



# The Economic Cost of Food Monopolies: The Dirty Dairy Racket

**U.S. dairy policy hurts farmers. Federal policies continue to push and celebrate increasing production and expanding exports. That focus helps agribusinesses but leaves farmers with volatile markets and low milk prices. States also work against the interests of family-scale dairy farmers, by funneling money into corporate schemes and permitting mega-dairy operations.**

Food & Water Watch analyzed changes in the U.S. dairy industry over the past several decades and found six troubling trends:

- ❶ Factory farms have taken over the dairy industry and are speeding the collapse of family-scale dairies. Between 1997 and 2017, the United States lost 64 percent of its family-scale commercial dairies.
- ❷ Between 1997 and 2017, changes in cow genetics and the rapid expansion of factory farms increased U.S. milk production by 38 percent, while the total number of dairy cows remained relatively steady. However, methane emissions from dairy manure management more than doubled from 1990 to 2020, thanks to factory farm waste management practices that can release significantly more methane than pasture-based systems.
- ❸ More milk does not mean more farm income but instead contributes to price swings. Many dairies face low milk prices despite rising production costs. The average U.S. dairy managed to turn a profit just twice between 2000 and 2021.
- ❹ For decades, U.S. dairy policy managed price swings by removing excess dairy from the market. But in the early 2000s, policy shifted from managing supply to expanding export markets. This lined the pockets of agribusinesses while leaving farmers captive to volatile international markets. Real milk prices did not improve but fluctuated dramatically, and were slightly lower in 2021 compared to 2000.

- ⑤ Dairy farmers pay mandatory assessments to the Dairy Checkoff program, which ostensibly funds the general promotion of U.S. dairy products but in reality funds corporate partnerships that do not help farmers. Food & Water Watch estimates that U.S. dairy farmers paid roughly \$4 billion into the Checkoff program between 2005 and 2018.
- ⑥ Similarly misguided state policies also waste money on corporate schemes. For example, Food & Water Watch identified nearly \$75 million in New York taxpayer dollars that flowed to just a handful of corporate or cooperative entities in the last 20 years, with the promise of a few thousand jobs — some of which were quickly lost when dairy plants closed. Meanwhile, Oregon houses some of the largest mega-dairies in the country, but lax environmental oversight unfairly advantages these polluting facilities over family-scale dairies, which are closing at alarming rates.

State and federal dairy policies are driving family-scale farms to extinction. But there is a clear way forward: a comprehensive federal supply management program that actively works to match supply with demand and does not use the export market as a dumping ground for oversupply. Curbing overproduction can bring a higher price to farmers through the market instead of through taxpayer-funded government payments and

bailouts. It will also reduce the pressure to expand herd sizes and thereby avoid more factory farms and the entailing climate emissions. Supply management will even save taxpayer dollars by addressing the problem (oversupply) rather than the symptom (low prices).

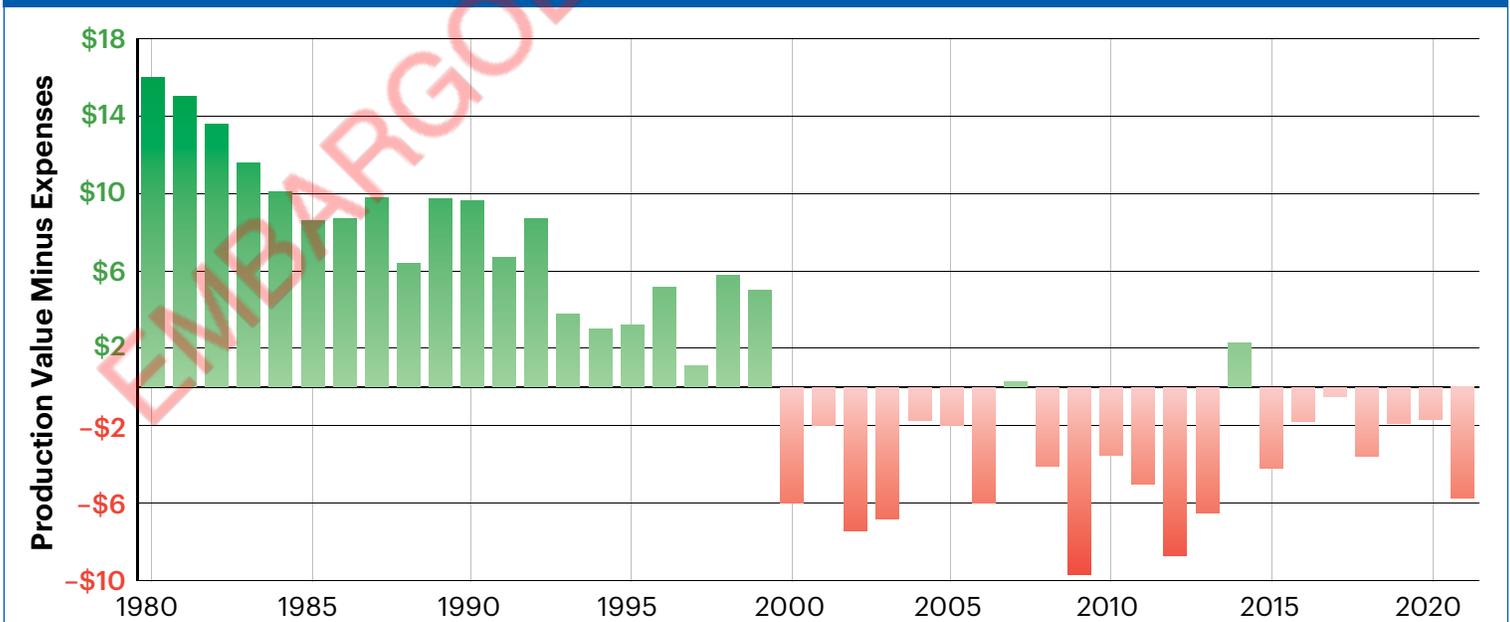
## Dairy Industry Consolidation

Nearly every sector of the food system has undergone rapid consolidation in recent decades. Consolidation in the dairy sector, however, is occurring even more rapidly. Consolidation is happening both at the farm level (fewer farms raising more cows) and at the processing level (fewer but larger corporations and cooperatives that purchase, process, and market dairy products).<sup>1</sup>

### Fewer farms, more mega-dairies

Many factors have caused rapid consolidation. One is declining net returns for farmers. Since the 1980s, the cost to farmers of producing milk has risen more sharply than the prices they sell it at (called “farmgate” prices). This reduces farmer profit and, at times, means that farmers sell below the cost of production. This trend became especially sharp in the early 2000s, as U.S. dairy policy shifted from previous price supports. Rising feed prices also contributed to declining margins.<sup>2</sup> The average U.S. dairy managed to turn a profit just twice between 2000 and 2021 (see Fig. 1).<sup>3</sup>

**FIG. 1: Production Value Minus Expenses – Milk** • IN DECEMBER 2021 DOLLARS PER HUNDREDWEIGHT



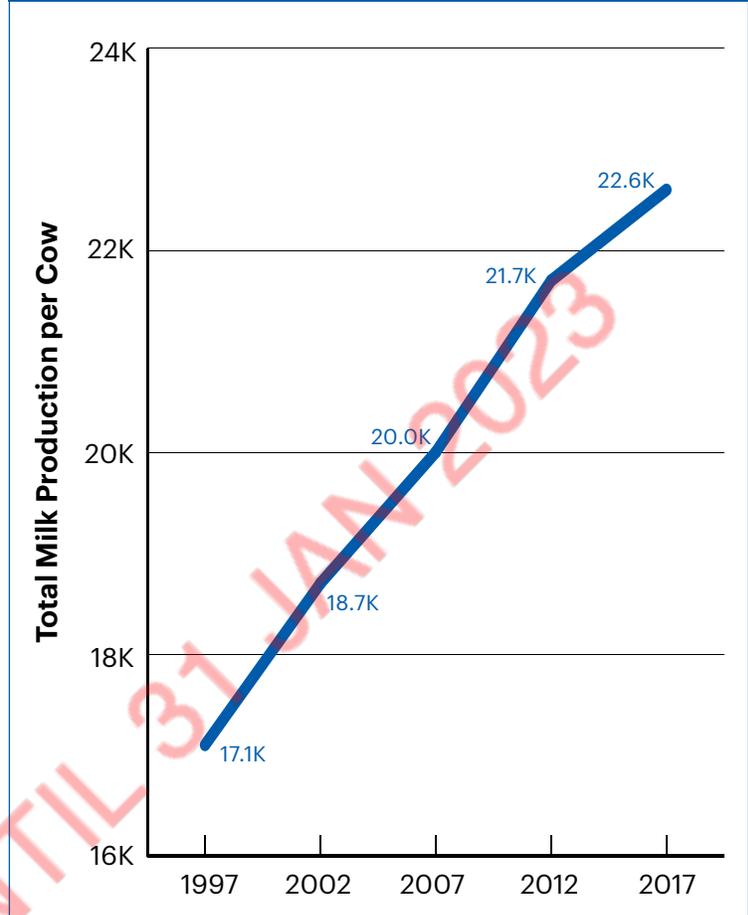
SOURCE: U.S. Department of Agriculture (USDA) data.

Dairy farmers may be able to weather a few difficult years by tapping into savings or relying on loans. But long stretches of years without profit put farmers in a difficult situation, one that hits smaller, family-scale dairies the hardest. Many face pressure to “get big or get out” — that is, expand herd sizes and adopt the factory farm model or leave dairy farming altogether.<sup>4</sup>

Another notable shift in the dairy sector has been the rapid increase in total milk production, which contributes to oversupply and drives down farmgate milk prices. This was brought on, in part, by increased productivity per cow (due to changing cow genetics and new feed formulations). Additionally, factory farms tend to produce more milk per cow, in part by using hired labor to milk herds three times rather than twice a day (which is more common on family-scale farms).<sup>5</sup> Total U.S. milk production rose 38 percent from 156 billion pounds in 1997 to 216 billion pounds in 2017, while the total number of dairy cows rose only 4.4 percent (see Fig. 2). Per cow productivity rose 36 percent over this period.<sup>6</sup>

Shifts in U.S. farm policy also incentivized factory farms. Previously, it was typically more cost-effective to graze cattle or for farmers to have the land base to grow their own feed. But the disastrous 1996 Farm Bill ended several decades of commodity grain supply management. Oversupplies flooded the market, and crop prices plummeted below the cost of production. Grain processors could purchase cheap grains to process and sell as livestock feed, ushering in the era of factory farms.<sup>7</sup>

**FIG. 2: Total Milk Production per Cow, 1997-2017**  
IN THOUSANDS OF POUNDS



SOURCE: FWW analysis of USDA data.

Smaller, family-scale operations that grazed cattle or grew their own feed could only get so large, constrained in part by the amount of cropland or pasture devoted to feeding their livestock.<sup>8</sup> And they faced more competition from emerging factory farms.



