



# The Critical To-Do List for Organic Agriculture

46

Recommendations for the President



Swette Center for  
Sustainable Food Systems

Arizona State University



# The Critical To-Do List for Organic Agriculture

The Swette Center for Sustainable Food Systems develops innovative ideas and solutions to the many challenges of current food systems. Taking a holistic and transdisciplinary approach, the Center’s work encompasses water and energy use, carbon footprint and nutrition, innovations in agtech, and the well-being and livelihood of farmers and others working in food systems.

Swette Center (pronounced “swee-tee”) faculty recognize that one-dimensional metrics, like yield per hectare, are important but blind us to many opportunities if not considered within a broader food systems approach. Increasingly, food system analysis is recognized for its power to provide greater understanding of complex interactions and real world dynamics than other kinds of lens, frameworks, or models. Food system analysis can help policymakers and others understand potential trade-offs of proposed interventions, technologies, and policies by taking into account the many aspects of food and agriculture typically studied — agricultural land, inputs, fisheries, infrastructure, labor, and the like — and placing these component parts within an integrated social and environmental context.

At the Swette Center, faculty are reinventing research processes, and by doing so, the Center is producing policy-relevant knowledge to make the consequences of our food choices explicit in quantitative and qualitative terms.

Swette Center for Sustainable Food Systems, Arizona State University  
June 2021

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## Recommendations for the President



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## COMING SOON

In fall 2021, the Swette Center for Sustainable Food Systems will co-publish a report with Natural Resources Defense Council (NRDC) and Californians for Pesticide Reform that details the many ways in which organic agriculture combats climate change and contributes to improved health and economic wellbeing.

The 46 recommendations contained herein are an outgrowth of discussions between our three organizations during the past year as we worked together to produce a comprehensive report based on cutting edge science. The Swette Center decided to publish these recommendations in advance of the full report, given the interest of the new Administration and Congress in pursuing an organic agenda.

We recognize our colleagues for their many insights. Thanks to Lena Brook, Director of the Food Campaigns, and Allison Johnson, Staff Attorney, from NRDC's People and Communities Program. Thanks to Co-Director of Californians for Pesticide Reform Sarah Aird. Finally, thanks to Swette Center for Sustainable Food Systems Senior Fellow Nadia El-Hage Scialabba.

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## RECOMMENDATIONS

## AT A GLANCE

46

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### USDA National Organic Program – Key Regulatory Standards at a Glance

Land must be managed organically for three years prior to organic certification. Once this chemical-cleansing period has passed, a USDA-accredited third-party organization performs an on-site inspection to ensure that all NOP requirements are met. To maintain organic certification, annual inspection is required for all farms, ranches, and processing operations. USDA maintains a publicly available list of all certified operations on the NOP website.

#### Key regulatory standards:

- Prohibits use of almost all synthetic pesticides and fertilizers.
- Prohibits use of genetic engineering – including recombinant DNA and other technologies.
- Prohibits use of ionizing radiation and sewage sludge – which may contain heavy metals.
- Requires practices to build soil quality – such as adding animal or green manures and compost.
- Requires practices to conserve soil – such as cover cropping, mulching, and conservation tillage.
- Requires crop rotation – to help manage pests and disease, build soil organic matter, prevent soil erosion, and increase farm biodiversity.

#### Organic livestock systems

- Prohibits use of antibiotics and growth hormones.
- Requires access to pasture for ruminants during the grazing season.
- Requires use of organic feed – including all feed, pasture, forage, and plant-based bedding.
- Livestock must be raised organically for the last third of gestation – birds for poultry and egg production must be raised organically by the second day of life.
- Requires livestock vaccination – and other disease-preventative techniques.

#### Organic handlers

- Prohibits mixing of organic and conventional products along the supply chain.
- Requires organic pest management in facilities.
- Only allows non-organic ingredients and processing aids approved by the National Organic Standards Board.

#### Organic labels

- “100% Organic” – only organic ingredients (excluding water and salt).
- “Organic” – at least 95% organic ingredients.
- “Made with organic ingredients” – at least 70% organic.
- Listing in ingredients panel only – less than 70% organic.

For more information:

USDA National Organic Program,  
<https://www.ams.usda.gov/rules-regulations/organic>



USDA Organic Seal  
authorized on:

“100% Organic” and  
“Organic” labels

# WHY



# RECOMMENDATIONS?

46 is a magic number only insofar as Joseph Biden is the 46th President of the United States. It is a fun contrivance. Honestly, we could easily double, maybe triple the number of recommendations but we thought it apropos to align our recommendations with the historic nature of this administration.

As you read through this document, please note that there is no hierarchy among the recommendations – whether a recommendation is listed as #4 or #24 is meaningless as they are not ordered in degree of importance nor ease of implementation. To the degree that there is organization, it is that we have tied most recommendations to the broad themes of our forthcoming report – health, economy, and climate.

The majority of these recommendations could be accomplished almost immediately, as the United States Department of Agriculture (USDA) has the power to carry out many of the needed actions we identify within existing statutory authority and, in many cases, within existing budgets. Some might refer to such recommendations as ‘low-hanging fruit.’ Other recommendations require new money, necessitating action by the appropriations and/or authorizing committees in Congress. Still others require passage of new law by Congress, and the timing for new legislative proposals is good, given that policymakers are introducing bills to seed ideas for the 2023 Farm Bill. Bottom line: with reasonable effort, these 46 recommendations are attainable in the near future.

**Some other numbers to keep in mind as you read through this report...**

30

30 years ago, Congress passed the Organic Foods Production Act (OFPA) as part of the 1990 Farm Bill. The law established strict national standards for organic food and a public-private enforcement program to ensure compliance with the law. In quick time, the US National Organic Program (NOP) became the model for the world and the US organic label its foremost ecolabel.

It is difficult to describe organic in a simple statement since organic production systems require a complex array of practices. USDA's organic rules and guidance documents total hundreds of pages. A citizen-led National Organic Standards Board (NOSB) is responsible for organic materials review and advising USDA on all aspects of organic production, processing, and labeling.

The organic industry has always faced an uphill battle in the policy arena. Early on, sluggish USDA regulatory efforts delayed the law from going into effect until 2002. Today, USDA regulatory delays continue to thwart industry success. Federal research investments in the sector are less than 2% of research spending,<sup>1</sup> and many USDA agencies have no organic agenda.

The organic industry faces a number of challenges including consumer confusion around what organic means, input and product shortages in organic supply chains, competition from new environmental labels, and the concern that some NOP rules are limiting further growth and innovation that has been achieved in other markets.

The opportunity to address these challenges is before us. While there has been some policy support for organic over the years, it has been meager and in no way commensurate with the sector's size nor sustainability contributions. The next 30 years should be marked by robust policy support for organic.

82

82% of Americans say they buy some organic food on a regular basis and sales are strong across every state of the nation. Overall, 6% of food sold in the US is organic.<sup>2</sup>

61,900,000,000

US organic sales totaled nearly \$62 billion in 2020.<sup>3</sup> This number includes food and non-food items such as clothing and personal care items. With few exceptions, organic sales have grown exponentially year over year since passage of the 1990 law, far exceeding growth in the food sector overall.

57.5

The average age of America's farmers and ranchers is 57.5 years old.<sup>4</sup> With more than a third of producers over the age of 65, the challenge to repopulate farms and ranches with young people is urgent. The good news is that organic is drawing young people into agriculture. 35% of organic producers are classified by USDA as beginning farmers compared to 27% of farmers overall.<sup>5</sup> And organic producers are more likely to farm fulltime, with 65% of organic farmers claiming farming as their primary occupation compared to 42% of farmers overall.<sup>5</sup>

The reality is that assisting the organic sector is a sound investment in the future of American agriculture.

2,480,091,949

This is the number of dollars known to be spent by Americans on imported organic products in 2020.<sup>6</sup> The reality is that much of this nearly \$2.5 billion worth of goods bought from other countries could be grown and processed here in the US, providing economic opportunities for our farmers and ranchers, food processors, and businesses of every size. And this is not a one-time thing – year after year, US organic imports are increasing; the US imported 10% more organic products in 2020 than in 2019<sup>6</sup>. We need to reverse this trend. In his first address to a joint session of Congress, President Biden emphasized the value of "Buy American," stating that "American tax dollars are going to be used to buy American products made in America to create American jobs. That's the way it's supposed to be, and it will be in this Administration."<sup>7</sup>

Demand for organic food continues to outstrip supply. Unfortunately, rather than home-grown organic, we are importing from other countries, eclipsing markets that could support our young and beginning farmers and the communities in which they live. This needs to change.



PHOTO CREDIT  
KATHLEEN MERRIGAN

## Section 1

# GOVERNANCE

**18,000,000**

The USDA National Organic Standards Program is woefully underfunded at \$18 million annually.<sup>1,8</sup>

**15**

The Secretary of Agriculture appoints 15 citizens to serve on the National Organic Standards Board.<sup>9</sup> Since its inception, the NOSB has issued more than 200 recommendations.

