and eggs have risen 71.67%**, as recorded by the Consumer Price Index (CPI).^{29,30} Both of these reflect rates of inflation higher than that of overall consumer good prices. In dollar terms, if one spent \$20 on food in 2000, an equivalent purchase of meat and eggs in 2020 would cost \$34.88. In fact, high retail beef prices versus below-cost-of-production live cattle prices spurred a probe into beef market collusion in 2020.³¹ A competitive market should see a net decrease in consumer prices considering today’s over-supply of farm-level inventory; however, consumer prices continue to increase.

In dollar terms, if one spent \$20 on food in 2000, an equivalent purchase of meat and eggs in 2020 would cost \$34.88.



2000 2020





Photo by Laura Mortelliti

RETAIL PRICES OF ALTERNATIVE FORMS OF FARMING

Alternative forms of agriculture can cost less for the consumer than industrial agriculture, or at least represent a negligible difference. Limited research points to this conclusion in CAFO hog production.³² **Most of the “economies of size” in hog production, for example, are achieved at scales much smaller than operations classified by USDA as CAFOs.**³³ A study conducted by Iowa State University in 2001 compared costs of feeding out hogs in CAFOs with the costs in non-confinement, deeply-bedded hoop house structures (a solid-waste system often used to produce organic, humanely raised, and/or hormone- and antibiotic-free pork).³⁴ The study indicated a cost advantage for the hoop house system during summer months but a larger advantage for CAFOs during the winter. The annual advantage for CAFOs amounted to just under \$3 per head. Hogs typically are slaughtered at around a 285-pound live weight, which yields about 150 pounds of pork at retail. When the \$3 advantage for CAFO hogs is spread over 150 retail pounds, it amounts to about 2 cents per retail pound of pork. Retail pork prices have recently averaged more than \$3 per pound, meaning a 2-cent difference would amount to less than 1% of retail pork prices. Granted, production costs and prices have changed since 2001; still, if cost advantages for CAFOs were twice as large today, the difference would hardly be noticed at retail, as prices continually fluctuate in response to changing market conditions.

The same is true for meat processing. Based on the limited available research, it’s reasonable to assume that a large pork processing plant has about a \$15 per-head economic advantage over the smaller processing plants that would allow smaller hog producers to access local and regional markets.³⁵ When this \$15 cost advantage is spread over 140 retail pounds, it amounts to about 11 cents per pound, or a bit over 3% of retail prices, with average prices of pork at \$3 per pound.

To a pork consumer, this \$15 per-head advantage represents mere pennies per pound, but means \$75 million annually for a plant that processes five million hogs per year. All of this demonstrates that the hyper-concentrated supply chains are not meant to keep consumer prices low, but rather to achieve higher profits for corporate shareholders.

DAIRY RETAIL PRICES

The only significant exceptions for lower consumer prices have been milk and other dairy products. Continuing downward pressure on dairy product prices is a consequence of expanded dairy CAFO production at a time when demand for dairy products is declining. The lower prices do not reflect lower costs of production, but rather the corporate use of market power to force the remaining small-scale, independent dairy farmers out of business.

In the case of dairy, corporate expansion of dairy CAFOs during the recent period of falling retail milk prices was a purposeful strategy implemented long before the COVID-19 pandemic began. The large dairy processors are able to control prices charged to retailers, and they contract with large dairy CAFOs to ensure a stable supply of raw milk. During the recent expansion of dairy CAFOs, the processors reduced milk prices enough to clear retail markets of milk production they had under contract or commitment. They kept their wholesale prices high enough that raw milk prices would remain above the cost of production for their contract producers. They also kept retail milk prices high enough to

limit their need for milk from independent producers. This allowed market prices for raw milk prices to drop below costs of production for independent dairy farmers without corporate contracts or commitments.

This same basic strategy was used to drive independent producers out of poultry, beef, and pork production, and is currently being used to squeeze out the remaining independent dairy farmers.³⁶ **Corporate contract producers only need to be more efficient than the least efficient independent producers to gain sufficient market power; this allows them to discriminate against more efficient independent producers and drive them out of business.**

Corporate processors used this strategy to force independent producers out of business, even producers who were more economically efficient than their contract CAFO operators. This clearly demonstrates that supply chain gouging is for the sake of corporate profit — not to lower the retail price or benefit the consumer.

SUMMARY COSTS TO TAXPAYERS

Advantages from industrial agriculture's economies of scale and externalized costs are not passed on to consumers through retail prices, but are captured for corporate profit. In the short-term, consumers may appear to pay a negligible price difference; however, over the long-term, price-gouging supply chains continue to cost consumers more, harm independent farmers and ranchers, and increase the externalized cost burdens to be paid as taxes (discussed in previous sections). The economic reality is that CAFOs exist because the current system of animal agriculture is more profitable for the industrial agriculture corporations — not because it saves money for consumers at retail.