Nationally, the total number of U.S. dairy farms fell by more than half over just two decades (1997 through 2017), while the average number of cows per farm increased by 139 percent (see Fig. 3). Family-scale commercial farms fell at an even higher rate (64 percent).<sup>9</sup>

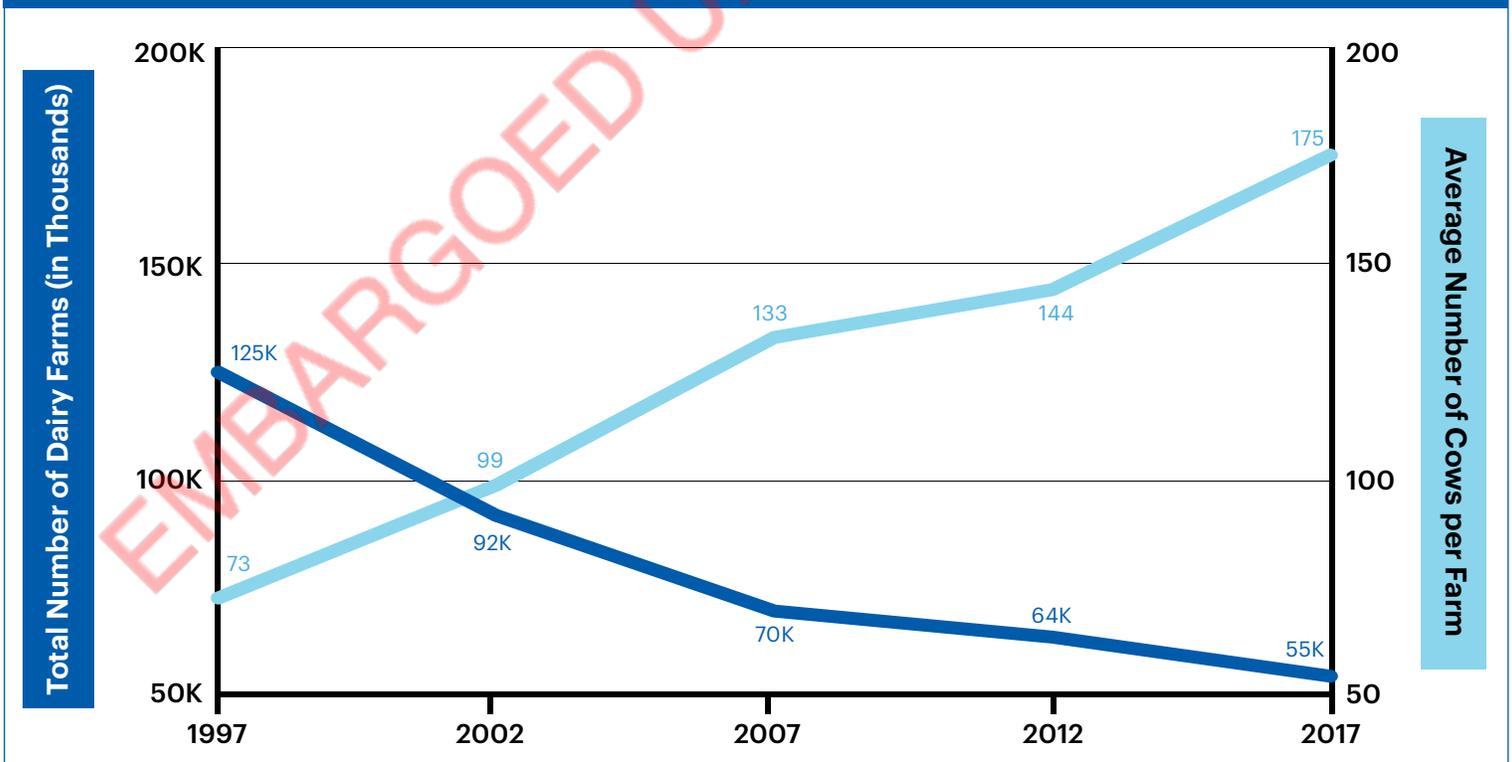


However, these averages mask the growth of factory farms — those raising 500 or more dairy cows on feed in confinement. Much larger operations with herd sizes exceeding 5,000 or 10,000 cows even emerged. The 1992 U.S. Department of Agriculture (USDA) Census of Agriculture reported only eight operations with 5,000 or more head. By the 2017 census, there were 189 operations. The largest dairies today exceed 25,000 head.<sup>10</sup>

Conversely, family-scale operations (those with fewer than 500 head) have plummeted — because farmers either have left dairy production or have expanded into larger size categories. In 2016, half of all U.S. milk was produced on operations confining 1,000 or more cows.<sup>11</sup>

Consolidation in the dairy industry is occurring at a faster pace than in almost every other U.S. agricultural sector — a 16-fold increase in consolidation over just 30 years (1987 to 2017). In comparison, there was a twofold increase in crop production consolidation over the same period. Only hog and egg production have rivaled the dairy industry’s pace of consolidation.<sup>12</sup>

**FIG. 3: Total Dairy Farms and Average Cows per Farm, 1997-2017**



SOURCE: FWW analysis of USDA data.



## The Climate and Environmental Justice Costs of Dairy Consolidation

By 2016, almost 70 percent of U.S. milk was produced on farms with 500 or more dairy cows. Larger farms are less likely to graze their cattle on pasture and instead rely on purchased feed, which is the single largest source of livestock industry greenhouse gas emissions.<sup>13</sup>

Additionally, the way factory farms handle manure waste increases climate emissions. Liquid storage is more common on factory farms and encourages the release of methane (a potent greenhouse gas). Annual methane emissions from manure management in dairy cattle more than doubled from 1990 to 2020, despite the total number of dairy cows remaining relatively steady. (In contrast, grazing cattle deposit manure in fields, which decomposes in a way that releases little to no methane.)<sup>14</sup>

Economic pressures create a dangerous feedback loop that increases the dairy industry's climate emissions. Low milk prices drive farmers to expand their herds to take advantage of economies of scale; larger herds increase greenhouse gas emissions. Additionally, more production feeds into milk gluts that contribute to oversupply and further depress milk prices.<sup>15</sup> The focus on export market growth necessitates continuing to expand production year after year. If the U.S. dairy industry instead focused entirely on domestic demand and sales, it would require fewer cows<sup>16</sup> (and produce fewer emissions).

Factory dairy farms create air and water pollution that contribute to health problems and make life miserable for nearby residents. Communities along New Mexico's "Dairy Row" — a stretch of highway dotted with factory dairy farms — are plagued with flies and foul odors that prevent them from spending time outdoors or even opening windows.<sup>17</sup> In eastern Oregon, Latinx communities are disproportionately exposed to air and water pollution stemming from the region's numerous factory dairy operations.<sup>18</sup>

PHOTO BY SOCIALLY RESPONSIBLE AGRICULTURE PROJECT (SRAP)

## Consolidation in agribusinesses and dairy cooperatives

As dairy farms consolidated, so did firms that purchase and process milk. What sets the dairy industry apart from many other U.S. agricultural industries is that most milk is processed and marketed by farmer-owned cooperatives — around 85 percent as of 2017. Cooperatives form to help their member farmers negotiate milk prices and coordinate delivery. Some also engage in milk processing.<sup>19</sup>

Despite humble beginnings, dairy cooperatives followed national trends of milk processing corporations — a shift to fewer but larger plants that handle greater volumes of milk. This mimics the period of rapid consolidation in the supermarket industry, which

ramped up in the 1990s. Dairy firms merged with or acquired competing firms. Some vertically integrated — purchasing the firms that supplied them with raw ingredients or processing services — to gain more control over the entire production chain. Cooperatives chose to consolidate for several reasons, including reducing overhead, taking advantage of economies of scale, and securing milk supplies. They faced pressure from the increasingly concentrated retail sector, growing to effectively market to the emerging supermarket giants. When cooperatives close or merge, overlapping pick-up routes may be reduced, leaving farmers with fewer options to market their milk.<sup>20</sup>

Between 1992 and 2000, the U.S. experienced a net loss of 52 dairy cooperatives (a 20 percent decrease). A notable example of consolidation is Dairy Farmers

of America (DFA), the largest dairy cooperative in the country today, marketing 39 percent of all fluid milk sales. DFA formed in 1998 through the merger of four major dairy cooperatives. It has also increased its market share in dairy manufacturing, most recently by acquiring the majority of Dean Foods' assets after that corporation folded in 2019. Land O'Lakes went through its own set of mergers that made it a national cooperative and household name, and today markets 35 percent of U.S. fluid milk.<sup>21</sup>

In 2022, just three cooperatives (DFA, Land O'Lakes, and California Dairies, Inc.) together marketed around 83 percent of all U.S. fluid milk (see Fig. 4).<sup>22</sup> A Government Accountability Office (GAO) report found that concentration among cooperatives can create competing interests, and at times may act against the interests of their farmer members. This is partly because consolidation brings together members across wide geographic regions and varied

backgrounds, including farms that are not family owned and run and farms that are very large — which may have different needs and expectations of the cooperatives. While some cooperatives stand by traditional voting structures of “one farmer, one vote,” some states have voting structures that give more power to members with greater production, thereby creating power imbalances and disadvantaging smaller farms.<sup>23</sup>

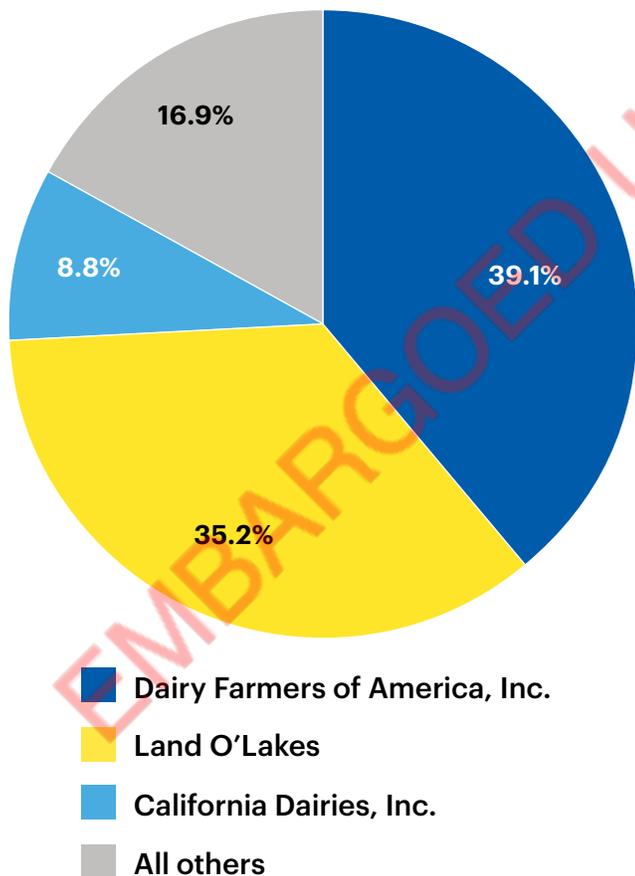
Cooperatives might also use their patronage refunds to invest in processing infrastructure, which may improve long-term farmer income at the expense of short-term income. Additionally, although rare, cooperatives may also offer preferred stock to nonmembers. While nonmembers lack voting rights, earnings may be first distributed to holders of preferred stock before farmer members.<sup>24</sup>

Even large cooperatives are shielded from some of our nation's antitrust legislation, thanks to a 1922 law called the Capper-Volstead act. Nevertheless, dairy farmers have accused some of these large cooperatives of working against farmers' own interests,<sup>25</sup> and even successfully settled antitrust suits against them. In 2014, DFA paid a \$50 million settlement as part of a class-action lawsuit brought by dairy farmers in the Northeast. The lawsuit accused the cooperative of conspiring with Dean Foods to monopolize milk production in the region, which drove down the prices farmers received for raw milk.<sup>26</sup> A suit filed in New Mexico in 2022 accused DFA of conspiring with another cooperative, Select Milk Producers, Inc., to unlawfully coordinate prices and drive down farmer earnings.<sup>27</sup>

Non-cooperative firms went through mergers just like their cooperative counterparts. Suiza Foods entered the dairy industry in 1993. By 2000, it had acquired 39 dairy companies, becoming the largest dairy processor in the country. Then, in 2001, it merged with the second largest processor, Dean Foods.<sup>28</sup> By 2017, the U.S. had one-third as many dairy processors (corporate or cooperative) compared to 1970.<sup>29</sup>

Extreme corporate consolidation reduces farmers' bargaining power, giving large firms greater power over the prices paid to farmers and even impacting price transparency. For instance, most “spot” market

**FIG. 4: Market Share of Fluid Milk Sales, 2022**



SOURCE: IBISWorld.

transactions (those sold on the open market rather than through forward contracts) occur on the Chicago Mercantile Exchange (CME), which trades in nonfat dry milk, butter, and cheese. While the actual amount of trading on the CME is slim, it impacts prices for milk across the country (it pinpoints wholesale prices used in the Federal Milk Marketing Order pricing equations) (see below). Some farm groups say the CME creates volatility in the market, since it has too few transactions and lacks transparency. In fact, the GAO found that it is susceptible to manipulation. There are also recorded attempts by industry players to manipulate the market, including in 2004 when industry groups used cheese purchases to manipulate prices.<sup>30</sup>

## From Price Supports to Export Markets

Another notable shift occurred in the dairy industry over the last two decades, one that involves U.S. dairy policy. The USDA has managed dairy markets since the New Deal through various programs that seek to reduce price volatility and economic risk.<sup>36</sup> Some, like the Dairy Product Price Support Program, managed oversupply by purchasing market surpluses of dairy and storing them until they could be donated or resold.<sup>37</sup> Others, like Federal Milk Marketing Orders (FMMOs), guarantee a minimum price for farmers' milk (although cooperatives are exempt).<sup>38</sup> While the U.S., unlike Canada, has never had a robust dairy supply management program, these programs did at least

### What About Organic Dairy?

Small commercial dairies are facing the greatest economic pressures, and some have transitioned to organic dairies to remain in business. This is because organic products like milk benefit from the organic premium — the higher price that consumers are willing to pay. However, organic milk is often more costly to produce. Farmers must feed dairy cows only organic feed, raise them on pasture throughout the growing season, and avoid antibiotic use. They must commit to these practices for a full three years before they can obtain organic certification, making the transition to organic an expensive investment.<sup>31</sup>

But this transition can be worth it for many farms. While organic dairies on average tend to be smaller than conventional ones, they realize greater net returns. In 2016, organic dairies with 100 to 199 head realized on average net returns of \$2.45 per hundredweight of milk produced, compared to -\$5.29 for conventional dairies of the same size (a difference of \$7.74).<sup>32</sup> Only conventional dairies that exceeded 2,000 or more head realized positive net returns on average.<sup>33</sup>

However, organic dairies still face the problem of a highly consolidated industry. In 2021, Horizon Organic (owned by the multinational conglomerate Danone) announced that it would terminate purchases from 89 organic dairy farms across the U.S. Northeast. The company was no longer willing to transport milk from these farms to its production plant in New York State and instead looked to purchase from larger farms in the Midwest and West. Contract cancellations like these can leave farmers in a precarious situation, given the perishable nature of dairy.<sup>34</sup> Even if farms were able to find conventional processors to sell to, doing so would come at a loss given the price difference between organic and conventional milk.