**12**

A dozen states and nearly 80 private agencies inspect organic operations to ensure compliance with National Organic Program standards.<sup>10,11</sup>

**108**

The number of countries with organic food regulations that govern practices on 88.2 million acres across the globe.<sup>12</sup>

**9**

The number 9 prefix added to a PLU (Price Look Up) label signifies that an item is organic. For example, #94011 is the code for an organic yellow banana.<sup>13</sup>

## 1. Develop a National Organic Plan

We need a comprehensive national plan if we hope to fully realize the untapped potential of organic agriculture and all of its attendant benefits. Such a plan should include needed and comprehensive strategies and identify interlocking policies to support the next generation of organic adopters. To propel action, the plan should establish clear goals and describe the range of actions to be undertaken to increase organic production and with it, the number of organic farmers and ranchers. California Certified Organic Farmers (CCOF) created such a plan for the state of California, establishing the goal of increasing organic acreage from the current 4% of agricultural land to 10% by 2030.<sup>14</sup> Furthermore, CCOF convened stakeholders to identify a comprehensive policy agenda.<sup>15</sup> It is a good model to inspire national action.

Why elevate planning for the organic sector? There are many reasons, including historic bias against organic producers that has resulted in meager public support compared to what has been provided for conventional producers over the decades. But perhaps the most important reason is that organic farmers and ranchers have proven themselves to be research pioneers, innovating practices that have been adopted by non-organic farmers. For example, rotational grazing, a soil health practice developed by organic dairy farmers, became popular among many different kinds of dairy operators. Investing in organic agriculture is a strategy to drive change and inspire more sustainable production across the spectrum of American agriculture.

To develop a national organic plan, USDA should seek out diverse stakeholders and facilitate convenings across the countryside. The resources for this effort need to go beyond the typical citizen advisory board governed by the Federal Advisory Committee Act (FACA), most of which focus on a particular crop (e.g., Pork Board) geographic area (e.g., Lake Tahoe Basin) or issue (e.g., Dietary Guidelines for Americans). It should involve USDA staff from multiple agencies and relevant staff from other federal departments, such as the Food and Drug Administration (FDA). Certainly, the NOSB should play a role. To come up with an initial plan, regional hearings should be held to solicit input from farmers, ranchers, processors, organic food businesses, organic and sustainable agriculture NGOs, state departments of agriculture, health, and education and Tribal Nations.

Once a draft plan is complete, it should be published in the Federal Register for public comment. The organic industry and organic advocates have a strong history of responding to public comment opportunities and USDA can reasonably anticipate robust participation that will improve the overall document and create public support for the way forward.

## 2. Implement an organic agenda in every USDA agency

Nine of the 17 agencies within USDA have significant and ongoing organic programs and activities. This box of agency activity does not represent all organic activities within these agencies, nor the universe of all USDA organic activities. However, it does show major USDA organic engagement, and means that in nearly half of USDA's agencies organic-related activities are minimal.

The most obvious gaps in USDA activity are in the Food and Nutrition Service (FNS) and in the agencies within Rural Development (RD). The opportunity for FNS to engage in organic, from sharing science-based information about its health benefits to using procurement to support the sector has been largely ignored. And while there are some admirable one-off organic-related projects that have been funded by RD agencies over the years, there is no organic emphasis or rural initiative that appreciates and builds upon the job creation and economic stimulus of the organic sector.

Figure 1: Significant USDA agency engagement in organic

- AMS** – Market News, National Organic Program
- ARS** – Intramural (In-house) organic research
- ERS** – Analytical support
- FAS** – Identification of foreign market opportunities
- NIFA** – Extramural organic research
- NRCS** – Organic conservation
- FSA** – Organic cost-share
- NASS** – Organic census
- RMA** – Organic crop insurance

Source: Swette Center



During the Obama-Biden Administration, USDA launched the Know Your Farmer, Know Your Food Initiative (KYF2) to promote local and regional agriculture. Rather than designating a single USDA agency to lead KYF2, USDA created a high-level, department-wide task force, led by the Deputy Secretary that required every USDA agency to be seated at the table. Each USDA agency was tasked to come up with strategies to advance local and regional agriculture within its domain and this approach proved to be successful. Over the years, and across administrations, there has been an interagency working group on organic, largely driven by career staff, which has greatly benefited the organic industry. However, it has not had engagement from all agencies nor the high-level engagement of a deputy secretary. The successful KYF2 effort provides one potential model for how USDA could infuse organic actions throughout its entire enterprise.

### 3. Take a whole-of-government approach

There is opportunity for many federal agencies and departments to support the organic sector. Just imagine if the 152 hospitals overseen by the US Veterans Affairs Department procured at least 10% American grown and processed organic food for their clients. What if the Department of Health and Human Services (HHS) and the National Science Foundation invested in research to better understand the health benefits of consuming organic food? Imagine the Treasury Department coming up with a tax strategy to incent farmers on the verge of retirement to sell their farms to young farmers committed to organic production. What if the White House Council on Environmental Quality prioritized organic in the various climate proposals now under development? The list could go on and on. A whole-of-government approach to organic agriculture is timely. The White House Domestic Policy Council and/or the President's Management Council could elevate organic agriculture and help infuse an organic agenda throughout the federal government. That federal government-wide effort could be shared with the public on a newly established cross-government website (e.g., [www.organic.gov](http://www.organic.gov)).

### 4. Restore organic advisor to the Office of the Secretary

Recognizing the need to elevate the interests of organic producers and businesses within USDA agencies, the position of senior advisor on organic agriculture was established within the Office of the Secretary in 2009. The purpose of this action was to provide USDA leaders access to on-the-ground knowledge of organic (e.g., for the first three years, the position was held by a small-scale organic farmer with prior employment as a certifier and NGO organic researcher). Given the limited traction organic had at USDA, this position helped coordinate across agencies and the office holder served as point person representing organic at the White House and across the Administration. Unfortunately, this position was eliminated in 2017. Successful execution on the 46 recommendations in this report will depend, in part, on restoring this high-level executive position to help guide the work.

### 5. Empower the National Organic Program

The organic industry depends upon having tough rules that are backed by tough enforcement. Increased government oversight is necessary, particularly enforcement at the borders to prevent fraudulent organic products from entering the US and unfairly undercutting domestic producers. NOP is in AMS, an agency which had nearly a \$2.8 billion budget in Fiscal Year (FY) 2020 and is part of USDA which had a budget of \$153 billion. The FY2020 budget for the NOP totaled \$18 million.<sup>1,16</sup> Given the current size of the industry -- \$61.9 billion in the US and nearly \$200 billion globally -- this budget is woefully insufficient for a program of such importance to US agriculture. The NOP is egregiously underfunded for its range of responsibilities, from development of organic policy, to support of the NOSB, to writing rulemaking dockets, to participating in the negotiation of equivalency agreements, to oversight of organic standards, to investigating allegations of fraud, to supporting federal partners who help with enforcement actions.

To provide context, AMS had a \$16 million budget for help marketing hemp – an industry which was valued at only \$5 billion globally in 2019 – and is a newly legal US crop for which oversight is far less complicated. The USDA Foreign Agriculture Service (FAS) spends \$200 million annually reimbursing organizations seeking foreign markets for US goods. This is not to criticize this effort, which has included organic companies on such missions. But it does provide a contrast in resources spent to facilitate exporting goods in comparison to resources spent building domestic markets. Another perspective, Rural Development spends around \$37 million on Rural Business Development Grants. Given the growth and importance of the organic industry, why is the NOP not seen as an equally worthy investment that will create jobs and economic prosperity in rural America?

The President's FY22 budget request includes a total of \$19 million for the NOP, a proposed \$1 million increase over the FY21 budget.<sup>17</sup> The Organic Trade Association is advocating that the additional amount of money, if appropriated, be dedicated to standards development, since only two fulltime NOP staff have that overwhelming responsibility. That said, even if this proposed increase is appropriated, the NOP budget remains inadequate, placing the organic sector at risk for fraud, misunderstandings, and lost opportunities. In the next Farm Bill, authorization level for the NOP should be raised to nothing less than \$100 million.

### 6. Encourage state actions

Many states are engaged in issues related to organic agriculture, from working in partnership with USDA on administration of certification cost-share assistance and acting as organic inspection agencies, to a variety of state initiatives aimed at supporting organic producers. The 2017 report, *Growing Organic, State by State*<sup>18</sup> describes various state organic activities and describes helpful ways in which states can expand what they do. But one critical opportunity for state action is overlooked.

OFPA left the door open for states to enact additional organic standards, above and beyond USDA's national standards, provided that such state standards are approved by the USDA Secretary. No state has yet used this authority and it seems to be all but forgotten.

Why allow states to enact additional organic standards? The idea is that, along with the organic plan requirement, it is a means to address site specific needs not possibly addressed with precision at the federal level. In implementing this idea, drafters of OFPA confronted two pressing and diametrically opposite demands. Organic leaders urged Congress to establish national organic standards because conflicting private and state organic standards made interstate commerce and multi-ingredient product manufacturing difficult, if not impossible. At the same time, environmental groups opposed preempting the ability of states to enact stricter organic standards, arguing that it was critical for states to retain the ability to act in the face of federal inaction or weak regulations. As a result, the statute attends to both these needs.