EXTERNALIZED COSTS:

- ☐ Responding to true cost of production
- ☐ Producer-share of retail price
- ☐ Fair competition in markets

²⁸ Philip Howard and Mary Hendrickson. February 8, 2021. "Corporate concentration in the US food system makes food more expensive and less accessible for many Americans." *The Conversation*. Available at <https://theconversation.com/corporate-concentration-in-the-us-food-system-makes-food-more-expensive-and-less-accessible-for-many-americans-151193>

²⁹ Official Data Foundation. "Food Inflation Calculator." Available at <https://www.in2013dollars.com/Food/price-inflation/2000-to-2020?amount=20>

³⁰ Official Data Foundation. "Meat, Poultry, Fish, and Eggs Inflation Calculator." Available at <https://www.in2013dollars.com/Meats,poultry,fish,and-eggs/price-inflation>

³¹ Claire Kelloway. March 25, 2020. "Meat prices spike, cattle prices fall, and ranchers and lawmakers see market manipulation." *Food & Environment Reporting Network*. Available at https://thefern.org/ag_insider/meat-prices-spike-cattle-prices-fall-and-ranchers-and-lawmakers-see-market-manipulation/

³² USDA-SARE. 2003. "Hog Production Systems." Available at <https://www.sare.org/publications/profitable-pork/hog-production-systems/>

³³ Michael Duffy. 2009. "Economies of Size in Production Agriculture." *Journal of Environmental Nutrition*, Vol 4, No. 3-4. Available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3489134/>

³⁴ Mark Honneyman and Arlie Penner. 2001. "Economics of Finishing Swine in Hoop House Structures and Confinement; Seasonal and Annual Comparisons." *Iowa State University Ag Decision Maker*. Available at <https://www.extension.iastate.edu/agdm/livestock/html/b1-81.html>

³⁵ Marvin Hayenga. 1997. "Cost Structures of Pork Slaughter and Processing Firms: Behavioral and Performance Implications" *Iowa State University*. Available at <https://pdfs.semanticscholar.org/1d26/b504112e777c6b0c6a7ec38846aad60abc6.pdf>

³⁶ John Ikerd. 2019. "The Corporatization of Animal Agriculture." Available at <https://www.johnikerd.com/post/the-corporatization-of-animal-agriculture>

ENVIRONMENTAL COSTS

From evading liability for past environmental harms to failing to internalize future environmental risk, industrial agriculture consistently externalizes the environmental costs of its production models. Even when fully accounting for environmental risk, large scale industrial agriculture operations lack the adaptability of smaller diversified farms, so they are slower to respond to changing environmental realities, are more likely to cause damage, and inevitably cost more over time. Ignoring environmental costs may yield short-term cost savings, but it also creates vast long-term vulnerabilities. The true cost of agricultural production must include present environmental outcomes and planning for future environmental risks.

THE COST OF EXTREME WEATHER

The U.S. experienced 12.6 major extreme weather events — each causing more than \$1 billion in damage — from 2014 - 2019. This doubles the 6.3 extreme weather events from 1980 - 2018.³⁷ The National Oceanic and Atmospheric Administration (NOAA) estimates that extreme weather events from 1980 - 2020 have cost \$1.175 trillion.³⁸ Droughts alone cost U.S. agriculture \$10 - 14 billion annually.³⁹ USDA-ERS estimated increased costs to crop insurance by 11% in corn and 65% in soybeans due to climate change for variability in yield and crop failures.⁴⁰ As the climate warms, rain patterns change, and seasonal variations shift, one study suggests that by 2070, more than half of U.S. crop acreage will have to change crops to maximize productivity. Even if such a shift were successful, 5% of U.S. farmland will be non-arable and non-productive by 2070.

CAFOs are particularly vulnerable to environmental risks. Hurricanes, floods, or other natural disasters can cause power outages, causing massive CAFO-housed livestock losses. Environmental instability also impacts livestock feed grain production and transportation. Slight risks expose the weaknesses of the feed-meat complex compared to other systems, and reflects the inherent fragility in commodity agricultural markets. Despite the risks associated with industrial agriculture, it is incentivized and supported by federal regulations and programs.

LAND MANAGEMENT COSTS

Federal regulations fail to hold industrial agriculture accountable for preventing or paying for the environmental harm it causes. Industrial livestock operations are exempt from any federal environmental impact reporting. Yet, USDA's Natural Resource Conservation Service (NRCS), an agency meant to administer programs that help farmers implement conservation practices, has been used to fund CAFO manure management, transportation, and dispersal, rather than programs that would help farmers raise livestock on pasture. Programs skewed to support industrial agriculture cover the cost of on-farm euthanasia and composting of hogs, as well as the cost of applying manure to soil so degraded that it is unable to retain nutrients from the manure. Not only does industrial agriculture rely on taxpayer support to enable practices that degrade the environment, the system penalizes those farmers wishing to implement true conservation practices, such as pasture-based livestock or cover crops.