Today, roughly nine percent of all U.S. dairy farms are organic, accounting for just over two percent of all milk production.<sup>35</sup> The USDA can encourage more farmers to transition to organic by strengthening incentives to help ease the economic burden of transitioning. It can also help invest in regional food hubs to connect organic producers with processors and consumers closer to home.



PHOTO CC-BY-SA © WILLIS LAM / FLICKR.COM

help ease price volatility and contribute to years of stable income.<sup>39</sup>

But by the turn of the twenty-first century, the U.S. was focused on building its export capacity, including for agricultural products. This was a time of trade liberalization across the globe. Free trade deals such as the North American Free Trade Agreement (NAFTA) opened new markets for U.S. agricultural goods. These deals were championed (and even written in part) by growing agribusinesses eager to reach international markets. Deals were often accompanied by significant changes to farm supports in the U.S. and abroad to reduce price distortion.<sup>40</sup>

Prior to the 2000s, the country did not rely heavily on export markets to manage supply, partly because

domestic prices were generally higher than global prices. But the lure of export markets took over U.S. policy, including at the USDA, and exports were increasingly viewed as a way to soak up excess milk production. This was aided by an increasing global demand for dairy products, primarily through growing middle classes in developing countries.<sup>41</sup>

However, previous USDA programs that raised farmer prices through domestic purchases of milk were incompatible with these export goals. Over the first two decades of the twenty-first century, the USDA terminated some dairy support programs that had been in place for 50 years or more. Programs shifted from price supports to risk management. Export markets became a chief way to manage oversupply.<sup>42</sup>

## USDA Dairy Programs Over the Years

**Federal Milk Marketing Orders (FMMOs):** This Depression-era program, made permanent in the 1937 Farm Bill, is intended to level the playing field between dairy farmers and processors by providing a minimum price for farmers' milk. The USDA "pools" milk receipts within defined geographic areas of demand and uses formulas to determine the weighted average for prices across different classes of milk (classes are determined by end use, such as fluid milk or hard cheese). Milk processors must pay at least the weighted average within each price class. There are currently 10 areas of demand in the U.S., with a handful of states operating their own milk marketing orders. In 2015, 61 percent of all U.S. milk was regulated under a FMMO (milk sold through cooperatives remains exempt).<sup>43</sup>

**Milk Price Support Program (changed to Dairy Product Price Support Program in 2008 and repealed in the 2014 Farm Bill):** The 1949 Farm Bill created a price support program for dairy farmers, leveraging the USDA's Commodity Credit Corporation (CCC). The CCC would purchase and store excess supplies of butter, cheese, and nonfat dry milk from dairy processors, thereby helping to avoid gluts of dairy products from flooding the market and driving down milk prices. Stored products could then be donated to charitable organizations, or sold back into the U.S. market during times of high dairy prices.<sup>44</sup>

**Dairy Export Incentive Program (DEIP) (repealed in the 2014 Farm Bill):** Enacted by the 1985 Farm Bill, the DEIP authorized cash bonuses to exporters of dairy products, enabling them to purchase dairy products at U.S. prices and sell at global ones, which were typically lower. It was created in retaliation against domestic subsidies offered by foreign nations while also providing a way to remove dairy surpluses from the U.S. market. In 2009, dairy trade groups petitioned the new Secretary of Agriculture, Tom Vilsack, to bolster dairy demand and reinstate the DEIP.<sup>45</sup>

**Milk Income Loss Contract Program (MILC) (repealed in the 2014 Farm Bill):** The 2002 Farm Bill enacted the MILC program to provide coverage for when milk prices fell below an established price floor. It paid farmers 45 percent of the difference between the floor and market price, covering the first 2.4 million pounds of milk produced (increased to 2.985 million in 2008).<sup>46</sup> During the 2009 milk price crisis, the MILC program paid out \$775 million between April 1 and October 26.<sup>47</sup>

**Margin Protection Program (MPP-Dairy) (changed to Dairy Margin Coverage, or DMC, in the 2018 Farm Bill):** This replaced the Dairy Price Support Program in 2014, offering an insurance policy to dairy farmers for when dairy margins (the difference between milk prices and feed costs) fall below a certain threshold. Farmers pay an administrative fee for "catastrophic coverage" and can purchase additional coverage. MPP payments to farmers totaled \$250 million in 2018 and \$279 million in 2019.<sup>48</sup>

These factors helped the U.S. emerge as one of the largest dairy exporters in the world.<sup>49</sup> U.S. dairy exports rose eightfold in the first two decades of the twenty-first century — higher than almost every other commodity.<sup>50</sup> This surging demand for U.S. dairy products in turn spurred more production (and more factory farms).<sup>51</sup> Today, global trade in dairy is dominated by a handful of developed countries. In 2020, the European Union, New Zealand, the U.S., the United Kingdom, and Australia accounted for three-quarters of all global milk exports.<sup>52</sup>

Exports even increased over the course of the COVID-19 pandemic. The U.S. Dairy Export Council (USDEC) reports that 2020 U.S. exports were up 13 percent over 2019 levels, even while U.S. dairy farmers were suffering the impacts of supply chain disruptions. Exports rose another 10 percent in 2021, with the total value at \$7.8 billion.<sup>53</sup> Meanwhile, after factoring in the cost of production, the average farmer suffered a net loss of around \$1.60 per 100 pounds of milk produced in 2020, which fell to a net loss of \$5.69 in 2021 (see Fig. 1 on page 2).

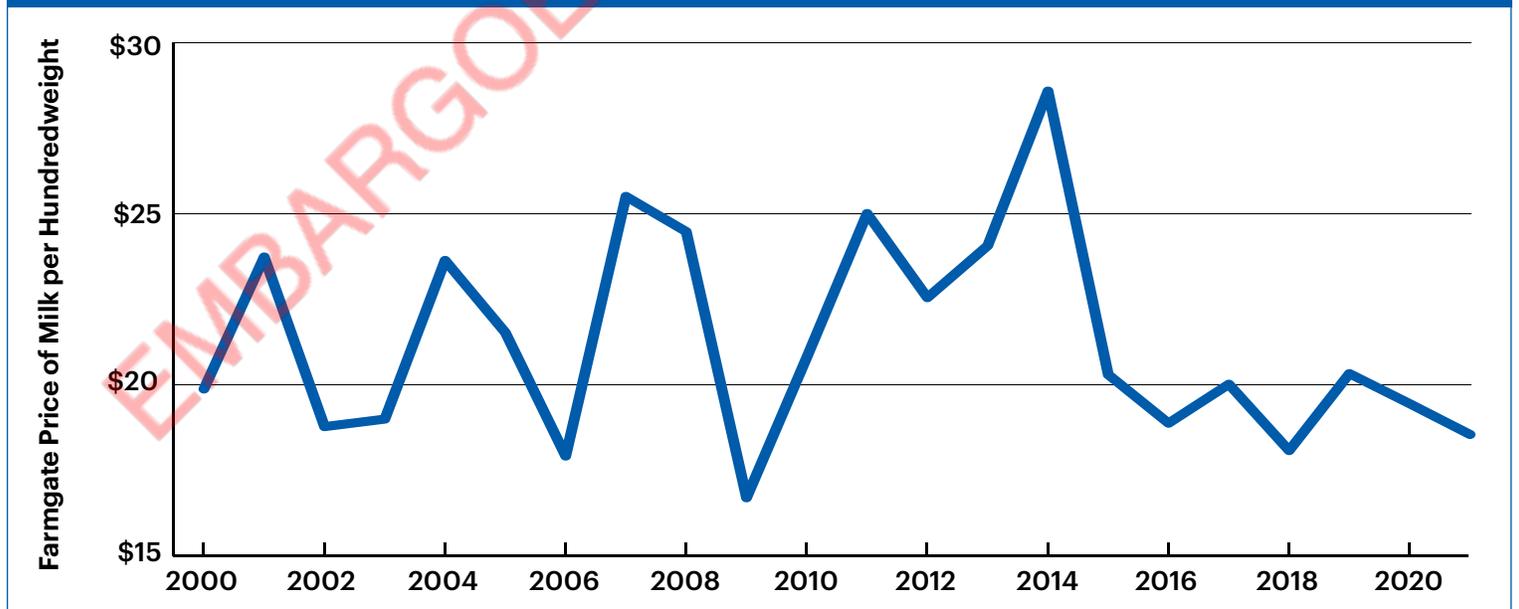
The dairy export market proved to be anything but reliable for managing farmer risks. Global markets are susceptible to price volatility stemming from numerous factors. Import bans, slowing global demand, and even a strong U.S. dollar have all hurt

U.S. exports. For instance, the value of U.S. dairy exports dropped 28 percent in 2015 alone (twice the rate of agricultural exports as a whole), thanks in part to a Russian import ban and the termination of EU dairy quotas. The 2008 to 2009 recession also decreased exports and hurt U.S. dairy farmers. In short, replacing price supports with exports may increase demand for U.S. dairy products, but it also contributes to farmgate price fluctuations and depressions.<sup>54</sup>

Continued growth of export markets depends on keeping U.S. dairy competitive on the global market. But this is tenuous, given the potential for markets to become saturated and for productivity to outstrip demand. Unfortunately for U.S. dairy farmers, keeping dairy products competitive means keeping prices low enough to attract foreign buyers<sup>55</sup> — putting the interests of dairy exporting firms at odds with those of farmers.

The data show that real milk prices did not improve during the period of export expansion. Prices fluctuated in the early twenty-first century, dropping significantly in 2015 and then flatlining ever since (see Fig. 5). Moreover, the value of milk exceeded farmers' production costs just twice between 2000 and 2021 (see Fig. 1).<sup>56</sup> Clearly, export-focused policies have not improved the welfare of the average U.S. dairy farmer.

**FIG. 5: Farmgate Price of Milk , 2000-2021** • IN DECEMBER 2021 DOLLARS PER HUNDREDWEIGHT



SOURCE: FWW analysis of USDA and U.S. Bureau of Labor Statistics (BLS).

## Consumers Do Not Cash In on Low Milk Prices

Low prices for farmers do not necessarily translate into retail savings for consumers. Food demand is generally price inelastic — that is, changes in price will not greatly impact the amount of food purchased. This is because people need to eat regardless of economic conditions.<sup>57</sup>

While retail prices may rise quickly in the face of higher commodity prices, they tend to fall more slowly (and only partially) in response to lower commodity prices — a phenomenon called “sticky” prices.<sup>58</sup> For instance, farmgate milk prices fell roughly 40 percent between October 2014 and April 2016, thanks to falling U.S. exports, rising imports, and increasing U.S. production. But consumer prices per gallon of whole milk fell just 16 percent, and per pound of cheddar cheese they fell just three percent.<sup>59</sup>

More recently, rapid inflation has hit consumers at the grocery checkout. The retail price per gallon of whole milk rose from \$3.25 in January 2020 to \$4.18 in September 2022 (a 28.5 percent increase). It rose a full 11 percent from January to May 2022 alone.<sup>60</sup>

## The Dairy Export Council does not speak for farmers

The U.S. Dairy Export Council formed in 1995 with the goal of increasing demand for U.S. dairy products and gaining foreign market access.<sup>61</sup> It is funded in part by its members (dairy exporting firms, accounting for roughly 85 percent of the U.S. industry). But the majority of funding originates from the Dairy Checkoff program.<sup>62</sup> Checkoffs exist for other commodities including pork and beef and are funded through mandatory assessments on farmers for every hundredweight of milk or head of livestock sold. They are ostensibly designed for general promotion of farm commodities (such as the “Pork: The Other White Meat” and “The Incredible, Edible Egg” campaigns).<sup>63</sup> In 2011, dairy importers began paying assessments as well; however, the rate is currently half that paid by farmers and makes up only roughly 1 percent of total assessments.<sup>64</sup>

Food & Water Watch estimates that U.S. dairy farmers paid roughly \$4 billion to the Checkoff program from 2005 to 2018.<sup>65</sup> These fees helped fund the National Dairy Promotion Board, which launched public relations campaigns like “Undeniably Dairy” intended to paint the dairy industry as committed to sustainability and animal welfare, and dairy products as “locally sourced.”<sup>66</sup> The Board also invests in partnerships with fast food corporations to convince them to stuff more cheese into menu items, helping spawn Pizza Hut’s stuffed crust and Taco Bell’s cheesy shelled Quesalupa.<sup>67</sup> The connection between funding new fast food menu items and raising dairy farmer welfare is dubious.