OFPA provides that a state confronting a particular state environmental challenge, such as the need to protect a highly stressed watershed, can propose to the USDA Secretary that it be allowed to require producers in its state to comply with a state standard that goes above and beyond existing federal standards. But there is a hitch. If approved, that state cannot require producers from other states to comply with the additional standard in order to sell product within its borders. This is meant to discourage a state from establishing additional standards as a strategy to give their producers a marketing edge (e.g., VT organic is better than NH organic because of an additional standard). As a result, the law allows for unimpeded interstate commerce of organic products and maintains one definition of organic while allowing states the opportunity to take necessary actions to protect critical natural resources.

The Secretary should meet with the National Association of State Departments of Agriculture (NASDA) and brief them on this opportunity and provide guidance on how it could be used to achieve climate and environmental protection goals.

## 7. Elevate and address issues of racial justice and social equity

This country is in the midst of a painful and overdue racial reckoning, with the urgency of racial justice and social equity issues topping the agenda across all domains. In the world of food and agriculture, the history of racial discrimination is deep and pervasive. While some point to the legal settlements of the lawsuits filed against USDA for discrimination against black farmers (Pigford I and II), for discrimination against Native American farmers (Keepseagle), and discrimination against women (Love) as successful redress of past wrongs, the reality is that these actions fall far short of addressing the depth and breadth of past discrimination nor do they address current inequities in government programs, including the lack of access provided to BIPOC (Black, Indigenous, People of Color) communities. All USDA and federal government actions and programs should be reconsidered in a nationwide effort to embrace equity and diversity, the NOP included.

Five areas merit urgent action. First, farmworkers and many poor rural communities are on the frontlines where toxic pesticides and fertilizers are used. Meat processing workers, as seen during the COVID-19 pandemic, are subject to unsafe working conditions. The vast majority of these vulnerable workers and communities are BIPOC. Every effort should be made to strengthen protections for these workers and communities who are disproportionately harmed by dangerous working conditions. Second, there is no sector more dependent on undocumented workers than the food and agriculture sector. Failure to achieve immigration reform has left too many people in the agricultural and food service workforce, most of them BIPOC, on the edges of society with little support and at threat for deportation and abuse. Third, racism is a global health issue. If food is indeed medicine, we need to help BIPOC communities gain greater access to organic food. Without doing so, existing disparities in healthcare and outcomes will persist. Fourth, the Department of Labor rule published November 2020<sup>19</sup> needs to be revoked. This rule freezes the wages of workers who travel to the US on temporary visas to do farm work through 2022 and establishes new procedures to guide wages beyond that, all intended to significantly lower wages. Whether these workers are on organic farms or conventional farms, they deserve fair wages and decent working conditions. Finally, the historic robbing of land from BIPOC farmers can never be fully undone. That said, there are USDA programs to help young people access farmland and these programs should prioritize BIPOC applicants. Furthermore, Congress should dedicate an entire and comprehensive title of the forthcoming Farm Bill to BIPOC needs, with land access as the centerpiece.

## 8. Facilitate participation of Tribal Nations in organic markets

Within the geographic boundaries of the US, Tribal Nations have 58.7 million acres of farmland and almost 80,000 farming and ranching producers<sup>20</sup>. Cumulatively, the Native agriculture sector provides an annual \$3.5 Billion in market value to tribal communities, with approximately 60% attributable to the livestock sector and the remainder attributable to grains, fruits and vegetables and other crops. The most recent Census of Agriculture showed increases across the board for Tribal agriculture, especially in crop production, with a 24% increase in fruit and tree nut farming and 20% increase in greenhouse, nursery, and floriculture farming.<sup>21</sup> This presents a huge opportunity to grow the US organic sector.

Many tribal lands are maintained through practices consistent with the NOP. Native Peoples have raised crops and livestock sustainably for millennia and many organic farmers and ranchers have adopted Indigenous practices to help them forgo chemical inputs, protect natural resources, promote biodiversity, and care humanely for animals. Many times, the adoption of those practices happens without a full understanding of the cultural significance of the practice, how the practice may differ from tribe to tribe and/or whether adoption of a practice could signal an appropriation from the tribe. Despite the contributions of Indigenous wisdom to the US organic sector, few American Indian and Alaska Natives (AI/AN) have benefited from the NOP. Often Indigenous voices are not at the table when organic practices are discussed, even if the root of the practice under consideration derives from the Indigenous community. Part of the reason for low participation is that it is not always easy for AI/AN producers to become certified.

If USDA found suitable pathways for certification for AI/AN producers and Tribal governments, it would create a win-win situation: more certified organic food would be in the marketplace and AI/AN producers would benefit economically. USDA should prioritize exploring two strategies.

Establishing organic equivalency with Tribal Nations is one potential strategy. Organic equivalency is when two countries recognize each other's organic standards as essentially the same, even if there are minor differences. The advantage of having an equivalency arrangement between countries is that it facilitates the free trade of organic goods. In the US, USDA and the US Trade Representative negotiate all such equivalency arrangements which may include some or all raw or processed organic products. At this writing, the US has signed and executed organic equivalency arrangements with Canada, European Union, Taiwan, Japan, Switzerland, United Kingdom, and for processed foods only, Korea. Within the US, there are 574 federally recognized and sovereign Indian Nations across 35 states. While equivalency arrangements could be executed with each Tribal government that has established organic standards, another alternative could be to negotiate equivalency arrangements at an intertribal level through the Intertribal Agriculture Council as a representative of Indian Country agriculture as a whole. An additional alternative in the equivalency space would be to negotiate equivalency arrangements with regional political intertribal organizations operating under shared, co-management or cooperative legal authorities created for that purpose.

A second potential strategy is to certify AI/AN producers under the grower group certification provision of the NOP. Grower group certification is designed for multiple producers who are producing the same crops in one general geographic region. Historically, the grower group certification provision has been poorly enforced and in August 2020,<sup>22</sup> USDA published a proposed rule to strengthen enforcement which, among other things, proposes strengthened grower group rules, a move long awaited by the organic industry. Once this rule is finalized, Indian Country could establish several grower groups located throughout Indian Country to facilitate AI/AN participation in the organic marketplace. Deeper discussions with the Intertribal Agriculture Council and the Native Farm Bill Coalition concerning the mechanics of such processes is a logical next step.



PHOTO CREDIT  
KINDEL MEDIA

Section 2

# Health

## 1

Human health is consistently the #1 reason why consumers purchase organic food.

## 979,000,000

Every year, 979 million pounds of pesticides are applied to US crops, which is nearly 1/5 of pesticide use worldwide.<sup>23</sup> Worse, many of these pesticides are banned in other countries due to their dangerous effects on human health.

## 3,000

The FDA has approved over 3,000<sup>24,25</sup> substances to be added during the processing of food. In contrast, the NOP allows less than 100, making organic the original “clean food.”

## 0

Zero is the amount of genetically modified organisms, sewage sludge, ionizing radiation, antibiotics, and hormones allowed in organic production.

## 363,404

The number of dairy cows grazing pasture because organic requires it and cows are healthier for it.<sup>26</sup>

## 9. Educate consumers on the health benefits of organic

Consumers consistently cite human health as their #1 reason for purchasing organic food.<sup>27,28</sup> Their rationale, however, is based on too little information. Scientific evidence demonstrating the health benefits of organic food does exist -- the problem is finding it.

Figure 2: Popular health websites searched by Swette Center for information on connection between organic food and health (search parameter: Jan. 2015-July 2020)

<b>No information</b>
Medline Plus, Cancer.gov
<b>Connection is unknown</b>
WebMD, Family Doctor
<b>Conflicting information</b>
Healthline, NIH, Mayo Clinic

Source: Swette Center

The average person does not search scientific journals for the latest findings on organic and health nor for any other health issue. The reality is that people typically search the web for information of all kinds, with 59% of US adults turning to online searches for health information.<sup>29</sup> To understand the implications of this for organic, we briefly explored what could be found by asking 'Dr. Google' about the relationship between organic and health. We searched top websites where people seek health information to see what was being shared about organic during the past five years. What we found was discouraging. To the extent that information was available on the positive health implications of organic, it was often out-of-date and not comprehensive. More often, health websites included information that was conflicting, leaving the reader to conclude that the connection between health and organic is unknown. Finally, two important online sources for health information had no mention of organic at all.

There is opportunity for the government to help consumers in their quest to find information on the relationship between health and organic. One obvious opportunity for this is through the Dietary Guidelines for Americans (DGAs). The DGAs are issued by the Federal government every five years, with the lead responsibility alternating between USDA and the Department of Health and Human Services (HHS). The government appointed citizen scientific advisory board argued during deliberations over the 2015 DGAs that it was time to factor in sustainability concerns in the construction of dietary recommendations.<sup>30</sup> The government did not comply however, nor were sustainability issues considered

in the 2020 DGAs despite cries of many health professionals to do so.<sup>31</sup> Given the health benefits of organic, along with the environmental sustainability benefits associated with organic production, the next iteration of the DGAs (due out in 2025 and under the leadership of HHS) should address organic food and its positive contributions to dietary and planetary health.