By 2070, more than half of U.S. crop acreage will have to change crops to maximize productivity. Even if such a shift were successful, 5% of U.S. farmland will be non-arable and non-productive by 2070.



Poor soil management causes long-term economic and environmental consequences. Soil scientist Rick Cruse estimates the soil-exhausting consequence of simple corn-soy crop rotations costs Iowa farmers over \$1 billion per year in lost income from soil erosion.⁴¹ Soil erosion leads to nutrient runoff into groundwater and freshwater sources (mostly nitrate and phosphorus), and is commonplace in the corn belt. As an example, 61% of Iowa's rivers and streams are categorized as impaired or polluted, mostly due to agricultural runoff.⁴² Across the 1.2 million square miles of the Mississippi River Basin that drains into the Gulf of Mexico, agricultural runoff accounts for 41% of the Dead Zone, contrasted with urban areas only accounting for 7%.⁴³ If industrial agriculture internalized the cost of the environmental harm it causes, it would not be economically viable.

SUMMARY ENVIRONMENTAL COSTS

Environmental disruptions and risks cause the U.S. trillions of dollars, yet industrial agriculture does not internalize any of the costs in their supply chains. Instead, industrial agriculture incentivizes extractive practices, degrades the environment, dodges environmental reporting and tax burdens, and discourages farmers and ranchers from implementing economically- and environmentally-sound practices.

ENVIRONMENTAL PRACTICES FOR ECONOMIC GAIN

Diversified farms have the ability to build long-term economic resilience, reduce soil erosion, and increase yields over time.⁴⁴ According to USDA's Sustainable Agriculture Research and Education (SARE) program, crop farmers who implemented cover crops saw first-year returns per acre compared to no cover crop due to reduced input costs, reduced erosion, weed control, and extra yields in drought years. Farmers and ranchers who grazed cover crops saw hikes of up to \$20 per acre in the first year and \$67 per acre by year five of implementation.⁴⁵ These are just a few examples of how diversified practices build soil health and long-term economic viability. Ultimately, these are the programs and practices that ought to be funded with taxpayer dollars.

EXTERNALIZED COSTS:

- ☐ Environmental reporting compliance
- ☐ Life-cycle greenhouse gas inventory reporting
- ☐ Extreme weather caused production crop and animal losses (paid by taxpayers)
- ☐ Rising crop insurance premiums
- ☐ Weather-related yield decreases
- ☐ CAFO manure liability and responsibility
- ☐ Soil erosion
- ☐ Decreased water quality from nutrient runoff
- ☐ Opportunity cost for farmers transitioning to non-industrial agriculture systems

³⁷ Rosamond L. Naylor. 2019. "Long-Run Uncertainties for U.S. Agriculture." Federal Reserve Bank of Kansas City. Available at <https://www.kansascityfed.org/documents/751/2019-Long-Run%20Uncertainties%20for%20U.S.%20Agriculture%20.pdf>

³⁸ NOAA. 2020. "U.S. Billion Dollar Climate and Weather Disasters 1980-2020." NOAA National Centers for Environmental Information. Available at <https://www.ncdc.noaa.gov/billions/events.pdf>

³⁹ Yusuke Kuwayama. 2019. "The Economic Impacts of Drought on U.S. Agriculture." Resources for the Future. Available at <https://www.resources.org/archives/economic-impacts-drought-us-agriculture/>

⁴⁰ Andrew Crane-Droesch, Elizabeth Marshall, Stephanie Rosch, Anne Riddle, Joseph Cooper, and Steven Wallander. 2019. "Climate Change and Agricultural Risk Management Into the 21st Century." USDA-ERS. Available at https://www.ers.usda.gov/webdocs/publications/93547/err266_summary.pdf

⁴¹ Donelle Eller. May 3, 2014. "Erosion estimated to cost Iowa \$1 billion in yield." Des Moines Register. Available at <https://www.desmoinesregister.com/story/money/agriculture/2014/05/03/erosion-estimated-cost-iowa-billion-yield/8682651/>

⁴² Iowa Department of Natural Resources. 2020. "305(b) Assessment Summary 2020 Integrated Report including the 2020 Impaired Waters List." Submitted to U.S. EPA on February 17, 2021. Available at <https://programs.iowadnr.gov/adbnnet/Assessments/Summary/2020>

⁴³ U.S. Geological Survey. "Nitrogen and Water." Available at https://www.usgs.gov/special-topic/water-science-school/science/nitrogen-and-water?qt-science_center_objects=0#qt-science_center_objects

⁴⁴ Ika Darnhofer. 2014. "Resilience and why it matters for farm management." European Review of Agricultural Economics, Vol. 41, No. 3. Available at <https://doi.org/10.1093/erae/jbu012>

⁴⁵ Rob Myers, Alan Weber, and Sami Tellatin. 2019. "Cover Crop Economics: Opportunities to Improve Your Bottom Line in Row Crops." USDA-SARE. Available at <https://www.sare.org/resources/cover-crop-economics/>