The Dairy Checkoff program also provides most of USDEC’s funding — \$16.4 million in 2015. Member dues, in contrast, made up \$1.5 million that same year. The USDA’s Foreign Agricultural Service provided an additional \$5.6 million.<sup>68</sup> Despite receiving the bulk of its funding from dairy farmers, USDEC primarily advocates in the interest of its dairy exporting members. The group argues that increasing exports supports “the health of America’s dairy farms” and any impairment or trade barriers will harm farmers.<sup>69</sup>

However, what USDEC leaves unsaid is that U.S. milk prices must remain low to compete globally. The U.S. grew to be the third largest exporter of dairy products during a time of volatile milk prices and below-cost returns for farmers (see Fig. 4 on page 6 and Fig. 1). It also coincided with the termination of USDA price support programs.<sup>70</sup> Over roughly this same period (1997 to 2017), the country experienced a net loss of more than half of its dairy farms.<sup>71</sup>

Nevertheless, exports bolster profits for USDEC member corporations and large cooperatives. Land O’Lakes cashed in \$295 million in net earnings in 2021. (Much of these earnings are passed on to members, although only half of members are actual dairy farmers.)<sup>72</sup> Dairy Farmers of America boasted \$199 million in net income that same year.<sup>73</sup> Both cooperatives have faced lawsuits for antitrust violations, including colluding together in price fixing schemes.<sup>74</sup>

The USDA has signaled its full commitment to USDEC and its mission of expanding U.S. dairy exports. After leaving the Obama administration, Secretary of Agriculture Tom Vilsack became the CEO of USDEC in early 2017,<sup>75</sup> where he reportedly made more than \$900,000 in total compensation in 2020 — more than 3,000 times the median farm income in 2019 (see Fig. 6). Vilsack returned as Secretary of Agriculture under the Biden administration, where he continued his legacy of expanding U.S. exports and finding “more, new and better markets” for U.S. producers.<sup>76</sup>

Dumping more and more cheap U.S. dairy on foreign economies is not going to lift the economic tide for U.S. farmers. It will not reduce farm foreclosures, the outmigration from rural communities, or the rate of farmers dying by suicide. It will, however, shore up revenue for dairy export companies and their corporate lobbyists. Perhaps that is why USDEC is calling for U.S. producers to increase the milk supply even more.<sup>77</sup> In doing so, they tipped their hand.

## State Policies Are Fueling the Flames

### Oregon’s mega-dairies are a failed experiment

In recent decades, the U.S. dairy industry has made a major push to expand into new geographical regions. Previously, dairy was largely consumed locally. But the shift to producing more products like cheese that serve regional or national markets meant that dairies no longer had to be located near urban populations or traditional dairy regions like the Northeast or Midwest. In fact, most dairy industry growth over the past few decades occurred in Western states like Oregon, where affordable land and a favorable climate enabled dairies to raise ever-increasing herds on factory farms.<sup>78</sup> Oregon also has an advantage of being positioned to export to important markets in the Pacific.<sup>79</sup>

**FIG. 6: Top Dairy Industry Association CEO Compensation Compared to Average On-Farm Income, 2019**



SOURCE: FWW analysis of Agri-Pulse and USDA data.

**NOTE:** 2019 is used as the year of comparison, as it is the only year since 1996 that the average on-farm income for farm families rose above \$0 (to \$297), thanks in part to federal bailout dollars to compensate farmers for events such as President Trump’s tariff war. See USDA Economic Research Service. “Farm household income for 2020F — December 2020 update.” December 2, 2020.



Today, Western states produce more dairy than the traditional dairy regions of the Eastern U.S. Western dairies tend to be larger and more specialized, and more likely to rely on purchased feed (rather than grazing herds on pasture) and hired labor.<sup>80</sup> Oregon regulators have encouraged mega-dairy expansion by granting permits to ever-expanding operations, despite years of documented environmental pollution.<sup>81</sup> As of 2021, Oregon has 11 mega-dairies (operations with 2,500 or more cows), the largest of which — Threemile Canyon Farms in Boardman — confines over 55,000 milking cows (and is permitted to house another 10,000).<sup>82</sup>

Meanwhile, the number of cows raised on farms with 500 or more head rose nearly fourfold in Oregon over just two decades (1997 to 2017).<sup>83</sup> This rapid expansion of factory farms and mega-dairies has come at a great loss to Oregon's family-scale dairies. Volatile milk prices and years of negative profits often hit these smaller dairies the hardest, who face increasing pressure to "get big or get out" — that is, to increase their herd sizes or exit the industry altogether.<sup>84</sup> In 2017, Oregon had half as many family-scale dairies (those with fewer than 500 cows) than it did in 1997.<sup>85</sup> This means that an increasing share of milk profits is now going to factory farms and mega-dairies.

## More milk does not mean more prosperity for Oregon's remaining dairy farmers

From 1997 to 2021, Oregon increased its milk production by 63 percent.<sup>86</sup> Today, the state consumes only around 20 percent of the dairy products produced in-state, exporting the remainder to other states and countries, with foreign exports valued at \$57 million.<sup>87</sup> Milk was Oregon's fourth most valuable agricultural commodity in 2020.<sup>88</sup> Oregon is home to household name brands like Tillamook, and advertises its products as coming from sustainable family farms — while in fact sourcing from mega-dairies like Threemile Canyon.<sup>89</sup>

But just like in the rest of the country, milk price volatility in Oregon increased beginning in the early twenty-first century, thanks to federal policies that reduced milk price supports in favor of export expansion. Monthly milk prices remain volatile, making comparisons between years difficult. Over the past two decades (2001 to 2021), Oregon milk prices averaged \$22.67 per hundredweight, adjusted for inflation. For comparison, 2001 inflation-adjusted prices averaged \$24.46 per hundredweight, compared to \$21.00 in 2021, suggesting that milk prices have not

meaningfully increased despite increased production and exports.<sup>90</sup> In fact, total real gross producer income in Oregon (which also fluctuates) was 9 percent lower in 2020 compared to 2011 (see Fig. 7), despite farmers producing 6 percent more milk.<sup>91</sup>

### Oregon’s mega-dairy experiment is not delivering on jobs and community wealth

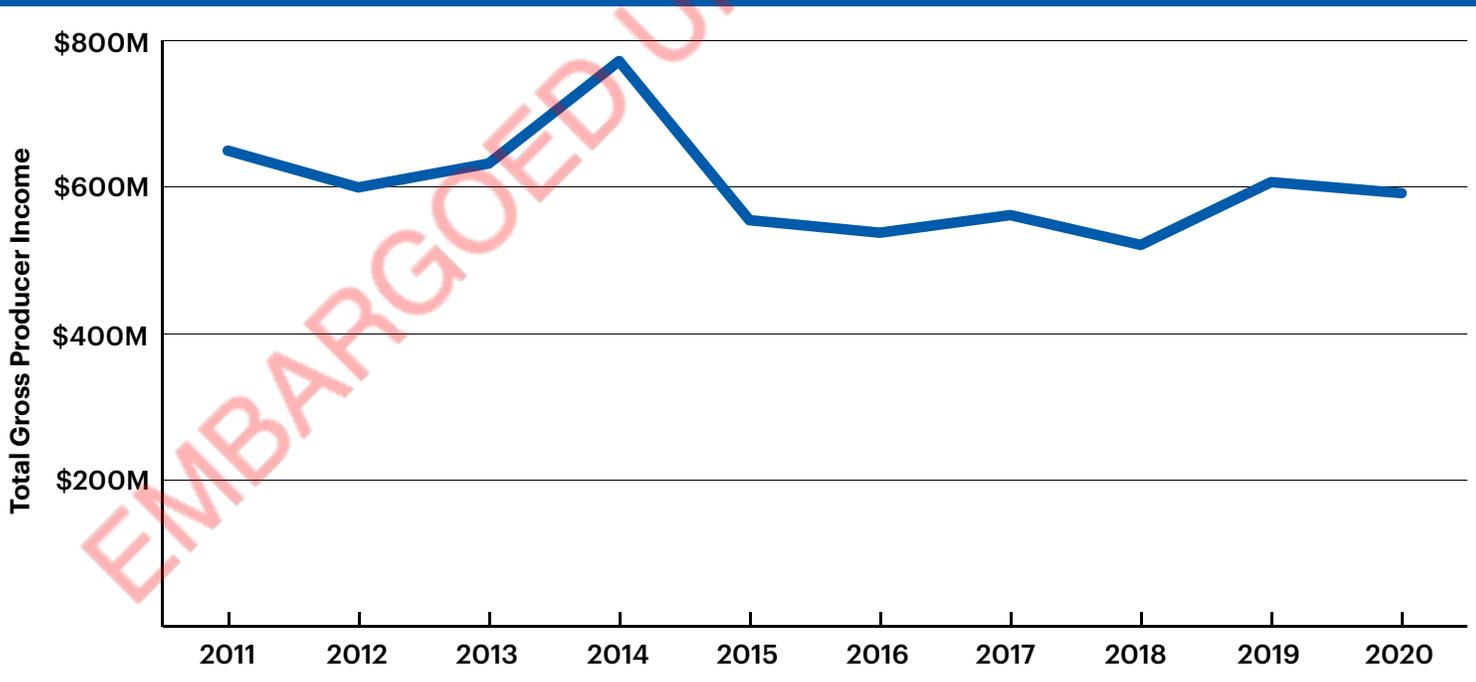
Oregon has fewer dairy production plants today than it did 20 years ago (17 in 2021 compared to 20 in 2001).<sup>92</sup> While jobs in Oregon’s dairy manufacturing industry have increased by 26 percent over the same time period, this is half the rate of increase of Oregon’s milk production. Additionally, dairy manufacturing jobs have actually declined 0.8 percent since 2011. In 2021, Oregon’s dairy manufacturing industry reported just 2,504 jobs, or 0.13 percent of all state jobs, paying 6.8 percent below the state average in annualized wages.<sup>93</sup>

Jobs on dairy farms increased 52 percent since 2001 but have also fallen since 2011 (by 4.5 percent). The

industry reported<sup>a</sup> 1,474 jobs on Oregon dairy farms in 2021, making up less than 0.1 percent of all Oregon jobs and paying 30 percent below the state average in annualized wages.<sup>94</sup> In fact, wages as a share of revenue have declined over the past five years (2017-2022).<sup>95</sup>

Oregon’s mega-dairies provide just a sliver of state employment while paying below-average wages. Jobs on mega-dairies and other livestock operations are also among the most hazardous of any industry. In 2020, 5 out of every 100 workers in the animal production industry reported a work-related injury or illness — more than four times the rate of injuries for workers in the notoriously dangerous mining, quarrying, and oil and gas extraction industry.<sup>96</sup> The GAO notes that injury rates could be higher due to under-reporting, especially by immigrant workers who may fear losing their jobs for speaking out.<sup>97</sup> Nevertheless, agricultural labor law exemptions intended to aid family farms are exploited by mega-dairies, allowing them to circumvent oversight from the U.S. Occupational Health and Safety Administration.<sup>98</sup>

**FIG. 7: Total Gross Producer Income, Oregon** • IN MILLIONS OF DECEMBER 2021 DOLLARS



SOURCE: Oregon Department of Agriculture.

a This is possibly an underestimate, given that farm jobs are exempt from reporting to the Quarterly Census of Employment and Wages. See <https://www.bls.gov/cew/overview.htm>.