## 10. Integrate organic into FNS programs

The USDA Food and Nutrition Service (FNS) is absent from the USDA Organic Web Resource Center. This is not surprising. FNS does not have program objectives related to organic food nor integration of organic goals within the agency's many programs. FNS has gone so far as to prohibit outright purchases of organic. For example, the Women Infant Children (WIC) Program is designed to improve the nutrition of pregnant and breastfeeding mothers and their infant children. FNS has allowed states to deny use of WIC benefits to purchase many organic food items, including milk and baby food. Given that unborn children and infants are particularly sensitive to dietary exposure to pesticides,<sup>32,33</sup> the organic prohibition is inconsistent with current health knowledge. Another example -- between the DGAs and SNAP-Ed, a \$400-plus million annual program that educates SNAP recipients on how to eat healthy on a limited budget, FNS could actively share important information about the healthful impacts of organic food.

By far, the largest activity of USDA, as measured by dollars spent, is the suite of USDA programs administered by FNS that provide nutrition assistance to people in need. In FY2021, nutrition assistance accounted for 68% of USDA funding.<sup>34</sup> With rising unemployment and economic distress due to COVID-19, it is likely that FNS spending will continue to rise significantly in the next couple of years. Given the magnitude of USDA spending and the central role of FNS in ensuring food security (e.g., Supplemental Nutrition Assistance Program (SNAP), school meals, WIC) and health promotion (e.g., DGAs) it is unacceptable for FNS not to be substantially engaged in organic.

## 11. Procure organic food

USDA procures hundreds of different kinds of food for distribution in numerous nutrition assistance programs, most notably, to support school feeding (e.g., National School Lunch, breakfast, etc.) Commodity Supplemental Food Program (CSFP), The Emergency Food Assistance Program (TEFAP) and the Food Distribution Program on Indian Reservations (FDPIR). Over a billion pounds of processed and fresh fruit and vegetables, for example, are purchased annually by USDA for distribution to these various programs.

USDA food procurement authority is primarily derived from Section 32 of the Agricultural Adjustment Act of 1935. Section 32 authorizes USDA to purchase domestically produced food when market conditions are unfavorable for producers and prices are plummeting. By buying such food, USDA stabilizes the market leading to higher prices for producers.

At the same time, USDA secures food to distribute through its many nutrition assistance programs. For example, in May 2021, USDA announced that it would purchase nearly \$160 million of seafood, fruits, legumes, and nuts.<sup>35</sup> In December 2020, USDA announced a Section 32 buy of \$60 million of fluid milk and \$50 million of butter “to encourage the continued domestic consumption.”<sup>36</sup> Section 32 authority is what USDA relied upon for USDA food box purchases for distribution during the COVID-19 pandemic.<sup>37</sup> USDA has a long history of supporting particular producer groups and commodities through its procurement power and yet the organic sector has never benefited from USDA procurement efforts. In most cases, procurement of organic foods has been outright barred with the rationale being that organic foods are oftentimes priced higher than conventionally produced foods. But this ignores the reality that historically most Section 32 purchases have procured foods at prices well above market prices. Indeed, that is the very purpose of Section 32 – to stabilize agricultural markets and secure reasonable prices for farmers and ranchers. Not only should organic be included in USDA procurement efforts, given the value of organic to health, the economy, and climate, USDA should proactively develop a procurement strategy to support the organic sector.

## 12. Increase federal research in organic

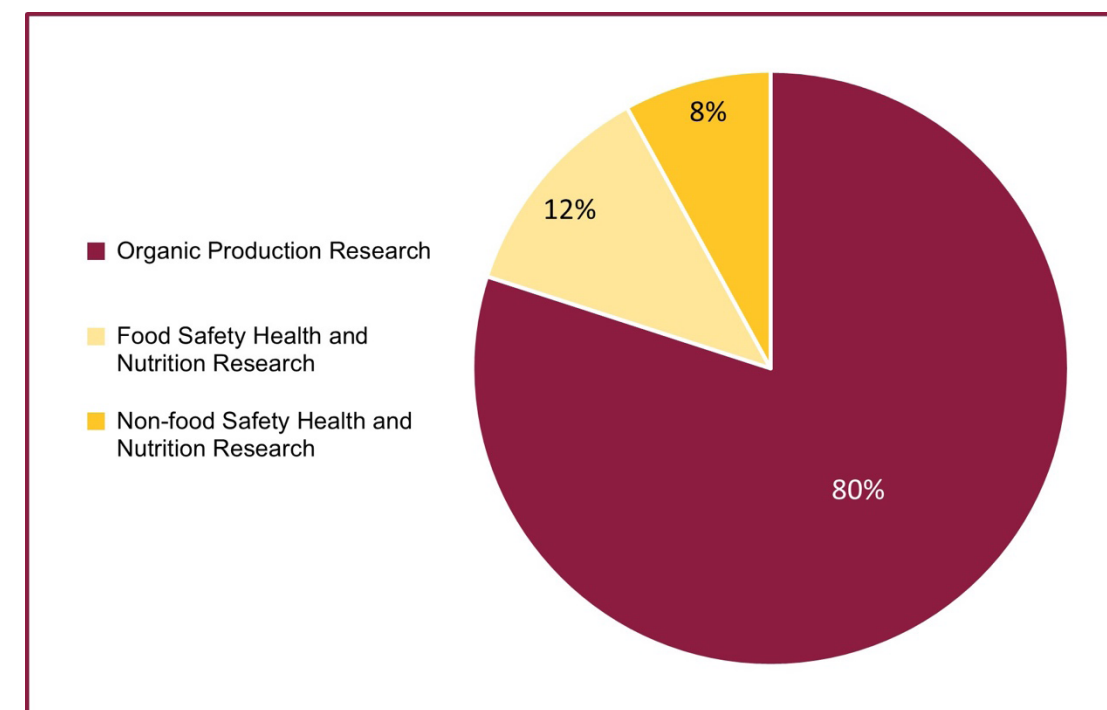
In 1997, the Organic Farming Research Foundation released a highly cited report, *Searching for the O-word*.<sup>38</sup> A search of thousands of records in the USDA Current Research Information System database found that less than one tenth of one percent of USDA research was directly pertinent to organic agriculture. The report triggered outcries over USDA’s failure to adequately invest in organic research. Over the years, Congress has sought to address the paucity of organic research, most notably by establishing two extramural grant programs in USDA, the Organic Agriculture Research and Extension Initiative (OREI) in the 2002 Farm Bill and the Organic Transitions Program (ORG) shortly after, to fund organic research in universities and other research institutions.

Fast forward twenty years and not much changed. OFRF undertook a similar examination of USDA’s extramural research portfolio, examining years 2002-2014. The result: organic research investments amounted to only 1.5% of the total amount of money that USDA spent each year on research.<sup>39</sup>

The outcome is grim when searching for USDA intermural funding through the Agricultural Research Service (ARS). Funding for organic research (of all kinds) declined from \$15 million in FY 2007 to just \$12 million in FY 2020. Overall, the ARS investment in organic research is approximately 1.2% of the agency’s overall budget. If made commensurate with organic agriculture market’s share, ARS would be spending at least \$80 million annually.<sup>40</sup> ARS’s human nutrition research program funds a paucity of organic research on human health. This is unfortunate as ARS monitors the nutrient intake of Americans, builds the scientific basis for dietary guidance on health and disease prevention, and links agricultural practices with beneficial health outcomes. ARS has not yet included organic questions in its nutrient intake surveys or most of its internal research on human nutrition.

Clearly USDA spending on organic research needs to increase. For this report, we decided to dig deeper and parse USDA organic research spending, probing the OREI program in search of human health related research since this program is the most obvious funding source for USDA’s extramural research on this topic. Overall, we found that over the course of the OREI program most funded projects focused on organic production research and 19.94% of the research could be categorized as human health related. However, the bulk of the human health research has been focused on food safety. That is not a criticism, and OREI has supported important research that has countered unfounded claims that organic food is unsafe.

Figure 3: Distribution of OREI awards (2004-2020)



Source: Swette Center analysis using USDA National Institute of Food and Agriculture data <sup>41</sup>

As can be seen in the pie chart, to date, approximately 8% of USDA's external grant funding through OREI has been spent on nutrition and other non-food safety human health research. USDA's internal human nutrition research program operated by the ARS has a similar track record in terms of its paucity of organic research on human health. This program monitors the nutrient intake of Americans, builds the scientific basis for dietary guidance on health and disease prevention, and links agricultural practices with beneficial health outcomes. USDA has not yet included organic questions in its nutrient intake surveys or most of its internal research on human nutrition.

There are many human health issues where organic research funding is overdue, and this is particularly true of nutrition research. Emerging health issues also merit investigation. For example, an exciting study comparing organic and conventional apples found that freshly harvested organic apples had significantly more, and greater diversity of, microbiota<sup>42</sup>. Scientists are just starting to investigate the relationship between plant microbiomes and human gut microbiomes. This research is nascent, and it will likely take years for definitive answers, but early indications suggest organic may contribute positively to microbial health.