PUBLIC HEALTH AND COMMUNITY COSTS

Industrial agriculture operates unencumbered by government regulations to protect public health and mitigate negative community impacts like food insecurity and poverty. The main responsibility of industrial agriculture corporations is to maximize profits for the benefit of their shareholders, not to maintain the health and economic vitality of the communities they enter. At the core, food firms sell low-cost, mass-produced food products that threaten human health for the sake of profit. Whatever has been gained by lower food costs has been more than offset by rising costs of healthcare and poor public health outcomes. In 2018, national health expenditures were \$3.6 trillion, and are projected to almost double to \$6.2 trillion by 2028. If metrics were established that allowed the true cost to public health to be determined, industrial agriculture could not cover the costs.

PUBLIC HEALTH

Mounting scientific evidence suggests that industrial agriculture production, both crop and livestock, threatens public health, yet individuals are forced to pay for their resulting health complications and higher health insurance premiums. Chemical inputs for grain production are known to cause cancer from direct exposure and groundwater leaching. Still, corporations dismiss product safety concerns until absolutely forced to settle in court or discontinue a brand, as happened in a \$25 million case in 2021 against the common weedkiller, Roundup (Glyphosate), and Bayer-Monsanto.⁴⁶ Regarding CAFOs, antibiotic resistance has become a major public health risk that could spread through the food supply and emerge as another global pandemic.^{47,48} The U.S. Center for Disease Control and Prevention (CDC),⁴⁹ the World Health Organization (WHO),⁵⁰ and the Food and Agricultural Organization of the United Nations (FAO)⁵¹ have all identified CAFOs as a primary source of antibiotic-resistant bacteria. All of these organizations have called for the elimination of the routine feeding of antibiotics to animals in CAFOs to achieve higher animal weight gains. Of course, their recommendations allow antibiotic use for treatment of veterinarian-diagnosed infections.

In 2018,
national health
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by 2028.



The public health risks of industrial agriculture are unfortunately not limited to carcinogens or antibiotic resistance. A report from the National Academy of Sciences of the U.S. found that ammonia from livestock manure and fertilizer application, dust from tillage and livestock, and fumes from agriculture-related fossil fuel combustion result in 17,900 air quality-related deaths in the U.S. annually.⁵² Asthma, hypertension, and other respiratory complications have been linked to nearby CAFOs.⁵³ A 2018 report by the Iowa Policy Project concluded, “[i]t is impossible to avoid the very substantial scientific evidence showing the impacts of livestock production and its very rapid growth on the degradation of Iowa water and air, and consequently the health of the people of the state.”⁵⁴ While this report focused on CAFOs in Iowa, it cited more than 150 scientific references including research carried out in many different regions of the U.S. where CAFOs operate.

17,900
air quality-
related deaths in
the U.S. annually.



FOOD HEALTH AND SAFETY

Not only are industrial production methods harmful, the food they produce can negatively impact human health too: an epidemic of diet-related illnesses, including diabetes, hypertension, heart disease, and cancer, now threatens humans’ physical and financial future.⁵⁵ Anthony Wilson (2013) argues in *The Industrial Diet: The Degradation of Food and the Struggle for Healthy Eating* that industrial agriculture and oversupply of commodities has fueled unhealthy diets across the world. Many foods for human consumption contain commodity crop-based ingredients, and while they are supplemented with salt, sugar, and fats to increase palatability, they lack essential vitamins, minerals, and amino acids.

Some industrially-produced foods contain traces of pesticides, herbicides, and fertilizers, all of which are proven to be harmful to human health. For instance, a 2021 congressional investigation found that food manufacturers knowingly sold baby food that contained heavy metals once used as pesticides for crops; the companies were aware that these metals were present in toxic levels well over their own accepted internal thresholds as well as legal limits.⁵⁶



COMMUNITIES, FOOD INSECURITY, AND POVERTY

Industrial agriculture corporations extract economic and social viability from communities — rural communities in particular.⁵⁷ Nowhere is this phenomenon more evident than in traditional farming communities where large, corporate-controlled CAFOs and factory farms have displaced small, independent farms.

Despite the abundance of agricultural production in farming communities, higher per capita rates of poverty and hunger exist in rural areas than in cities. In 2019, 16.1% of rural people lived below the poverty line compared to 12.6% in metropolitan areas.⁵⁸ The only instances of persistent poverty in the U.S. — wherein at least 20% of people have lived in poverty over 30 years — are in rural places. Societal problems such as access to healthcare, instances of domestic abuse, and lower education attainment are on the rise — even as social services are cut, due to corporate economic extraction of rural wealth and population displacement. Across the economy, corporate consolidation has resulted in the extraction of wealth, the gutting of resources, and widespread disinvestment in communities.