Additionally, dairy farm workers are exposed to toxic pollutants that contribute to lung conditions such as asthma, chronic obstructive pulmonary disease (COPD), chronic bronchitis, and cancer.<sup>99</sup> Communities near Oregon’s mega-dairies are likewise exposed while also living with water polluted by mega-dairy runoff. The Oregon Department of Environmental Quality (DEQ) identified the Lower Umatilla Basin in northeastern Oregon (home to several mega-dairies including Threemile Canyon) as having elevated levels of nitrate, which increases the risk of thyroid disease and several types of cancer.<sup>100</sup> In June 2022, Morrow County declared a state of emergency over the dangerously high levels of nitrate in private drinking wells and began providing drinking water to residents.<sup>101</sup> Mega-dairies like Threemile Canyon are often located in rural, predominantly Latinx communities — making this an issue of environmental racism and justice.<sup>102</sup>

Mega-dairies not only bring dangerous jobs and toxic pollution, but they can also unravel the economic and social fabric of rural communities. A wealth of data documents how a shift from family-scale farms to factory farms and mega-dairies brings numerous

problems, including more unemployment, more economic inequality and poverty, and depopulation.<sup>103</sup> There is also some evidence that larger farms make fewer local purchases than smaller farms, which hurts local businesses, deprives communities of the “multiplier effect” that occurs when money is circulated in a local economy, and decreases tax revenue.<sup>104</sup> Tax revenue may also be lost when home values decline due to their proximity to factory farms.<sup>105</sup>

## Oregon’s regulators fail to hold mega-dairies accountable

Nevertheless, Oregon regulators appear unmoved by the concerns of rural communities impacted by mega-dairy expansion; they continue to grant permits to some of the largest mega-dairies in the country. As of December 2022, the state is considering granting a permit to Easterday Dairy to open a nearly 30,000 head mega-dairy on the same site as the notorious Lost Valley mega-dairy. Lost Valley was permitted to confine a similar number of cows and was shut down after repeated violations that threatened local drinking water.<sup>106</sup> Meanwhile, Oregon’s DEQ has also failed to adopt regulations addressing mega-dairy air emissions — despite a 2008 set of state task force recommendations that the agency do so.<sup>107</sup>

Instead, state incentives allow mega-dairies to profit from their manure waste while failing to curb pollution. This includes funding for factory farm gas (biogas), which comprises climate-warming methane created through anaerobic digestion of manure and other factory farm waste.<sup>108</sup> For instance, Threemile Canyon and its digester project received \$7.6 million in tax credits from Oregon’s previous Bovine Manure Tax Credit program and another \$10 million in tax-exempt financing from Oregon Private Activity Bonds.<sup>109</sup> This is all money thrown at a technology that does not eliminate manure waste while being prone to shutdowns and failure.<sup>110</sup> It is also often only economically viable on the largest factory farms, further tilting the playing field in their favor.<sup>111</sup> As of May 2022, the U.S. Environmental Protection Agency reported six operational anaerobic digesters in Oregon and an additional four that have shut down for various reasons (a 40 percent closure rate).<sup>112</sup>



PHOTO CC-BY-SA © ALEX MARSHALL / COMMONS.WIKIMEDIA.ORG

Oregon needs to end its failed mega-dairy experiment. Advocates and community groups, including the Stand Up to Factory Farms coalition, are calling for a moratorium on new and expanded mega-dairies.<sup>113</sup> This is the necessary first step toward preventing further expansion of this harmful industry. The state must also follow through with its mandate to address air pollution stemming from Oregon's mega-dairies. Finally, Oregon needs to invest in programs to assist dairy workers in a just transition from the dangerous and exploitive mega-dairy industry.

## **New York throws money at dairy industry giants at the expense of family-scale farms**

Former New York Governor Andrew Cuomo hosted a "Yogurt Summit" in 2012, announcing the goal of boosting yogurt manufacturing in the state to create jobs and help dairy farmers. The idea was to reduce regulatory burdens so that smaller farms could expand and produce an ever-greater amount of milk.<sup>114</sup> Additionally, the state planned significant amounts of public funding through grants, tax breaks, and other financial subsidies to companies manufacturing dairy products in the state.

Recipients included several multinational agribusinesses and large cooperatives like Dairy Farmers of America. Yet some projects folded after only a couple years of receiving subsidies — taking with them the jobs they were intended to create. Nevertheless, some corporations like Kraft successfully threatened to expand production in out-of-state plants if they did not receive additional funding.

This all happened at a time of continued dairy farm consolidation, which was already occurring in the decade and a half prior to the 2012 summit. During this time frame (1997 to 2012), New York experienced a more than 40 percent net loss in dairy farms. And it lost an additional 779 (14 percent) between 2012 and 2017.<sup>115</sup> As it turns out, the Cuomo administration's focus on dairy farm "expansion" — and its exorbitant subsidies to manufacturing companies — did nothing to stem the tide of farm foreclosures among New York's family-scale dairies.

Food & Water Watch identified nearly \$75 million in public money that flowed to just a handful of corporate or cooperative entities over two decades (just a snapshot of all dairy subsidies granted by New York). Most of this funding was granted on the promise of creating or retaining fewer than 2,000 jobs, some of which were quickly lost due to plant closures.

### *Yogurt manufacturing plant — Batavia, Genesee County (\$40.3 million)*

The plant opened in 2013 as a collaboration between PepsiCo and the German-based Theo Müller Group. The corporations reportedly received \$26.3 million in public support (and created just under 200 jobs).<sup>116</sup> However, the plant closed just two-and-a-half years into operation, due in part to competition from the Chobani yogurt brand. Dairy Farmers of America purchased the plant in 2015, then sold it to HP Hood in 2017. HP Hood received its own financial incentives package totaling up to \$14 million (in exchange for the creation of an estimated 230 new jobs).<sup>117</sup>

### *Kraft Foods plant — Avon, Livingston County (\$777,023)*

A 2010 Empire State Development (ESD) document highlights several state incentives given to a Kraft Foods plant in Avon, Livingston County over the course of 15 years. This included \$289,250 in training grants between 1995 and 2000 (in exchange for the creation of 677 jobs).<sup>118</sup> However, a 2002 economic slowdown made achieving the goal of creating 677 jobs difficult. Kraft reduced its target to 522 jobs and paid back \$12,227 of grant funding. Kraft then reduced the two Lunchables lines to one and automated the Cool Whip line to make it less labor-intensive, bringing total jobs to just 353 by 2009.<sup>119</sup>

Nevertheless, in 2009, Kraft approached ESD to ask for additional financial support to aid in building two new Lunchables lines. The ESD document notes that without state support, Kraft may have expanded at its Pennsylvania plant instead. New York State offered Kraft an additional \$250,000 to install one Lunchables line (for the creation of 50 new jobs).<sup>120</sup> ESD then offered a second \$125,000 capital grant, also matched by the state Office of Community Renewal, contingent on Kraft building an additional Lunchables line in Avon.<sup>121</sup>

### *Additional funding to Kraft Foods plants (\$4.7 million)*

ProPublica's New York State Subsidy Tracker highlights additional tax breaks offered to Kraft Foods. These include power discounts from the New York Power Authority to all four New York State plants in 2014, totaling nearly \$1.4 million, and a Regional Economic Development Councils grant in 2011 to the Lowville plant for \$400,000.<sup>122</sup> Kraft also took in subsidies from other states, including at least \$2.9 million in Pennsylvania (where the Lunchables expansion may have occurred had ESD not intervened — see above).<sup>123</sup>

### *Chobani plant — New Berlin, Chenango County (\$28 million)*

Kraft Foods closed a plant in New Berlin, which Chobani purchased in 2005. In 2011, Chobani, Inc. approached ESD for assistance in expanding the plant, stating that without financial support the company might have relocated closer to its Midwest suppliers. The New Berlin plant received up to \$28,000,000 in financial incentives from ESD (with the goal of retaining 386 jobs and creating 450 new ones).<sup>124</sup>

### *Craigs Station Creamery plant — York, Livingston County (\$2.65 million)*

The Craigs Station Creamery plant is a partnership between Craigs Station Ventures and Dairy Farmers of America. It received \$150,000 in Excelsior Jobs tax credits (creating 11 full-time jobs).<sup>125</sup> In 2016, the state awarded Craigs Station Ventures an additional \$2.5 million in funding for its Livingston County facility (in exchange for creating 30 jobs).<sup>126</sup> Both plants source milk from Craigs Station Ventures, which is made up of eight "family" dairy farms that together have over 13,000 head of cows.<sup>127</sup>

## **Millions of public dollars did not stem the tide of dairy farm closures**

The USDA's Census of Agriculture (released every five years) documents significant changes to the dairy industry from 1997 to 2017. New York State experienced a net loss in both dairy farms and dairy cows (50 percent and 10 percent, respectively). However, factory farm dairies (those with 500+ cows) surged



PHOTO CC-BY-SA © THE IMPULSIVE BUY / FLICKR.COM

by 160 percent in the state. The three counties where the aforementioned plants were located (Livingston, Genesee, and Chenango) also lost a significant number of total farms but gained factory farms. Only four New York counties (Yates, Westchester, Seneca, and Rockland) reported increases in total dairy farm operations.<sup>128</sup>

## **The U.S. Needs Dairy Supply Management**

Clearly, the traditional concept of supply and demand does not work for dairy farmers. As Sarah Lloyd, a dairy farmer and advocate, summarizes: "It looks nice in your economics textbook, but in reality, the signals are not working that way and farmers are going broke."<sup>129</sup> Milk supply does not increase much in the face of higher prices. Similarly, demand does not greatly impact retail costs. However, larger economic trends (such as recessions) can reduce milk demand and consequently farmgate prices for milk, as occurred during the 2008-2009 recession.<sup>130</sup> This activated government programs and resulted in spending of over \$1 billion to support the industry.<sup>131</sup> The U.S. system does such a poor job of stabilizing prices and providing livable incomes to farmers that it must compensate with significant subsidies to keep farmers afloat.<sup>132</sup>

Even with government aid, U.S. dairy farmers remain in a financial crisis. In recent years, the price of milk has been so low and production costs so high that the average farm cannot even break even (see Fig. 1). And since more farms now rely on purchased feed, volatile feed costs create additional risks. For instance, feed costs spiked in 2008 due to several factors, including increasing demand from the ethanol industry and weather events that curtailed supply.<sup>133</sup>

Dairy farmers themselves bear most of the risks in the U.S. system, compared to systems in other countries where risks are more evenly shared between producers and processors.<sup>134</sup> However, it was not always this way; U.S. policy previously worked to curb dairy overproduction and price swings (see page 8, “USDA Dairy Programs Over the Years”). And farmers of other commodities benefited from a more robust supply management program that guaranteed living wages for farmers and stable supplies of commodities to consumers. Remarkably, U.S. supply management programs have even succeeded with little to no budgetary cost to taxpayers.<sup>135</sup>

Several past and current examples illustrate what a U.S. dairy supply management program might look like — one designed to provide dairy farmers of all backgrounds with stable, living wages.



## New Deal supply management for commodity grains

Overproduction is a chief contributor to grain price slumps. However, farmers cannot flip a switch and halt production until prices recover; they are locked in to crops already in the ground, along with the debt for machinery and inputs geared toward commodity specialization. One of the few strategies farmers have to combat price slumps is to ramp up production even more, creating a positive feedback loop.<sup>136</sup>

The crisis of overproduction is what underpinned the Dust Bowl of the 1930s. But following years of organizing by farmer groups,<sup>137</sup> New Deal legislation brought sweeping reforms to U.S. farm policy that directly tackled overproduction. The Agricultural Adjustment Act of 1933 (recognized as the first Farm Bill) and other legislation established supply management programs for commodities like corn and wheat through a multipronged approach:<sup>138</sup>

- Price floors established minimum prices farmers received for their crops. These functioned as non-recourse loans to farmers by the USDA. “Non-recourse” means that loans were held on collateral — in this case, the grain harvest. So, when the market price of corn or wheat fell below the established price floor, the USDA collected the farmers’ harvests, essentially purchasing surplus grains rather than letting them flood the market.<sup>139</sup>
- Crops collected as collateral went into the federal grain reserve. When weather events or other disruptions reduced national crop yields, the government sold grain from the reserve, thereby recouping some costs and smoothing market volatility.<sup>140</sup>
- Additional tactics like import restrictions and marketing quotas further protected against oversupplies of grains flooding the market, which helped reduce price volatility and raise farm income.<sup>141</sup>

The central goal of many of these programs was to achieve parity — a crop price that covered farmers’ costs of production while providing living wages comparable with that of non-farm families.<sup>142</sup> They undoubtedly saved countless farms from foreclosure,

although the benefits were unequally shared among farmers of different racial and economic backgrounds.<sup>143</sup>

New Deal legislation also included price supports for dairy farmers, including establishing Federal Milk Marketing Orders (FMMOs), which created a price floor for milk (although milk sold to cooperatives remains exempt).<sup>144</sup> Later programs like the Milk Price Support Program (repealed in the 2014 Farm Bill) enabled the government to purchase excess dairy products from the market.<sup>145</sup> Programs like these curbed price swings to some degree. But without quotas to restrict dairy production, the programs failed to curb U.S. production and oversupply.<sup>146</sup>

## The Canadian Supply Management Committee

Canada's dairy policies bring together several tried-and-true supply management techniques to create a more comprehensive program than ever existed in the U.S. dairy program:

- The Canadian program allocates quotas to provinces, which farmers must own to sell milk to processors.<sup>147</sup>
- Like U.S. FMMOs, Canada also “pools” milk receipts to determine prices. However, participation is mandatory (that is, there are no exemptions for milk sold through cooperatives). Prices are set annually and adjusted for changes in inflation and production costs.<sup>148</sup>
- Canada does export a small percentage of its milk to stem oversupply<sup>149</sup> — not to expand export markets and join the global price race to the bottom.