Additional research on organic cropping systems and biological controls is also needed, as well as research to develop animal breeds for organic production systems. The use of conventionally selected high yielding breeds is not desirable for organic production, given that these high breeding animals parallel advances in antibiotics and other veterinary drugs. But currently there are few alternatives. For instance, given the NOP prohibition of prophylactic use of antibiotics and synthetic anthelmintic medicines, morbidity due to parasite infection is a problem in organic poultry.<sup>43</sup> In organic pig husbandry, there is an increased risk of joint lesions for free range pigs because the breeds are not adapted to the level of exercise required in larger spaces.<sup>44</sup> If breeding is oriented to organic systems, especially by selecting traits such as livestock general capacity to thrive on pasture, or parasite resistance, the resulting animals would thrive. The use of slower growing breeds in broiler production could improve health and net yield due to more appropriate behavior leading to more broilers being healthy at slaughter.<sup>45-47</sup> For cows, the use of dual dairy/beef crossbred animals could allow dairy cows to produce calves with the growth potential of the beef breed<sup>45</sup>. The development of more suitable organic breeds should be considered, possibly using, or crossbreeding with indigenous breeds possessing traits favorable for animal health in the local environment.<sup>45</sup>

### 13. Secure organic's fair share in Research and Promotion programs

Since 1966, the federal government has operated "research and promotion (R&P) programs," industry-funded programs that set up a process for agricultural industries to self-tax and pool the money raised into a general pot to fund research important to the commodity (e.g., Hass avocados, pork) and promotion (e.g., incredible edible egg marketing).<sup>48</sup> Currently there are 21 such programs, also referred to as check-off programs, along with a similar number of federal marketing orders that also have a taxing mechanism. For many years, organic industry participants were taxed under these programs, but protested that none of the money went to support organic and, in the worst cases, some of the resources were used illegally on marketing that denigrated organic. To solve this problem, two related efforts were undertaken: organic operations were given the option to opt out of the R&P programs and get a refund of the dollars they were taxed.<sup>49</sup> At the same time, the organic industry sought an organic R&P program of its own, although it has not received the support it needs from either USDA or the

industry to come into force.<sup>50</sup> This is a long history to simply say that the organic sector has not been able to take advantage of R&P programs. Going forward, USDA should work with the existing R&P programs to secure commitment to fund organic research consistent with the degree to which organic commodities are produced (e.g., given that 10% of eggs sold are organic<sup>26,51</sup>, then 10% of egg R&P program funding should be devoted to organic).

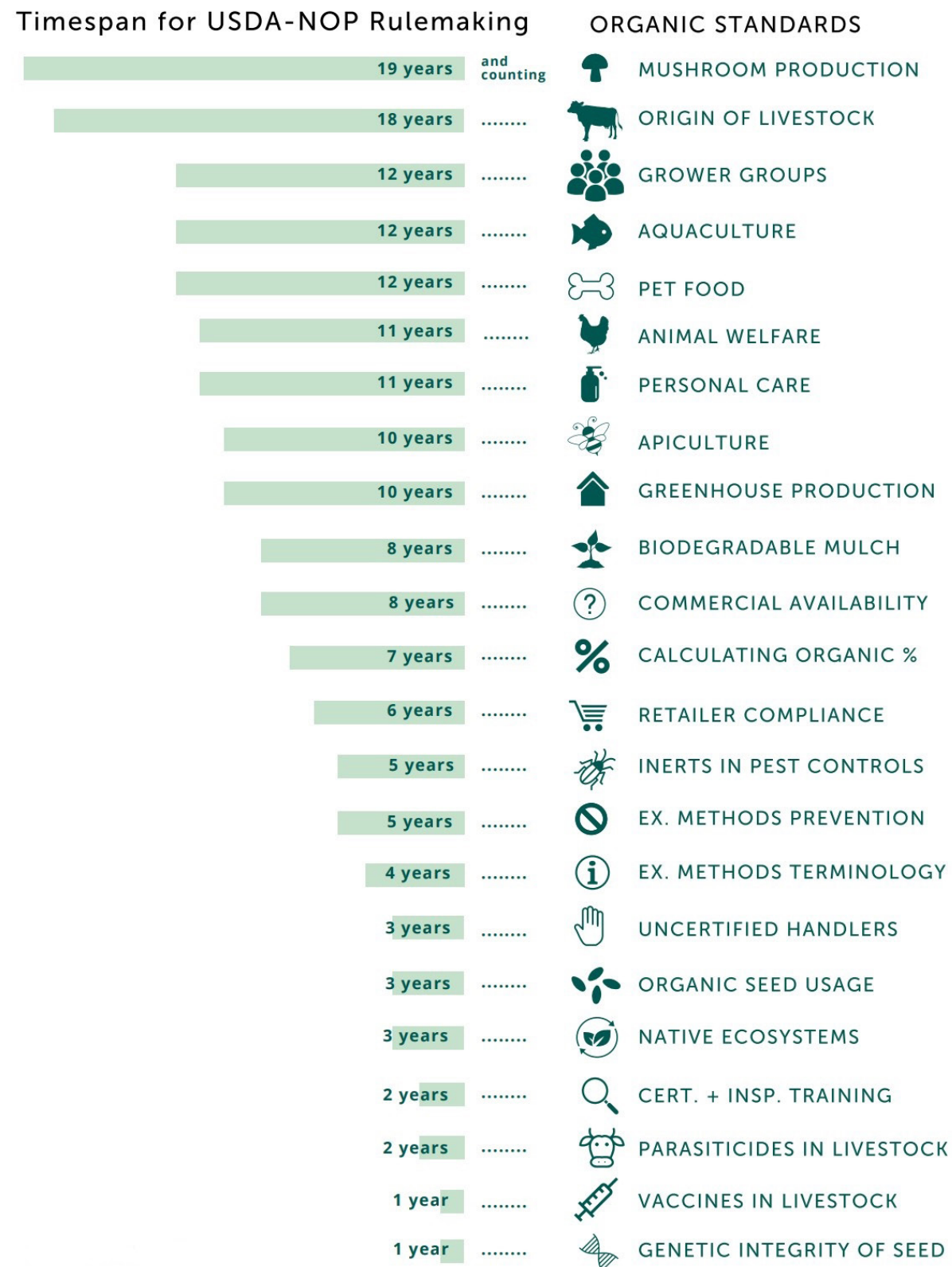
### 14. Implement the long overdue Animal Welfare Rule

Marketing meat and poultry as organic was prohibited by the USDA Food Safety Inspection Service (FSIS) for decades for no good reason. Pioneering companies, like Coleman's Natural Beef and Petaluma Poultry, had to settle with a menu of FSIS approved marketing claims such as "natural" and "free range," all the while advocating for what became the USDA NOP. Even after passage of the OFPA in 1990, which clearly directed USDA to have a standards program inclusive of animal products, FSIS maintained its opposition, prohibiting the word "organic" on meat, poultry, and processed egg labels and promotional materials up until 1999. This history foreshadowed the current battle between the organic industry and USDA over the failure to advance organic animal welfare rules. The continued success of the organic sector demands that animal welfare rules be strengthened, in line with consumer expectations.

To this end, and after 14 years of work, the Organic Livestock and Poultry Practices (OLPP) final rule was published January 19, 2017.<sup>52</sup> The regulation required more space for livestock and poultry, and greater access to the outdoors, especially for egg-laying hens which are mostly kept in cages. Upon taking office, the Trump Administration immediately delayed the rule and finally rescinded it in March 2018. The failure to carry through on the rulemaking triggered backlash from organic farmers and animal rights groups and the Organic Trade Association (OTA) filed a lawsuit against USDA alleging that the Department had violated the Administrative Procedures Act. Two and half years of court litigation witnessed first a USDA motion to dismiss the lawsuit, then OTA rebuttals, followed by hearings on animal welfare arguments for the organic sector, and in March 2020, a court request for USDA to review its economic modelling within six months. The USDA published that economic analysis for public comment and OTA charged that USDA had biased the selection of variables to intentionally understate the benefits of the OLPP Rule and overstate the costs. OTA developed a strong data-driven case (i.e. productivity data of 5.6 million organic hens) that demonstrates that the benefits of the OLPP rule clearly exceed the costs, and that USDA's withdrawal of the OLPP rule is unsubstantiated.<sup>53</sup> The failure to implement this rule has caused direct economic harm to thousands of organic poultry and dairy farmers and compromised animal health. In March 2021, Senators Patrick Leahy and Jon Tester and Representatives Chellie Pingree and Peter DeFazio sent a letter to the White House asking that the rule be reinstated.<sup>54</sup>

OLPP is one of many rules languishing at USDA. The OTA has released an analysis of 20 rules that have been approved by the NOSB over the years, but which have not been promulgated. This is largely the impetus behind HR 2918, the Continuous Improvement and Accountability Act in Organic Standards Act introduced by Congressman Peter DeFazio. Clearly, something must be done to expedite USDA organic rulemaking.