SUMMARY

PUBLIC HEALTH AND COMMUNITY COSTS

Industrial agriculture is not held accountable for the public health, food safety, or community well-being outcomes it negatively impacts. If these costs were internalized, industrial agriculture corporations could not foot the bill. Instead, individuals and communities are burdened with the costs associated with poor health, a depopulated community, food insecurity, and higher local taxes.

EXTERNALIZED COSTS:

- ☐ National health expenditures related to industrial agriculture
- ☐ Antibiotic resistance impacts
- ☐ Industrial production proximity–related respiratory complications and deaths
- ☐ Drinking water contamination
- ☐ Recreational water contamination
- ☐ Low nutrient diets
- ☐ Food containing trace pesticides, herbicides, and fertilizers
- ☐ Decreased community well-being
- ☐ Decreased community economic development
- ☐ Displaced farms
- ☐ Rural depopulation
- ☐ Increased food insecurity

⁴⁶ Maura Dolan. May 14, 2021. “Appeals court upholds \$25-million verdict against maker of Roundup.” *Los Angeles Times*. Available at <https://www.latimes.com/california/story/2021-05-14/appeals-court-upholds-25-million-verdict-against-monsanto-maker-of-roundup>

⁴⁷ John A Casey, Brent F Kim, Jesper Larsen, Lance B Price, Keeve E Nachman. 2015. “Industrial Food Animal Production and Community Health.” *Current Environmental Health Reports*. Vol. 2, No. 3. Available at <https://pubmed.ncbi.nlm.nih.gov/26231503/>

⁴⁸ Marty Makary, Indrani Das, Farah Hashim, & Christi Walsh. January 20, 2021. “The Next Pandemic Is Already Here.” *MedPage Today*. Available at <https://www.medpagetoday.com/blogs/marty-makary/90795>

⁴⁹ Center for Disease Control and Prevention. April 23, 2013. “Antibiotic Resistance Threats in the U.S. – 2013.” Available at <https://www.cdc.gov/drugresistance/threat-report-2013/pdf/ar-threats-2013-508.pdf#page=6>

⁵⁰ World Health Organization. November 7, 2017. “Stop using antibiotics in healthy animals to prevent the spread of antibiotic resistance.” Available at <http://www.who.int/mediacentre/news/releases/2017/antibiotics-animals-effectiveness/en/>

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⁵² Nina G. G. Domingo, Srinidhi Balasubramanian, Sumil K. Thakrar, Michael A. Clark, Peter J. Adams, Julian D. Marshall, Nicholas Z. Muller, Spyros N. Pandis, Stephen Polasky, Allen L. Robinson, Christopher W. Tessum, David Tilman, Peter Tschofen, Jason D. Hill. 2021. “Air quality–related health damages of food.” *Hill Proceedings of the National Academy of Sciences May 2021*. Available at <https://www.pnas.org/content/118/20/e2013637118>

⁵³ Sara G Rasmussen, Joan A Casey, Karen Bandeen-Roche, Brian S Schwartz. 2017. “Proximity to Industrial Food Animal Production and Asthma Exacerbations in Pennsylvania.” *International Journal of Environmental Research and Public Health*, Vol. 14, No. 4. Available at <https://pubmed.ncbi.nlm.nih.gov/28362334/>

⁵⁴ James Merchant and David Osterber. 2018. “The Explosion of CAFOs in Iowa and Its Impact on Water Quality and Public Health.” *The Iowa Policy Project*. Available at <http://www.iowapolicyproject.org/2018docs/180125-CAFO.pdf>

⁵⁵ John Commins. September 19, 2018. “Healthcare Spending At 20% Of Gdp? That’s An Economy-Wide Problem.” *Health Leaders*. Available at <https://www.healthleadersmedia.com/finance/healthcare-spending-20-gdp-thats-economy-wide-problem>

⁵⁶ U.S. House of Representatives. February 4, 2021. “Baby Foods Are Tainted with Dangerous Levels of Arsenic, Lead, Cadmium, and Mercury.” Staff Report to the Subcommittee on Economic and Consumer Policy Committee on Oversight and Reform. Available at <https://oversight.house.gov/sites/democrats.oversight.house.gov/files/2021-02-04%20ECP%20Baby%20Food%20Staff%20Report.pdf>

⁵⁷ John Ikerd. 2017. “The Economic Colonization of Rural America; Increasing Vulnerability in Volatile Times.” Presentation paper. Available at <https://web.missouri.edu/~ikerd/papers/OhioRSSConference2017.pdf>

⁵⁸ USDA Economic Research Service. May 2020. “Rural Economy.” Available at <https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/rural-economy/>

SECTION SUMMARY

EXPOSING THE HIDDEN COSTS OF INDUSTRIAL AGRICULTURE

If industrial agriculture were regulated like a majority of U.S. industries, it would not be economically viable when compared to alternative agricultural systems. Industrial agriculture corporations and interests would no longer be able to line their pockets with profit extracted from every link in the supply chain, and could no longer fulfill their promises to their stakeholders. Instead, independent farmers and ranchers already internalizing a vast majority of the costs could operate in fairer markets, and young and aspiring farmers could more easily enter farming. This would in turn inject wealth into communities and actually feed more people – the fundamental purpose of agricultural production.