These programs help stabilize Canadian farmgate milk prices, which are generally higher than the global average and were 42 percent higher than U.S. prices between 2016 and 2020.<sup>150</sup> As a result, Canadian farmers have a good chance of making a profit in most years and are buffered from global price swings.<sup>151</sup>

According to a study by Export Action Global, higher farmer income does not translate into higher retail prices for Canadians. Canadians on average pay

similar retail prices as Americans for fluid milk, and much less for certain manufactured products like butter, packaged cheddar, and yogurt. Canadian retail prices remain much lower than those of many other countries, including those with deregulated markets like Australia and New Zealand.<sup>152</sup> Moreover, because the Canadian system addresses the problem (oversupply) rather than the symptom (low milk prices), it largely avoids the need to subsidize farm income with taxpayer dollars.<sup>153</sup> U.S. consumers, on the other hand, pay twice for dairy products — once at the retail counter and again through taxes to subsidize low farm income.<sup>154</sup>

A significant benefit of the Canadian system is that it has restricted factory farm growth, largely through the quota system. Average herd sizes in Canada are smaller than in the U.S., with only a handful of farms housing more than 1,000 cows. Canada has also lost a smaller percentage of its farms over the past decades compared to the U.S.<sup>155</sup> Smaller herd sizes enable more pasture grazing, which can be more climate friendly. In fact, emissions on Canadian dairy farms have actually been declining since 1990 at a rate of around 1 percent per year. The climate footprint of a liter of Canadian milk is 2.5 times smaller than the global average (0.94 kilograms of carbon dioxide equivalent compared to 2.5 kilograms, respectively).<sup>156</sup>

The Canadian system is not without controversy. For instance, quotas limit the amount of milk that can be produced in a given year. Farmers must own quotas to sell milk, which can be prohibitively expensive and prevent beginning farmers from entering the industry.<sup>157</sup> The system is also under attack by global trade deals, including the United States-Mexico-Canada Agreement (USMCA), which in 2018 replaced NAFTA. Unlike NAFTA, USMCA requires a portion of duty-free dairy exports from the U.S. to Canada, threatening to undercut Canadian farmers. Tom Vilsack, while at the helm of USDEC and again while Secretary of Agriculture for the Biden administration, has been an outspoken critic of the Canadian system.<sup>158</sup> Dairy exporters likely see a potential opportunity to dump more cheap U.S. products on Canadian markets if they could only chip away at the country's supply management program.

However, some U.S. farmer-led groups have defended Canadian farmers, urging U.S. leaders to back off and instead learn from Canada's dairy program. They also point out that Canada's dairy market is far too small to make any dent in improving the welfare of American dairy farmers, even if trade barriers were removed.<sup>159</sup>

## Toward a U.S. dairy supply management system

Farmer-led groups like Dairy Together (led by the Wisconsin Farmers Union) are leading the movement toward establishing a comprehensive dairy supply management program in the U.S. Dairy Together argues that the U.S. need not perfectly emulate the Canadian system, but instead use it as a guide. For instance, recognizing how Canada's quota system can inhibit new farmers from entering, Dairy Together has suggested workarounds in its Dairy Revitalization Plan.<sup>160</sup>

One proposal is to use a "market access fee," where farmers would pay a fee to increase production beyond a base; that money would be redistributed to farmers who did not expand, thereby reducing the incentive to expand. The group has intentionally called the initiative "growth management" to make it clear that farmers can still choose to grow, but the program incentivizes this growth in a more orderly way that will not continually glut out the market and bring everyone's prices down. The proposal also includes exemptions on market access fees for new and beginning farmers as they get their farms established.<sup>161</sup>

While farmer-led groups work on completing an official proposal, they have identified key tenets of a fair and successful U.S. dairy supply management system. These include mandatory participation, fair dairy prices for farmers, reduced price volatility, the discouragement of farm consolidation, addressing exports, and not increasing barriers for entry for new farmers.<sup>162</sup>

Dairy farmers join a growing movement of farmers and advocates calling for comprehensive supply management for major U.S. commodities, including reestablishing New Deal-era programs that brought decades of prosperity to U.S. grain farmers. These programs suffered a similar fate to U.S. dairy programs, abandoned in favor of pro-corporate agendas that sought

deregulation and free trade.<sup>163</sup> Coalitions like Disparity to Parity are working to reestablish supply management programs for grains and dairy in the next Farm Bill, while actively working to address the racial and economic injustices inherent in the New Deal programs.<sup>164</sup>

## Conclusion and Recommendations

We cannot afford to maintain the status quo. Family-scale dairies are collapsing at an alarming rate, replaced by factory farms that introduce a host of environmental and social problems. Dairy farmers who manage to hang on face rising costs, negative returns, and mounting debt. They are forced to pay into a Checkoff program that funds corporate campaigns that further advantage mega-dairies to their detriment. Meanwhile, the USDA embraces the pro-corporate agenda of export expansion that pads the pockets of agribusinesses while requiring U.S. dairy prices to remain low. This is a costly decision that results in spending hundreds of millions each year in relief to dairy farmers who nevertheless still struggle to break even.

As illustrated in the previous two reports in this series, corporate consolidation is at the heart of our food system's dysfunction. Lax attitudes toward antitrust, embraced by leaders on both sides of the aisle, created space for a handful of powerful companies to amass power over each step of the food supply chain. The problem is too big for any single farmer or consumer to solve; we need our elected leaders to stand up to corporate power.



Fortunately, we have the blueprints for an alternative dairy system, and lessons from the past to inform how we can make future programs more inclusive. Here are some steps we can take:

## **Restore supply management in the next Farm Bill**

The Farm Bill is an omnibus law passed approximately every five years to establish and fund a wide range of food and agricultural policies. This includes everything from conservation programs to federal crop insurance to the Supplemental Nutrition Assistance Program. Farm Bill programs have enormous influence over our food system.<sup>165</sup> As such, we need to build the momentum to ensure that supply management is included in negotiations over the next Farm Bills.

Farm Bill negotiations usually devolve into disputes over how much to fund various programs, without enough funding to go around.<sup>166</sup> Fortunately, supply management programs reduce overall spending by addressing the problem (overproduction) rather than treating the symptom (low prices).<sup>167</sup> In fact, programs issuing non-recourse loans can operate at little to no cost since the USDA can sell crops and dairy products collected as collateral.<sup>168</sup>

## **Reform — rather than remove — the current farm safety net**

Immediately ending current farm payment programs would only drive more farmers off the land. Instead, we can realign them with the climate reality while moving toward a system that actually manages production. We must also ban factory farms from receiving public funding from conservation programs and guaranteed loans.

## **Stop the mega-merger frenzy among agribusinesses**

Sample legislation includes the Food and Agribusiness Merger Moratorium and Antitrust Review Act,<sup>169</sup> introduced by Sen. Cory Booker (D-NJ) and Rep. Marc Pocan (D-WI-2). It would enact an immediate moratorium on all large agribusiness mergers. The bill would also create a commission to evaluate the impacts of current consolidation levels

on farmers and consumers and make recommendations to strengthen antitrust oversight. The moratorium would remain in place until Congress passes comprehensive legislation addressing market consolidation in the agribusiness sector.

## **Ban factory farms and fund the transition to sustainable systems**

We need to stop these environmental catastrophes and level the playing field for more sustainable livestock producers. Legislation like Sen. Booker and Rep. Ro Khanna's (D-CA-17) Farm System Reform Act (FSRA)<sup>170</sup> would immediately ban all new, large factory farms<sup>171</sup> and the expansion of existing ones. It would phase out existing large factory farms by 2040.

The FSRA would also invest in a "just transition" by creating a buy-out program for existing factory farms. Farm operators could use the funds to pay off debt (a significant obstacle for those trying to exit contract growing) or transition to more sustainable systems, such as pasture-based livestock or specialty crops. Notably, this funding would only be available to farmers for projects on land they own, ensuring that corporate giants will not pocket funds.

The FSRA would take additional steps to level the playing field between farmers and agribusinesses, such as:

- Holding integrating companies responsible for manure waste produced on factory farms;
- Strengthening USDA oversight and enforcement of anticompetitive practices through improvements to the Packers & Stockyards Act; and
- Restoring mandatory Country of Origin Labeling (MCOOL) on beef and pork products and extending it to dairy.

## **Reject false climate solutions and close "conservation" loopholes that fund factory farms**

Money from conservation programs flows to false solutions, such as digesters on factory farms, which generate biogas from manure and other waste.<sup>172</sup> Biogas is a dirty, polluting energy.<sup>173</sup> Digesters built with taxpayer money simply prop up factory farms

and entrench fossil fuel infrastructure. Instead, we should support farmers in shifting to smaller, integrated crop-and-livestock systems where they can sustainably recycle manure as crop fertilizer.

## Renegotiate trade deals to ease market volatility and stop undermining developing world farmers

Export markets have proven unreliable and ineffective at managing surpluses. We need to renegotiate trade deals to lessen the reliance on foreign markets and stop subsidizing cheap feed crops that fuel factory

farm growth abroad. Moreover, the U.S. should stop commodity “dumping” that creates cycles of dependency, and instead fund local initiatives to increase food sovereignty.

Corporate interests have spent decades — and fortunes — lobbying against supply management and other commonsense farm policies that would bring prosperity to rural America.<sup>174</sup> Our dairy farmers deserve better. We must elect leaders who are willing to stand up to agribusinesses and champion legislation to reshape our food system so that it works for all farmers, food chain workers, and consumers.

## Endnotes

- MacDonald, James M. et al. U.S. Department of Agriculture (USDA). Economic Research Service (ERS). “Consolidation in U.S. Dairy Farming.” Economic Research Report No. 274. July 2020 at 11; Liebrand, Carolyn. USDA. Rural Business-Cooperative Service. “Structural Change in the Dairy Cooperative Sector, 1992-2000.” RBS Research Report 187. October 2001 at iii, 1, and 3.
- MacDonald et al. (2020) at 3 and 5.
- USDA ERS. Commodities Costs and Returns. Available at <https://www.ers.usda.gov/data-products/commodity-costs-and-returns/commodity-costs-and-returns/#Historical%20Costs%20and%20Returns:%20Milk>. Accessed June 2022.
- Lloyd, Sarah E. University of Wisconsin, Madison. “Dairy together: Building a farmer-led movement for supply management.” *Disparity to Parity*. 2021; Sharma, Shefali. Institute for Agriculture and Trade Policy (IATP). “Milking the Planet: How Big Dairy Is Heating Up the Planet and Hollowing Rural Communities.” June 2020 at 10 to 11; MacDonald et al. (2020) at 6 to 7.
- Hansen-Kuhn, Karen and Ben Lilliston. IATP. “The challenge to Canadian dairy supply management and climate change.” May 17, 2021; MacDonald et al. (2020) at 5 and 13.
- Food & Water Watch (FWW) analysis of USDA. National Agricultural Statistics Service (NASS). Quick Stats. Available at <https://quickstats.nass.usda.gov>. Accessed June 2022.
- Ayazi, Hossein and Elsadig Elsheikh. University of California, Berkeley. Haas Institute for a Fair and Inclusive Society. “The US Farm Bill: Corporate Power and Structural Racialization in the United States Food System.” October 2015 at 26 to 27; Clark, Ann E. “Benefits of re-integrating livestock and forages in crop production systems.” *Journal of Crop Improvement*. Vol. 12, Iss. 1-2. 2004 at 407 to 408.
- Clark (2004) at 410 and 418 to 419.
- FWW analysis of USDA NASS. Quick Stats. Accessed June 2022. We define commercial dairies as those with 10+ cows, as used in MacDonald et al. (2020) at 10.
- MacDonald et al. (2020) at 10 to 11.
- FWW analysis of USDA NASS. Quick Stats. Accessed June 2022; MacDonald et al. (2020) at 10 to 13, table 2.
- MacDonald et al. (2020) at 11.
- Ibid.* at 13, table 2 and 21; Gerber, P. J. et al. (2013). *Tackling Climate Change Through Livestock: A Global Assessment of Emissions and Mitigation Opportunities*. Rome: Food and Agriculture Organization of the United Nations (FAO) at xii.
- U.S. Environmental Protection Agency (EPA). “Inventory of U.S. Greenhouse Gas Emissions and Sinks, 1990-2020.” EPA 430-R-22-003. April 2022 at 5-11 and 5-13, table 5-6; USDA 1992 Census; FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- Hansen-Kuhn and Lilliston (2021).
- Bórawski, Piotr et al. University of Warmia and Mazury, Olsztyn and Pennsylvania State University. “Production and International Trade of Milk and Dairy Products in the USA.” 2015 at 201. Available at <https://wnus.edu.pl/sip/file/article/download/1040.pdf>.
- Ogburn, Stephanie Paige. “A citizen activist forces New Mexico’s dairies to clean up their act.” *High Country News*. December 5, 2011; Weida, William J. The Colorado College. “A Synopsis of Potential Impacts From Dairies on a Regional Economy.” March 1, 2003 at 1 to 2; Border 2012 Texas-New Mexico-Chihuahua Regional Work Group Public Meeting. [Minutes]. Anthony, New Mexico. November 4, 2010 at 2 to 3.
- FWW analysis of Oregon Department of Agriculture (ODA). AFO Data. December 2021. On file with FWW; U.S. Census Bureau. Quick Facts. Available at <https://www.census.gov/quickfacts/fact/table/US/PST045221>. Accessed February 2022; Census Reporter. Available at <https://censusreporter.org>. Accessed February 2022.
- U.S. Government Accountability Office (GAO). “Dairy Cooperatives: Potential Implications of Consolidation and Investments in Dairy Processing for Farmers.” GAO-19-695R. September 2019 at 1 to 3.
- Liebrand (2001) at iii, 1, and 3; Shields, Dennis A. Congressional Research Service (CRS). “Consolidation and Concentration in the U.S. Dairy Industry.” R41224. April 2010 at 10, 11, and 15.
- Liebrand (2001) at 1 and 3, table 1; Lee, Seth. IBISWorld. “Dairy Farms in the US.” Industry Report 11212. July 2022 at 4 and 7; Troncoso, Kimberly. IBISWorld. “Dairy Product Production in the US.” Industry Report 31151. July 2022 at 11.
- Lee (2022) at 4, 7, and 17.
- GAO (2019) at 4 to 5.
- Ibid.* at 5 to 7.
- Shields (2010) at 11 and 17 to 19.
- Astley, Mark. “DFA to pay \$50m to settle Northeast US milk price lawsuit.” *Dairy Reporter*. July 15, 2014.
- Leonard, Mike. “Top U.S. dairy co-op hit with antitrust lawsuit over farmer pay.” *Bloomberg Law*. April 5, 2022.
- Liebrand (2001) at 1; Shields (2010) at 13.
- GAO (2019) at 3.