Figure 4: Timespan for USDA-NOP Rulemaking on organic standards



Source: Organic Trade Association<sup>54</sup>

### 15. Publish a final rule on the Origin of Livestock

Inconsistent application of the origin of livestock NOP requirement among certifiers has created competitive harm among market participants and confused consumers. After a decade of NOSB recommendations and a USDA Office of Inspector General audit,<sup>56</sup> a proposed rule on the origin of livestock was published in 2015<sup>57</sup> which, if implemented, would prohibit continuous sourcing of non-organic dairy stock. The proposed rule permitted a farmer to transition a conventional dairy herd to organic one-time only. Thereafter, according to the proposed rule, the farmer could only source from dairy livestock managed as organic from the last third of gestation. The 2015 proposed rule garnered strong public and industry support through two comment periods with over 2,300 comments and 99% of commenters supporting the general premise of the proposed rule offered by the NOP. In 2017, completion of this critically needed rule was taken off the USDA regulatory agenda; added back in 2019; and again, seems stuck at USDA even in the face of a directive to finalize the rule in the 2020 Appropriations Act. The response by the organic industry and organic advocates has been unmistakable and unified. The organic community, including OTA whose members represent over 90% of the current organic dairy market, have demanded that the rule be finalized and doing so is the most impactful action the Biden-Harris Administration can do to support the organic dairy sector.

### 16. Complete rulemaking for NOSB-advised animal welfare standards

OLPP is mainly concerned with space requirements during livestock production and does not address other important aspects of animal welfare, particularly standards related to transport and slaughter. Organic standards and management practices need to introduce more specific ethological (behavior-based) animal welfare criteria for the main animal groups, such as: more social grooming and grazing; avoidance of dehorning for cattle; more space allowance, restricted slatted floors and adequate anesthesia for castration of pigs; lower indoor and outdoor densities and better defined outdoor run and pasture for poultry; more drinking, resting and feeding possibilities before animal transport in vehicles; and more time between stunning and bleeding during slaughter of animals.<sup>58</sup> In April 2016, NOP published a proposed rule to amend organic livestock and poultry production requirements by adding provisions for livestock handling, transport, and slaughter, along with the currently discussed animal living conditions.<sup>59</sup> It is time for USDA to complete rulemaking for the NOSB-advised animal standards.



## 17. Develop standards for emerging feed options

Insect protein and seaweed represent new protein-rich and sustainable alternatives for animal feed. Legal rules on the use of insects as feed and food vary across the world but precise rules on safety, marketing, and animal welfare are largely missing. In the European Union (EU), US and Canada, insects are novel and legally treated as such. In February 2019, the International Platform of Insects for Food and Feed (IPIFF) submitted the IPIFF Guide for Good Hygiene Practices to the European Commission<sup>60</sup> which provides standards for safe production of insect food and feed for all farm animals, including adequate germ-reducing treatment (e.g. heating). Seaweed, including brown algae (Phaeophyceae), red algae (Rhodophyceae) and green algae (Chlorophyceae), have a long history of use as livestock feed. These alternative feeds have a highly variable composition, depending on the species, time of collection and habitat, and on external conditions such as water temperature, light intensity, and nutrient concentration in water. In vivo studies on ruminants, pigs, poultry and rabbits reveal that some seaweed has the potential to contribute to the protein and energy requirements of livestock, while others contain a number of bioactive compounds, which act as prebiotics for enhancing production and health status of both monogastric and ruminant livestock.<sup>61</sup> Organic feed options should explore the potential of these novel foods. As FDA develops guidelines for insect-based livestock feed, which we encourage, consultation with the USDA NOP and NOSB is essential.

## 18. Establish new grade standards for grassfed animals

Under best advanced grazing management, grassfed cattle can greatly reduce the net greenhouse gas footprint per pound of meat or milk production, and increase the content of fatty acids important to human health. Despite these benefits, grassfed beef performs poorly under the current USDA grading system. The way the current system works is that USDA staff across the country grade beef, on a fee for service basis, and those grades facilitate its marketing. These grades are based on quality standards that have been around for decades and are primarily determined by the degree of fat marbling in the meat. USDA graders inspect beef and assign it a grade that largely determines the price for which the meat can be sold. There are eight primary USDA meat grades (in descending order of quality), beginning with those labels consumers see in the meat case (USDA Prime, Select, and Choice) as well as other designations that are not consumer facing (Standard, Commercial, Utility, Cutter, and Canner). The problem is that grassfed beef does not have extensive marbling, which is largely achieved through grain feeding in feedlots, and thus it gets low grades. It is time for USDA to work with the organic industry and non-organic grassfed ranchers to develop grassfed grading based on attributes achievable within a grassfed system.



PHOTO CREDIT  
KATHLEEN MERRIGAN

## Section 3

# Economics

### 16,585

At last count, the US had 16,585 certified organic farms producing organic food on 5.5 million acres of certified organic land.<sup>51</sup>

### 225

Organic is an engine of economic development. Researchers classify 225 US counties as “organic hotspots” -- places with a high concentration of organic operations, high labor force participation and, compared to other counties, higher median household income, lower unemployment, and lower poverty rates.<sup>62</sup>

### 50

All states produce organic food, with CA ranking #1 in sales, followed by WA, PA, OR, TX, NC, NY, WI, MI, ID, and AZ.<sup>51</sup>

### 16

Organic apples - one of America’s all-time favorite fruits – now account for over 16% of the value of US apple production.<sup>26</sup> Organic apples are also the top tracked US organic export, averaging over \$100 million annually in export sales.<sup>63,64</sup>

### 5

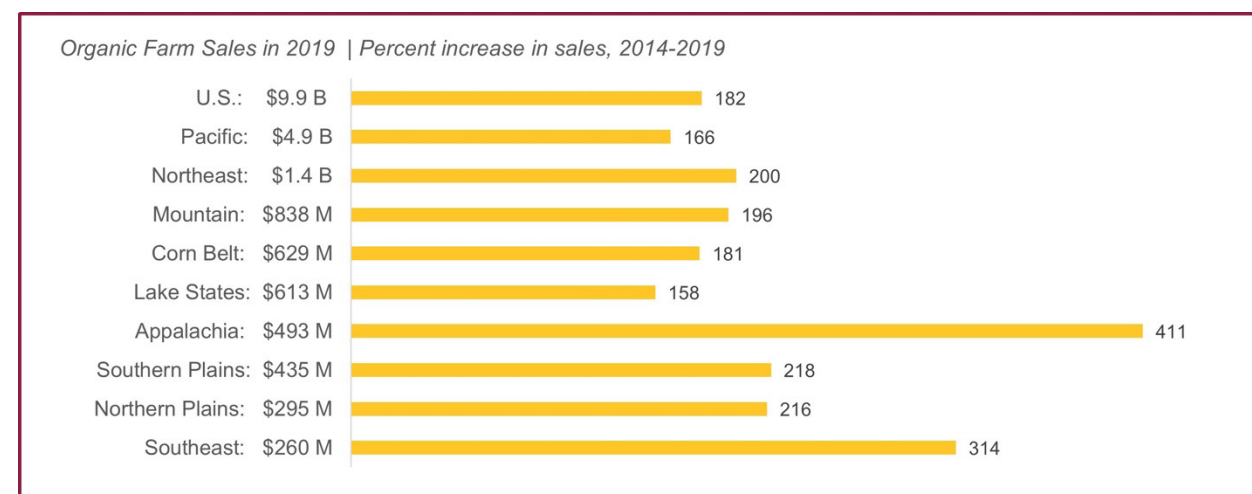
The 5 top organic retailers are Walmart, Costco, Kroger, Target, and Safeway.<sup>65</sup> 56% of organic sales are in conventional grocery store chains, club stores, and supercenters.<sup>2</sup>

## 19. Achieve economic development across regions through organic hotspots

Organic farmers are younger, on average, than conventional farmers and farming is more likely to be their primary job. Average production costs are higher on organic farms, but net cash income is also higher. While the recent Census of Agriculture shows only a quarter of all US farms had at least \$50,000 in agricultural sales in 2017, nearly half of US organic farms had at least \$50,000 in sales. US organic farmers sold nearly \$10 billion worth of organic crop and livestock products in 2019, tripling to 3% of total US farm sales in less than a decade.

While most regions have shown rapid growth in recent years, organic sales are still concentrated in only a few regions<sup>26</sup> (see Figure 5). Organic hotspot economic studies<sup>62,66,67</sup> show that counties with high levels of organic production provide an effective tool for rural development and environmental protection. Further research into ways organic can be used to target impoverished areas for economic development should be undertaken. USDA Rural Development should share hotspot research findings and data with rural development staff and stakeholders and explore the extent to which Rural Development resources can be used to advance organic farms and businesses in areas of economic distress. The Biden-Harris Administration supply chain initiative presents opportunity to invest in organic hotspots as part of the building back better pandemic response. Hotspots can be helpful with supply chain resilience, jobs, climate mitigation, and economic development. In the forthcoming Farm Bill, Congress should enact a pilot program to provide, on a regional basis, funding and technical assistance to build out the organic sector, particularly in areas of economic distress.