ALL EXTERNALIZED COSTS:

LABOR:

- ☐ Fair wages for labor
- ☐ Worker safety
- ☐ Worker healthcare costs
- ☐ Displaced farms and farmers
- ☐ Depopulated rural communities
- ☐ Farm income and debt
- ☐ Manure management
- ☐ Building maintenance
- ☐ Equipment
- ☐ Market risks

TAXPAYERS:

- ☐ Net local tax base decreases
- ☐ Lowered property values
- ☐ Increased local infrastructure maintenance taxes
- ☐ Increased utility maintenance (water filtration)
- ☐ Commodity payments for below cost-of-production prices
- ☐ Industrial recovery from natural disasters
- ☐ Industrial recovery from market disruptions

RETAIL COSTS:

- ☐ Responding to true cost of production
- ☐ Producer-share of retail price
- ☐ Fair competition in markets

ENVIRONMENTAL COSTS:

- ☐ Environmental reporting compliance
- ☐ Life-cycle greenhouse gas inventory reporting
- ☐ Extreme weather caused production crop and animal losses (paid by taxpayers)
- ☐ Rising crop insurance premiums
- ☐ Weather-related yield decreases
- ☐ CAFO manure liability and responsibility
- ☐ Soil erosion
- ☐ Decreased water quality from nutrient runoff
- ☐ Opportunity cost for farmers transitioning to non-industrial agriculture systems

PUBLIC HEALTH AND COMMUNITY COSTS:

- ☐ National health expenditures related to industrial agriculture
- ☐ Antibiotic resistance impacts
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- ☐ Drinking water contamination
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- ☐ Low nutrient diets
- ☐ Food containing trace pesticides, herbicides, and fertilizers
- ☐ Decreased community well-being
- ☐ Decreased community economic development
- ☐ Displaced farms
- ☐ Rural depopulation
- ☐ Increased food insecurity

DISPELLING THE MYTHS OF INDUSTRIAL AGRICULTURE

If industrial agriculture had to foot the bill for all their externalized costs, simply put, they could not. Deeply aware of the externalized factors outlined in the previous section, agrifood corporations resist altering their supply chains by crafting catchy and deceptive taglines. Using their colossal

economic and political power, industrial agriculture interests market and lobby their mythical taglines until they enter political and social discourse as fact. In this section, we identify the actual myths perpetuated by industrial agriculture, and dispel them.



INDUSTRIAL AGRICULTURE IS THE ONLY WAY TO FEED THE WORLD.

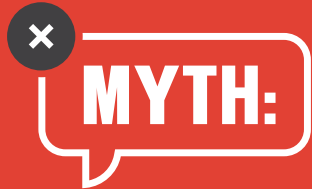
“And with today’s population nearing 8 billion, we are working harder than ever to provide families around the world with nutritious, delicious, and affordable food.”⁵⁹

– Smithfield Foods

In reality, the rest of the world doesn’t need industrial agriculture to feed itself, especially not products from the U.S. Contrary to popular belief, the food needs of 70% to 80% of the people of the world are being met by smaller farms, most of which we would call “subsistence farms,”⁶⁰ not industrial farms. Global research has shown that these small farmers

could double or triple their production without adopting industrial farming methods,⁶¹ and that there are paths to transform the food system to one that prioritizes the principles of agroecology.⁶² Industrial agriculture is not helping to feed the hungry people of the world today and will not do so in the future.⁶³

Even if industrial agriculture was feeding hungry people, other countries would not need U.S.-produced goods.⁶⁴ International farm output is rising, so the notion that U.S. agriculture must be responsible for feeding other countries is a myth. Even so, current U.S. meat exports are not going to those nations with the highest levels of hunger or food insecurity, which are predominantly in Africa, South America, and the Middle East.^{65,66} Instead, U.S. meat exports go primarily to the developed and rapidly-developing nations whose growing economic middle classes can afford to pay global market prices for meat.



INDUSTRIAL AGRICULTURE IS THE ONLY WAY TO KEEP RETAIL FOOD PRICES AFFORDABLE.

Large industrial agrifood corporations are legally responsible to take those actions that are best for the corporation, not food affordability or security. Once costs of food go up, they tend to “stick,” staying high even if the cost paid for goods such as cattle goes down. Cases of collusion and price manipulation are intentional actions by corporations that run counter to their food affordability claims.