- 30 Shields (2010) at summary and 16 to 17.
- 31 MacDonald, James M. USDA ERS. "Organic dairy farms realized both higher costs and higher gross net returns than conventional dairy farms." September 1, 2020; Carlson, Andrea. USDA ERS. "Investigating retail price premiums for organic foods." May 24, 2016. Available at <https://www.ers.usda.gov/amber-waves/2016/may/investigating-retail-price-premiums-for-organic-foods>.
- 32 MacDonald (2020).
- 33 MacDonald et al. (2020) at summary.
- 34 Rathke, Lisa. Associated Press. "Contracts ending, Northeast organic dairies ask consumers to jump in." *Press Herald* (ME). January 14, 2022.
- 35 Geiger, Corey. "Organic dairy accounts for 2.3% of the market." *Hoard's Dairyman*. December 28, 2020.
- 36 Shields, Dennis A. CRS. "Dairy Market and Policy Issues." R40205. October 2009 at 4 to 5.
- 37 Cessna, Jerry et al. USDA ERS. "Growth of U.S. Dairy Exports." LDPM-270-01. November 2016 at 21.
- 38 CRS. "Federal Milk Marketing Orders: An Overview." R45044. Updated October 2017 at 2 to 5.
- 39 MacDonald et al. (2020) at 5; Hansen-Kuhn, Karen. IATP. "Reshaping supply management in the US: Looking North and South for Inspiration." *Disparity to Parity*. March 30, 2021.
- 40 McMichael, Philip. "The impact of globalisation, free trade and technology on food and nutrition in the new millennium." *Proceedings of the Nutrition Society*. Vol. 60. 2001 at 217 to 219; Vitaliano, Peter. "Global dairy trade: Where are we, how did we get here and where are we going? *International Food and Agribusiness Management Review*. Special Issue – Vol. 19, Iss. B. 2016 at 28 to 33; Cessna (2016) at 1.
- 41 Vitaliano (2016) at 28 to 31.
- 42 *Ibid.*; Cessna (2016) at 1, 2, and 22.
- 43 CRS (2017) at 1 to 6.
- 44 Shields (2009) at 5; Cessna (2016) at 21.
- 45 Cessna (2016) at 22; Shields (2009) at 8 to 9.
- 46 Cessna (2016) at 22.
- 47 Shields (2009) at 1 to 3 and Table I.
- 48 CRS. "U.S. Dairy Programs After the 2014 Farm Bill (P.L. 113-79)." IF10195. October 2014 at 1 to 2; MacDonald et al. (2020) at 35 to 38.
- 49 FAO. "Dairy Market Review: Emerging Trends and Outlook." December 2021 at 10.
- 50 FWW analysis of USDA. Foreign Agriculture Service (FAS). Production, Supply, and Distribution data. Available at <https://apps.fas.usda.gov/psdonline/app/index.html#/app/advQuery>. Accessed August 2022. Includes exports of butter, cheese, dry whole milk powder, fluid milk, and nonfat dry milk, measured by weight.
- 51 MacDonald et al. (2020) at 4.
- 52 FAO (2021) at 10.
- 53 Loux, William. U.S. Dairy Export Council (USDEC). "U.S. dairy exports set multiple records in 2021." February 28, 2021; Lee (2022) at 8.
- 54 Cessna (2016) at 1; MacDonald et al. (2020) at 4 to 5.
- 55 Cessna (2016) at 1; Vitaliano (2016) at 32.
- 56 USDA ERS. Commodities Costs and Returns. Available at <https://www.ers.usda.gov/data-products/commodity-costs-and-returns/commodity-costs-and-returns/#Historical%20Costs%20and%20Returns:%20Milk>. Accessed June 2022.
- 57 Ni Mhurchu, Cliona et al. "Food prices and consumer demand: Differences across income levels and ethnic groups." *PLoS ONE*. Vol. 8, Iss. 10. October 2013 at 1.
- 58 Shields (2010) at 3 to 4; Carpenter, Julia. "The 'sticky' high prices unlikely to come down any time soon." *Wall Street Journal*. September 29, 2022.
- 59 Stewart, Hayden. USDA ERS. "Processing and marketing blunt the impact of volatile farm prices on retail dairy prices." August 1, 2016.
- 60 U.S. Department of Labor (DOL). Bureau of Labor Statistics (BLS). Consumer Price Index (CPI) Databases. Available at <https://www.bls.gov/cpi/data.htm>. Accessed October 2022.
- 61 Vitaliano (2016) at 28.
- 62 USDEC. Think USDA Dairy. "Common questions." Available at <https://www.thinkusadairy.org/common-questions>. Accessed October 2022 and on file with FWW; Cessna (2016) at 23.
- 63 GAO. "Agricultural Promotion Programs: USDA Could Build on Existing Efforts to Further Strengthen Its Oversight." GAO-18-54. November 2017 at 1 and 6; Shields (2009) at 16.
- 64 USDA. Agricultural Marketing Service (AMS). "U.S. Department of Agriculture Report to Congress on the Dairy Promotion and Research Program and the Fluid Milk Processor Promotion Program: 2018 Program Activities." November 2020 at 4, 23, and 36, table 3-2.
- 65 FWW analysis of USDA AMS annual reports to Congress on the National Dairy Promotion and Research Program and National Fluid Milk Processor Promotion Program.
- 66 USDA AMS (2020) at 4 and 12.
- 67 *Ibid.* at 12 to 13 and 68 to 70; Rainey, Clint. "The mad cheese scientists fighting to save the dairy industry." *Bloomberg*. July 19, 2017.
- 68 FWW analysis of USDA AMS annual reports to Congress on the National Dairy Promotion and Research Program and National Fluid Milk Processor Promotion Program.
- 69 USDEC and National Milk Producers Federation. Comments submitted to the Office of the United States Trade Representative. Docket No. USTR-2021-0016. October 26, 2021 at 1.
- 70 Vitaliano (2016) at 31 to 34; Harden, Krysta. USDEC. "How exports underpin U.S. dairy's success." April 6, 2022; Cessna (2016) at 1 to 2.
- 71 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 72 Land O'Lakes Inc. "2021 Annual Report." 2022 at 6.
- 73 Dairy Farmers of America. "Strategic investments continue to strengthen the cooperative: DFA reports 2021 financial results." March 23, 2022.
- 74 Hagens Berman. "\$52 million settlement reached over dairy industry's nationwide price-fixing conspiracy, cow killing." September 8, 2016.
- 75 Eller, Donnelle. "Milkman in chief: Vilsack confirms he'll head U.S. Dairy Export Council." *Des Moines Register*. Updated January 18, 2017.
- 76 Llewellyn, Courtney. "More, new and better markets." *Country Folks*. March 14, 2022.
- 77 Rogers, Paul and Mark O'Keefe. USDEC. "With global milk production constrained, Harden sees opportunity to expand U.S. dairy exports." May 5, 2022.
- 78 Blayney, Don and Mary Anne Normile. USDA ERS. "Economic Effects of U.S. Dairy Policy and Alternative Approaches to Milk Pricing: Report to Congress." Administration Publication No. 076. July 2004 at 3 to 5, 13, and 27 to 29; Hanawa Peterson, Hikaru. Kansas State University. "Geographic Changes in U.S. Dairy Production." Presented at the Annual Meeting of the American Agricultural Economics Association. Long Beach, CA. July 28-31, 2002 at 1 to 4; MacDonald et al. (2020) at 1, 5 to 7, and 18.
- 79 Davis, Christopher G. and William Hahn. "Assessing the status of the global dairy trade." *International Food and Agribusiness Management Review*. Special Issue – Vol. 19, Iss. B. 2016 at 5.
- 80 MacDonald et al. (2020) at 15 to 16, figure 8.
- 81 Oregon Department of Environmental Quality (OR DEQ). "Second Lower Umatilla Basin Groundwater Management Area Local Action Plan." October 28, 2020 at 2, 14, and 34 to 36.
- 82 FWW analysis of ODA. "OR AFO Spreadsheet 2021." 2021. On file with FWW.
- 83 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.