Figure 5: US organic farm sales are increasing in all regions but are concentrated in a few



Source: Swette Center analysis using USDA National Agricultural Statistics Service 2019 Organic Survey data<sup>26</sup>

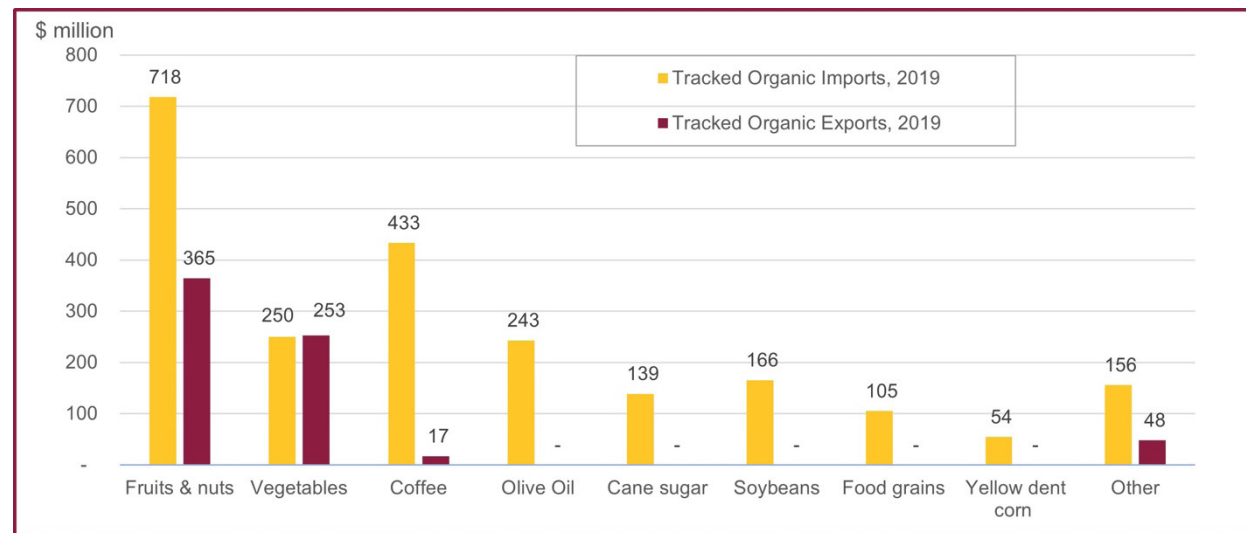
## 20. Complete rulemaking on 'Strengthening Organic Enforcement'

In August 2020, USDA published a proposed rule to close gaps in current regulations to strengthen enforcement, encompassing ways to detect fraud, training requirements of certifiers, reduced exemptions from certification for certain handlers, traceability provisions, and unannounced inspections, among many other things.<sup>68</sup> This proposed rule is extensive and represents the most ambitious rulemaking undertaken by the NOP since publication of the final NOP rule at the tail end of the Clinton Administration in January 2000. It is critical that USDA follow through on this rulemaking, so essential to organic integrity and consumer trust, by considering all comments, and publishing a final rule as soon as possible in 2021.

## 21. Create more HS codes

The US International Trade Commission (ITC) is responsible for tracking imports and exports, and to do so, the agency uses what are known as Harmonized System (HS) codes. We know that US organic trade has increased substantially over the last decade, reflecting worldwide increases in organic production and consumption, and what activity we know is seen in this graph. But this is not the full picture of what is going on in international trade. There are only 100 organic-specific HS codes, a small fraction of the products that are traded. For this reason, the total value of US organic trade is unknown. To fully understand the import and export of organic goods here in the US, the ITC needs to develop additional organic HS codes to track organic trade more comprehensively, which will help industry leaders and policymakers pinpoint opportunities to advance the US economy.

Figure 6: Tracked US organic imports and exports



Source: Swette Center analysis using USDA Foreign Agriculture Service GATS trade database and US Department of Commerce data<sup>63,64</sup>

## 22. Reform milk marketing order

Federal Milk Marketing Orders (FMMOs), overseen by USDA AMS, is a complicated and antiquated process to determine the processes by which dairy processors purchase fresh milk from farmers and the price of such milk. In the current FMMO scheme, organic is losing out. The pricing of non-organic farm milk through FMMOs is based on a methodology that has never recognized the unique position of organic dairy. The reality is that organic dairy cooperatives and processors are required to pay millions of dollars each year to the conventional pricing of non-organic farm milk across different milk classes of use. Organic dairy is forced to compensate the federal order despite a sustained performance of paying organic dairy farmers often twice the value of the USDA monthly determined prices. If the goal of FMMOs is to provide a base price for farm milk, organic dairy supersedes that expectation with the organic premium. Given the prominent position organic has in the fluid milk market, they contribute upwards of \$20-25 million a year to the orders with few opportunities to draw on the orders for non-fluid classes. The organic dairy sector is disproportionately impacted given the higher share of fresh milk in the organic industry and, secondarily, as an organic-specific dairy product. USDA needs to act. First, USDA should hold an administrative hearing to find a fair solution that does not continue to burden the organic industry and family farmers. Second, as industry-wide conversations advance on the efficacy of the FMMO, USDA needs to ensure that reform efforts address organic dairy needs.

## 23. Reinvest in the ORG Program

The Organic Transitions (ORG) Program, established by the 2002 Farm Bill, provides funding for colleges and universities to provide research and technical support for the organic sector. It is administered by the USDA National Institute of Food and Agriculture (NIFA). Over the years, Congress has appropriated anywhere from \$3 to \$6 million each year; the FY22 Biden-Harris budget proposes \$7 million. Farmers transitioning to organic agriculture need more training and resources to do so successfully. This program should receive greater appropriations from Congress, and at least half of the program's budget should be directed to supporting transitioning farmer activities.

## 24. Establish a Transition Label

Congress should pass a law that allows for a "transition to organic" label to allow farmers in the transition process to gain market recognition, and hopefully a small premium, to help them as they await full certification and provide an incentive for more producers to take the leap to organic production. As introduced in the Senate, the 1990 legislation to establish the NOP included a separate title for a "transition to organic" label program that did not ultimately get integrated into the final law. Until such time as Congress returns to the topic of a transition program and amends OFPA, there are ways USDA can help. In January 2017, USDA announced the establishment of the National Certified Transitional Program (NCTP) built upon standards developed by OTA. CCOF offers a Certified Transitional Program and label, as a steppingstone toward full USDA organic certification that allows producers who are at least one year into the organic conversion process to reap market rewards. The NCTP program could work in a similar way. However, the current USDA website states that the NCTP is withdrawn and that AMS will not offer the program at this time. Considering that the institutionalization of transitional certification would improve access to USDA support services (e.g., conservation incentives, risk management, farm loans), transition certification is essential to incentivize organic adoption by reducing the financial burden of the transition period. Ideally a transition labeling program would be passed into law by Congress, but at a minimum, USDA should proceed with the NCTP.

## 25. Restore certification cost-share funding

Although organic certification expenses have been increasing for over a decade, Congress recently reduced funding for the certification cost-share program and USDA lowered the individual cap on assistance in 2020. For the smallest operators, USDA's decrease of \$250 in the certification cost-

share assistance cap could make the difference as to whether they pursue certification. Given the organic market potential and the need to attract new farmers into this sector, Congress should restore this program to full funding and USDA should return the level of assistance to \$750. Going forward, USDA should undertake a study of certification costs to determine a reasonable cost-share amount that reflects current market prices. Based on this analysis, Congress should revise the maximum cost share amount. Furthermore, Congress should make this program an entitlement, which would eliminate the annual guesswork of what is needed to fully fund all eligible applicants.

## 26. Consider biennial inspection

The new European Commission organic regulation that goes into effect January 2022 adjusts the schedule for mandatory inspection of organic operations from once yearly to every two years. A similar adjustment for US producers should be considered. For example, following five years of successful inspections, operations without major changes, could be shifted to a two-year inspection cycle. This would reduce certification costs and ease paperwork burdens for producers. Such a change would require amendment of OFPA.