In 2019, before the pandemic, one in nine American households — and one in seven households with children — were classified as “food insecure,” meaning they were at risk of not having enough food.⁶⁷ In fact, more people are classified as “food insecure” now than when the 1968 CBS documentary, *Hunger in America*, revealed hunger as a national disgrace.⁶⁸ Food insecurity has persisted in the U.S. even as 40% of the U.S. corn crop is converted to ethanol and agricultural policies promote agricultural exports.⁶⁹ If the proliferation of industrial agriculture was supposed to make food more affordable and accessible, why are more people hungry?

Claims about the economic efficiency of large-scale, centralized production are disingenuous at best: in truth, these practices are not meant to keep prices affordable for consumers or keep farmers in business, but rather to reap maximum profits for industrial agriculture corporations and interests. Efficiency limits of increased scale exist for all agricultural production, and were reached years ago⁷⁰ — meaning that any increase in volume or acquisition in agriculture has not increased efficiency. Instead, industrial agriculture continues to increase scale in order to accumulate and concentrate more power to profit.



Photo by Laura Mortelliti



INDUSTRIAL AGRICULTURE IS NECESSARY TO SUPPORT RURAL COMMUNITIES AND ECONOMIES.

The lived experiences of rural residents make it clear that industrial agriculture brings social and economic desecration, while merely promising economic development. 70 years of academic research documenting the impacts of industrial agriculture on rural economies and quality of life found that 82% of communities experience detrimental economic, civic, and environmental effects because of industrial agriculture.⁷¹

Whatever industrial agriculture, particularly CAFOs, contribute to a local tax base is more than offset by increased costs incurred by their operations. In addition to repairs to local infrastructure not originally built to accommodate constant heavy truck and machinery traffic, CAFOs also decrease the property values of their neighbors, ultimately reducing property tax receipts for local governments.⁷² As for sourcing building materials, labor, and inputs needed for the industrial farms, their operators typically source from outside their local communities. Feeder animals, feed, and other supplies are shipped in from elsewhere. Few of the economic benefits of industrial agriculture remain in local communities.

Industrial agricultural operations inevitably degrade and destroy rural communities, leaving them hollowed out of opportunities for future economic growth, displacing independent farmers, and discouraging new residents from settling there.

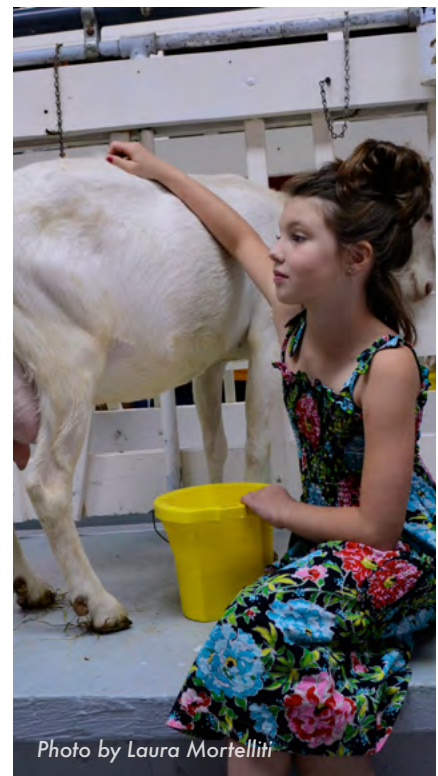


Photo by Laura Mortelliti



INDUSTRIAL AGRICULTURE POSES NO SIGNIFICANT RISKS TO PUBLIC HEALTH.

An overwhelming amount of scientific literature suggests industrial agriculture is linked to public health issues. In November 2019, the American Public Health Association called for a “Precautionary Moratorium on New CAFOs.”⁷³ The policy statement cites concerns for worker health and environmental justice as well as general public health concerns.

As discussed, antibiotic resistance, asthma, hypertension, and other respiratory complications have been linked to nearby industrial agriculture operations. Runoff from agriculture fields threatens the safety of drinking water by leaching well and groundwater sources. The public health issues are widely recognized by the scientific community and communities experiencing industrial agriculture influxes.

Public concern and awareness is rising at the intersection of industrial agriculture and public health. In December 2019, the Center for Livable Futures at Johns Hopkins University reported the results of a nationwide poll of likely voters asking their opinions of government regulation of CAFOs.⁷⁴ Larger samples were drawn from Iowa and North Carolina, the states with the largest numbers of CAFOs, and clear majorities favored moratoriums on new CAFOs and stricter regulations on existing CAFOs needed to protect public health.





INDUSTRIAL AGRICULTURE IS SUSTAINABLE, CLIMATE-FRIENDLY, AND RENEWABLE.