- 84 Sharma (2020) at 10 to 11; MacDonald et al. (2020) at 6 to 7.
- 85 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 86 *Ibid.*
- 87 Oregon Dairy and Nutrition Council (ODNC). “2020 State of the Oregon Dairy Industry.” 2020 at 3.
- 88 ODA. “Oregon Agricultural Statistics & Directory 2022.” January 2022 at 5.
- 89 Green, Aimee. “Tillamook cheese comes mostly from cows kept in concrete and dirt feedlots, not green pastures, lawsuit says.” *Oregonian*. August 21, 2019.
- 90 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 91 FWW analysis of ODA (2022) at 17 and 54.
- 92 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 93 FWW analysis of DOL BLS. Quarterly Census of Employment and Wages (QCEW). Available at <https://www.bls.gov/downloadable-data-files.htm>. Accessed November 2022; FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 94 FWW analysis of DOL BLS. QCEW. Available at <https://www.bls.gov/cew/downloadable-data-files.htm>. Accessed November 2022.
- 95 Lee (2022) at 22.
- 96 FWW analysis of DOL BLS. “Animal Production: NAICS 112.” Available at <https://www.bls.gov/iag/tgs/iag112.htm>, and “Oil and Gas Extraction: NAICS 211.” Available at <https://www.bls.gov/iag/tgs/iag21.htm>. Accessed September 2022.
- 97 GAO. “Workplace Safety and Health: Additional Data Needed to Address Continued Hazards in the Meat and Poultry Industry.” GAO-16-337. April 2016 at 47.
- 98 New Mexico Center on Law and Poverty. “Human Rights Alert: New Mexico’s Invisible and Downtrodden Workers.” July 2013 at 2 to 3 and 6.
- 99 Reynolds, Stephen J. et al. “Systematic review of respiratory health among dairy workers.” *Journal of Agromedicine*. Vol. 18. 2013 at abstract.
- 100 Lower Umatilla Basin Groundwater Management Area. “Maps.” Available at <https://lubgwma.org/maps>. Accessed February 2022; Burkholder, JoAnn et al. “Impacts of waste from concentrated animal feeding operations on water quality.” *Environmental Health Perspectives*. Vol. 115, No. 2. February 2007 at 310; Ward, Mary H. et al. “Drinking water nitrate and human health: An updated review.” *International Journal of Environmental Research and Public Health*. Vol. 15, No. 7. 2018 at 1; OR DEQ. [Fact sheet]. “Nitrate in Drinking Water.” Updated May 1, 2020.
- 101 Samayoa, Monica. “Morrow County declares emergency over high nitrate levels in wells.” *Oregon Public Broadcasting*. June 10, 2022.
- 102 Gittelsohn, Phoebe et al. “The false promises of biogas: Why biogas is an environmental justice issue.” *Environmental Justice*. May 2021 at 2.
- 103 Lobao, Linda and Curtis W. Stofferahn. “The community effects of industrialized farming: Social science research and challenges to corporate farming laws.” *Agriculture and Human Values*. Vol. 25, Iss. 2. June 2008 at 220 to 221 and 225; Durrenberger E. Paul, and Kendall M. Thu. “The expansion of large-scale hog farming in Iowa: The applicability of Goldschmidt’s findings fifty years later.” *Human Organization*. Vol. 55, No. 4. Winter 1996 at 411 to 412; Lyson, Thomas A. and Rick Welsh. “Agricultural industrialization, anticorporate farming laws, and rural community welfare.” *Environment and Planning A: Economy and Space*. Vol. 37, Iss. 8. August 1, 2005 at 1487 to 1488.
- 104 Andrews, David and Timothy J. Kautza. “Impact of Industrial Farm Animal Production on Rural Communities.” Report of the Pew Commission on Industrial Farm Animal Production. 2008 at v to vi; Donham, Kelley J. et al. “Community health and socioeconomic issues surrounding concentrated animal feeding operations.” *Environmental Health Perspectives*. Vol. 115, No. 2. February 2007 at 317; Foltz, Jeremy D. et al. “Do purchasing patterns differ between large and small dairy farms? Econometric evidence from three Wisconsin communities.” *Agricultural and Resource Economics Review*. Vol. 31, No. 1. April 2002 at 37.
- 105 Hribar, Carrie. National Association of Local Boards of Health. “Understanding Concentrated Animal Feeding Operations and Their Impact on Communities.” 2010 at 11; Srubas, Paul. “Living near CAFOs reduces property value, DOR rules.” *USA Today Network–Wisconsin*. Updated November 28, 2017.
- 106 Plaven, George. “New application submitted for Easterday Dairy.” *Capital Press* (OR). July 30, 2021.
- 107 Baumardt, Alex. “Environmental, public health groups want state to regulate air pollution from large dairies.” *Oregon Capital Chronicle*. August 30, 2022; Oregon Dairy Air Quality Task Force. “Final Report to the Department of Environmental Quality & Department of Agriculture.” July 2008 at 1.
- 108 EPA. “How Does Anaerobic Digestion Work?” Updated March 2, 2022. Available at <https://www.epa.gov/agstar/how-does-anaerobic-digestion-work>; Kuo, Jeff. California State University, Fullerton. “Air Quality Issues Related to Using Biogas From Anaerobic Digestion of Food Waste.” Prepared for the California Energy Commission. CEC-500-2015-037. March 2015 at 2, 9, and 10.
- 109 ODA. Bovine Manure Tax Credit Program. Available at <https://data.oregon.gov/Revenue-Expense/Bovine-Manure-Tax-Credit-Program-Dept-of-Agriculture/cdnv-r4ea/data>. Accessed February 2022; Loew, Tracy. “2 Oregon daily manure digesters cited for air quality violations.” *Salem Statesman Journal* (OR). Updated December 22, 2021.
- 110 Katers, John and Ryan Holzem. “4 reasons why anaerobic digesters fail.” *Progressive Dairyman*. June 29, 2015.
- 111 Cowley, Courtney and B. Wade Brorsen. “Anaerobic digester production and cost functions.” *Ecological Economics*. Vol. 152. October 2018 at sections 6 and 7.
- 112 EPA. AgSTAR Livestock Anaerobic Digester Database. Updated May 2022. Available at <https://www.epa.gov/agstar/livestock-anaerobic-digester-database>. Accessed September 2022.
- 113 Stand Up to Factory Farms. “About Us.” Available at <https://standuptofactoryfarms.org>. Accessed September 2022 and on file with FWW.
- 114 New York State (NYS). [Press release]. “Governor Cuomo hosts first New York State Yogurt Summit.” August 15, 2012.
- 115 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 116 NYS. Empire State Development (ESD). [Press release]. “Spotlight on success: Muller Quaker Dairy and PepsiCo.” August 7, 2013.
- 117 Watson, Elaine. “Muller Quaker Dairy JV ends in disappointment, but what went wrong?” *Food Navigator*. December 11, 2015; Owens, Howard B. “HP Hood chairman confident \$200 million investment in Batavia will pay off for dairy company and community.” *Batavian* (NY). July 18, 2017; Fink, James. “From pumpkin farm to \$500 million agri-business hub in Genesee County.” *Buffalo Business First*. November 30, 2020.
- 118 ESD. “Avon (Livingston County) — Kraft Foods Global Capital — Empire State Economic Development Fund — General Development Financing (Capital Grant).” February 19, 2010 at 3. Available at [https://cdn.esd.ny.gov/aboutus/data/boardmaterials/February2010/09\\_Kraft.pdf](https://cdn.esd.ny.gov/aboutus/data/boardmaterials/February2010/09_Kraft.pdf). On file with FWW.
- 119 ESD (2010) at 1 and 3.
- 120 *Ibid.* at 1 and 3; “US: Kraft secures funding for NY expansion.” *Just Food*. June 4, 2009.
- 121 ESD (2010) at 1 and 3.
- 122 ProPublica. New York State Subsidy Tracker. Available at <https://projects.propublica.org/subsidies>. Accessed February 2018 and on file with FWW.
- 123 Good Jobs First. Subsidy Tracker. Available at <https://subsidytracker.goodjobsfirst.org>. Accessed November 2022 and on file with FWW.
- 124 ESD. Meeting of the Directors. [Minutes]. July 18, 2012 at 53 to 56. On file with FWW; “Yogurt maker gets \$18 million to aid expansion in New Berlin.” *CNY Central*. June 29, 2011; “ESD approves \$1.5M for Chobani.” *Evening Sun* (NY). June 19, 2012.
- 125 NYS. Finger Lakes Regional Economic Development Council. [Press release]. “Empire State Development recognizes Craigs Station Creamery’s success on its first anniversary.” September 29, 2015.

## The Economic Cost of Food Monopolies: The Dirty Dairy Racket

- 126 NYS. [Press release]. "Governor Cuomo announces WNY Cheese Enterprise to open new \$49.7 million production facility in Livingston County." December 23, 2016; Jackson, Ken. "Western NY Cheese Enterprise to open new \$49.7 million production facility in Livingston County." *Urban CNY*. December 26, 2016.
- 127 NYS (2015); NYS (2016).
- 128 FWW analysis of USDA NASS. Quick Stats. Accessed June 2022.
- 129 Lloyd (2021).
- 130 MacDonald et al. (2020) at 3.
- 131 Shields (2010) at 1.
- 132 Environmental Working Group (EWG). Farm Subsidy Database. Available at <https://farm.ewg.org/index.php>. Accessed October 2022 and on file with FWW.
- 133 Shields (2009) at 3.
- 134 Bozic, Marin and Blimling and Associates. "Modernizing US Milk Pricing: An Exploration." Working paper. January 2022 at 21.
- 135 Graddy-Lovelace, Garrett and Adam Diamond. "From supply management to agricultural subsidies — and back again? The U.S. Farm Bill & agrarian (in)viability." *Journal of Rural Studies*. Vol. 50. February 2017 at 76; Teigen, Lloyd D. USDA ERS. "Agricultural Parity: Historical Review and Alternative Calculations." Agricultural Economic Report No. 571. June 1987 at iii; McMinimy, Mark A. CRS. "U.S. Sugar Program Fundamentals." R43998. April 6, 2016 at summary.
- 136 Lauck, Jon. "After deregulation: Constructing agricultural policy in the age of 'Freedom to Farm.'" *Drake Journal of Agricultural Law*. Vol. 5, No. 1. Spring 2000 at 5 and 6.
- 137 Rasmussen, Wayne D. et al. USDA ERS. "A Short History of Agricultural Adjustment, 1933-75." Agriculture Information Bulletin No. 391. March 1976 at 1 to 2; Belz, Adam. "Corn prices keep slumping, and farmers keep planting more." *Star Tribune*. May 22, 2020.
- 138 Rasmussen et al. (1976) at 2 to 6; McGranahan, Devan A. et al. "A historical primer on the US farm bill: Supply management and conservation policy." *Journal of Soil and Water Conservation*. Vol. 68, No. 3. May/June 2013 at 67A to 69A.
- 139 Rasmussen et al. (1976) at 2 to 3; Schaffer, Harwood D. et al. Agricultural Policy Analysis Center. "An Analysis of a Market-Driven Inventory Systems (MDIS)." April 2012 at 60 to 62.
- 140 Breimyer, Harold F. "Agricultural philosophies and policies in the New Deal." *Minnesota Law Review*. Vol. 68. 1984 at 346 to 347; Schaffer (2012) at 62.
- 141 Rasmussen et al. (1976) at 3 to 4; Reynolds, Bruce J. USDA. Rural Business-Cooperative Service. "Black Farmers in America, 1865-2000: The Pursuit of Independent Farming and the Role of Cooperatives." RBS Research Report 194. October 2002 at 8 to 9.
- 142 Teigen (1987) at iii.
- 143 Rasmussen et al. (1976) at 3 to 4; Reynolds (2002) at 8 to 9.
- 144 CRS (2017) at 2 to 5.
- 145 Shields (2009) at 5; Cessna (2016) at 21.
- 146 Belongia, Michael T. Federal Reserve Bank of St. Louis. "The Dairy Price Support Program: A Study of Misdirected Economic Incentives." February 1984 at 6 and 14.
- 147 Bozic and Blimling and Associates (2022) at 89.
- 148 *Ibid.* at 91 to 93.
- 149 Hansen-Kuhn and Lilliston (2021).
- 150 Bozic and Blimling and Associates (2022) at 87 to 88.
- 151 *Ibid.* at 95.
- 152 Export Action Global. "Are Canadian Consumers and Farmers Better Off With the Canadian Model?" April 2018 at 30.
- 153 National Farmers Union of Canada. "Strengthening Supply Management: Defending Canadian Control of Our Market Space and Advocating Food Sovereignty." January 2016 at 4.
- 154 Export Action Global (2018) at 21.
- 155 Bozic and Blimling and Associates (2022) at 90 and 95.
- 156 Hansen-Kuhn and Lilliston (2021).
- 157 Bozic and Blimling and Associates (2022) at 89; Hansen-Kuhn (2021).
- 158 Hansen-Kuhn (2021); Edmiston, Jake. "U.S. hits back at Canada's dairy rule." *Financial Times*. May 25, 2022.
- 159 Hansen-Kuhn (2021).
- 160 *Ibid.*
- 161 Lloyd (2021); FWW communication with Lloyd, Sarah. University of Wisconsin, Madison. October 2022.
- 162 Lloyd (2021).
- 163 Ayazi and Els Sheikh (2015) at 23 to 26; McGranahan et al. (2013) at 68A to 72A; Rasmussen (1976) et al. at 4 and 6 to 14.
- 164 See <https://disparitytoparity.org>.
- 165 Ayazi and Els Sheikh (2015) at 8 and 14; McGranahan et al. (2013) at 67A.
- 166 Good, Deith. "Farm bill negotiations: Tensions persist." *Farm Policy News*. October 8, 2018.
- 167 Schaffer (2012) at 60 to 61.
- 168 Graddy-Lovelace and Diamond (2017) at 76.
- 169 S. 4245. 117<sup>th</sup> Cong. (2022).
- 170 S. 2332. 117<sup>th</sup> Cong. (2021).
- 171 For the purposes of the bill, large factory farms are those as defined by EPA at 40 CFR § 122.23(b)(4).
- 172 FWW analysis of Environmental Quality Incentives Program payments, using data received from EWG; Environmental and Energy Study Institute. "Biogas: Converting Waste to Energy." October 2017 at 1; EPA. "Basic information about anaerobic digestion (AD)." Available at <https://www.epa.gov/anaerobic-digestion/basic-information-about-anaerobic-digestion-ad>.
- 173 Kuo (2015) at 2, 9, and 10.
- 174 Ayazi and Els Sheikh (2015) at 26 to 27; Clark (2004) at 15; Open Secrets. "Sector profile: Agribusiness." Available at <https://www.opensecrets.org/federal-lobbying/sectors/summary?id=A>. Accessed December 2021 and on file with FWW; Duvall, Zippy. American Farm Bureau Federation. "Your voice is essential to our country's success." July 21, 2021.

**Food & Water Watch** mobilizes regular people to build political power to move bold and uncompromised solutions to the most pressing food, water and climate problems of our time. We work to protect people's health, communities and democracy from the growing destructive power of the most powerful economic interests.



(202) 683-2500

[foodandwaterwatch.org](https://www.foodandwaterwatch.org) • [info@fwwatch.org](mailto:info@fwwatch.org)  
Copyright © January 2023 Food & Water Watch