“Farming practices are more environmentally protective than ever.”⁷⁵

— American Farm Bureau Federation

“The U.S. food and agricultural arena is increasingly aligning around a vision for a resilient, restorative, economically viable and climate-smart agricultural system that produces abundant and nutritious food, natural fiber and clean energy for a sustainable, vibrant and prosperous America.”⁷⁶

— U.S. Farmers and Ranchers Alliance



While industrial agriculture is far from sustainable, its well-funded lobbying arm evades any sort of environmental reporting that would contend otherwise. In reality, industrial agriculture exhausts and degrades soils, requiring the continued application of synthetic inputs that are manufactured with fossil fuels — all of which are finite, unsustainable sources. The highly-degraded soil and nutrients run off into waterways, rendering both drinking water and recreation unsafe. Surrounding conservation areas, private and public, experience decreased plant and animal biodiversity resulting from years of pesticide and herbicide use, diminishing opportunities for outdoor recreation such as hunting or birdwatching.

Industrial agriculture claims it can be a “climate-smart” solution, mainly from use of methane digesters. Methane digesters are not a renewable energy source, and encourage the expansion of industrial livestock operations. Methane digesters collect manure from large CAFOs in large pits or lagoons, capture methane (25 times more potent than carbon) produced by anaerobic digestion of the manure, and process the methane to be used as “natural” gas. This process is far from “renewable,” especially when compared to the return on investment for wind and solar.⁷⁷ From the buildings themselves to the taxpayer subsidies that keep CAFOs economically viable⁷⁸ — calling this artificial management scheme “renewable” is unequivocally false. Biogas generation with animal waste simply rationalizes the large-scale livestock production that is destroying the economic and social quality of life in rural areas.



MYTH:

INDUSTRIAL AGRICULTURE IS INEVITABLE.

Industrial agriculture is merely the result of years of ill-informed political choices. Economically viable alternatives exist; however, they run counter to the interests of industrial agriculture's well-funded lobbying groups. Industrial agriculture is not a consequence of consumer demand or free markets, but rather owes its existence to the USDA, finance sectors, and the policymakers who promoted it financially and programmatically as the future of agriculture.

For example, the U.S. government makes it easier for young farmers to borrow money to build and operate CAFOs than to access land for crops, establish a cooperative, or pay off student debt. The U.S. government guarantees the repayment of large percentages of loans, knowing the producer will be unable to repay the loans with income only from their corporate integrator agreements. Other government benefits, such as EQIP subsidies for manure management systems, may be packaged with CAFO loan agreements. This allows local banks to make loans without taking significant risks, which allows CAFO operators to obtain lower interest rates, and gives local bankers an incentive to promote local construction of CAFOs. Similar support for young and aspiring farmers wishing to raise pastured livestock or vegetables does not exist. Industrial agriculture is a manufactured choice, not an inevitability.



THERE ARE NO ALTERNATIVES TO THE INDUSTRIAL AGRIFOOD SYSTEM.

Times of crisis, like the COVID-19 pandemic, not only reveal vulnerabilities in the current systems but also present opportunities for fundamental change.⁷⁹ When the highly brittle and concentrated supply chains failed, consumers and farmers alike relied on alternative markets, processing facilities, and distribution systems with built-in resilience and redundancy, such as collective food aggregation, cooperative groceries, farmers markets, Community Supported Agriculture (CSA) shares with local farmers, or roadside stands. These are the alternatives to industrial agriculture, and the potential future of agriculture absent industrial agriculture's abuses of power.

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⁶² Steve Gliessman. 2016. "Transforming food systems with agroecology." *Agroecology and Sustainable Food Systems*, Vol. 40, No. 3. Available at <https://www.tandfonline.com/doi/full/10.1080/21683565.2015.1130765>

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CONCLUSION

Photo by Laura Mortelliti

Concentrated corporate economic and political power shaped industrial agriculture, not the free market economy. Its rise was not inevitable, but was rather the result of strategic, purposeful decisions. As such, strategic, purposeful decisions can be made again to justly transition the U.S. to a socially- and economically-sound agrifood system.

A fundamental purpose of public policy is to ensure that the economy serves the public when public interest conflicts with the economic interests of individuals. Nowhere is that conflict clearer or more compelling than in industrial agriculture's failure to pay the real costs, internal and external, of its production models. That agrifood corporations have been able to prop up their business model with myths and hidden costs for so long is a failure of public policy, a failure of government.

An intentional transition from today's corporate-controlled industrial agriculture to a resilient agriculture system controlled by independent farmers, workers, and consumers is possible given the political will to implement existing policy tools. Such tools include: passing legislation that incentivizes a transition from industrial agriculture's interests to independent farmer autonomy; creating bright-line antitrust and financial regulations that require internalization of supply chain costs; and ensuring agricultural policy is democratically created and implemented across regions and scales. Specific legislative, administrative, and regulatory recommendations can be found in Family Farm Action Alliance's [Toolkit for Congress to Tackle the Food Monopoly Crisis](#).

Our analysis of industrial agriculture and its externalized costs demonstrates that taxpayers, consumers, farmers, workers, and communities are paying exorbitant amounts. In the future, this money will inevitably be spent to support agricultural production; the question is, which system would serve us and future generations best in the long run? The consequences of this decision are great, and our ability to be fed depends on it.

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