## 27. Prevent contamination

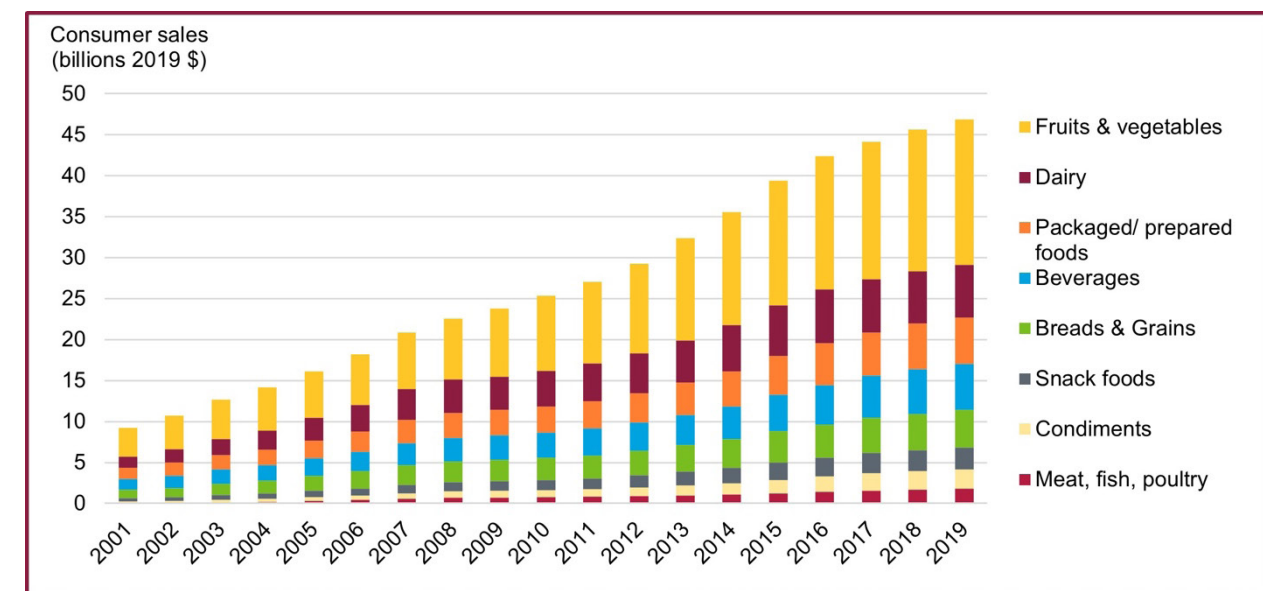
Organic operations are at risk from contamination from non-organic operations. A 2013 pesticide residue testing NOP rule requires certifiers to test a minimum of 5% of the operations that they certify to ascertain whether pesticide or GMO residues exist.<sup>69</sup> More significantly, many institutional buyers of organic products are conducting their own private testing to determine whether pesticide or GMO residues exist. More than ever, farmers are anxious that even when they follow all NOP rules, buyers may nevertheless reject their products. When organic crops are contaminated by non-organic operations, the burden is borne solely by the organic producer. The lack of a polluter-pay liability mechanism for farmers who are contaminated by neighboring fields, forces organic farmers to plant later to avoid drift, which often results in lower yield. As well, organic farmers bear the costs of testing, buffers, and potential market losses when contamination is found.

More information is needed to understand the magnitude and impact of inadvertent contamination of organic from seed to retail. The USDA 2019 NASS organic survey found that 267 producers reported residue problems and another 1,675 reported not knowing if there were residues. This is likely an undercount due to the many reasons a producer may not want to share such information for fear of exposure and resulting loss of markets. USDA needs to fund research to better understand how to help organic industry participants assess risks, and the potential loss of income when the organic premium is lost due to detectable residues. Congress should create new legal mechanisms that shift the burden of lost markets due to residues from one that is solely shouldered by the organic farmer to a polluter

pays model. Furthermore, Congress needs to establish strict liability laws for pesticide drift to protect both organic farmers and communities.

## 28. Promote home-grown organic supply chains

Figure 7: Growth of the national demand for organic food across all categories



Source: Swette Center analysis based on data from Nutrition Business Journal (2020)<sup>70</sup>

We need to keep organic growing! The national demand for organic products offers new avenues for organic import substitution and more localized organic supply chains, while enhancing pricing transparency and fairness across the overall organic supply chain. Although state and local governments<sup>160</sup> have taken on new roles in food system governance by focusing on supporting or enabling local food production and supporting short food supply channels, government programs and policies need to address barriers to support local food markets (e.g., inconsistent availability and quality, regularity of supply) and their growth in the US. In a post-COVID world of supply shortages and new restrictions on movement between countries (and sometimes, states and cities), shifting to regional-supply networks counterbalances volatile global supply chains. Resilience and efficiency of small businesses and short supply chains was demonstrated by scores of small restaurants that quickly adapted (while large restaurants dependent on long supply chains had simply to shut down) by completely changing their business model towards home delivery, or click-and-collect-services. Similarly, small organic businesses have responded to the needs of their customers despite social distancing, by selling food directly to residents. The COVID-19 crisis has called new attention to the benefits of local food systems that enable direct delivery, far from crowded grocery stores. Direct-market farmers are not locked into contracts with big buyers, so they can more nimbly change what they grow and how they get food to people more quickly. Developing a cost-effective strategy to localize

a multi-product supply chain is not an easy task, due to complex relationships across supply chains, the diversity in supply and demand across geographic regions, and the seasonality of the production process. Policymakers have the opportunity to facilitate adoption of an organic systems approach to anticipate the consequences of public policy initiatives to increase localization in the food industry.

## 29. Adopt True Cost Accounting

The application of cost-benefit analysis within federal rulemaking has evolved over time and typically at the start of a new administration, new executive orders are issued to shape rulemaking. For example, at the start of the Trump Administration, executive order 13771 was issued mandating that the net cost of all regulations not exceed zero; this was consistent with the anti-regulatory rhetoric espoused by White House leaders and the intent in issuing it was to have a chilling effect on any new regulatory efforts. In the next iteration of federal rulemaking, True Cost Accounting (TCA) should be substituted for cost-benefit analysis to ensure that, to the greatest extent possible, externalities are monetized and evaluated so that the true cost of various actions are transparent to policymakers and the public<sup>71</sup>. This would be a boost to organic production because when environmental and social externalities are taken into full account, the organic premium price can easily be associated with clear benefits. Furthermore, TCA would help make transparent various policy distortions, potentially leading to the abolishment of certain subsidies, the full implementation of the 'polluter pays principle' via taxing (e.g., of energy, CO<sub>2</sub>, pesticides, nitrogen) and clear labelling of practices (e.g., GMO, pesticide, intensive animal rearing).

## 30. Facilitate land access

Access to land is one of the greatest barriers to entry confronted by socially disadvantaged farmers and beginning farmers. Black and Indigenous farmers, in particular, have been systematically deprived of land.<sup>72,73</sup> USDA programs should be recalibrated to prioritize land access for socially disadvantaged organic farmers, next-gen organic farmers and ranchers, and young farmers seeking to transition their family farms to organic production.

The USDA Transition Incentives Program (TIP) offers two additional Conservation Reserve Program (CRP) rental payments on expiring CRP contracted land, in exchange for agreement to rent or sell the land to beginning or disadvantaged farmers or ranchers who commit to using sustainable farming and grazing methods. USDA makes farm loans to farmers unable to obtain financing from commercial lenders to purchase and develop farmland. FSA Land Contract Guarantee further helps beginning farmers enter rent-to-own situations with affordable interest rates and smaller down payments. All of these programs should be expanded and prioritized for organic producers. In the forthcoming Farm Bill, new initiatives could also be designed. The new Rhode Island Farm Access Program provides an interesting model.<sup>74</sup> To counter development pressure, the state buys farmland at its appraised value and then resells it to farmers for its agricultural value, which is typically a fifth of the appraised price.

## 31. Consider interim final rules

The organic industry wants and depends upon tough regulations. Organic farmers, ranchers, handlers, and businesses of all sorts understand that to maintain their market edge and remain a top choice for consumers, organic standards must be strict, based on the latest scientific information, and represent state-of-the-art practices pioneered in organic fields and ranches. The problem is that USDA has been exceedingly slow to execute on regulatory enhancements that have been put forth by the NOSB and that, for the most part, represent consensus positions, with little disagreement regardless of geography, crops, or scale. In the past 10 years, the NOSB has advanced 20 consensus recommendations for improvements to organic standards that have not become final, such as the aforementioned animal welfare rules. USDA should review this backlog and separate out proposals that are essentially consensus proposals and publish them as Interim Final Rules as soon as possible in 2021. In this way, the public will still have an opportunity to submit comments and USDA will be able to finetune the rules, if necessary, based on those comments.

## 32. Indicate Non-GMO in the organic label

Given the strong interest among consumers in non-GMO food, modifying the USDA seal to indicate that organic also means non-GMO would help organic producers and businesses. So many organic products now carry both the organic seal and a non-GMO seal. This means that producers and organic companies are paying twice for the same service – paying for an organic certifier to inspect for non-GMO compliance and paying for a non-GMO company inspector to do the same. The added costs and paperwork for an additional third-party certification to validate a non-GMO claim a second time over is absurd, but this came about, in part, because USDA prohibited organic producers from making a non-GMO claim on organic meat and poultry products until recently. Because the NOP seal is well recognized in the marketplace, it would be too disruptive to begin design anew. Rather, the recommendation is to find a way to augment the current seal to indicate these attributes.



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THOMAS OLDENBURGER

Section 4  
**Climate**

**10**

Agriculture is responsible for 10% of human-caused US greenhouse gas emissions making it the second largest contributing sector behind energy.<sup>75</sup>

**45**

Organic agriculture uses 45% less energy than conventional agriculture,<sup>76</sup> largely because nitrogen fertilizers are prohibited.

**120**

Organically raised cows and other ruminants must graze pasture for a minimum of 120 days a year, which helps reduce methane emissions<sup>77,78</sup> and builds soil organic matter.<sup>79</sup>

**40**

For the past 40 years, Rodale Institute field studies have shown that after a 5-year transition period, organic yields are competitive with conventional yields and in times of drought, organic yields are up to 40% higher.<sup>76,80</sup>

### 33. Provide organic a seat at the table in developing climate policies

Policies need to recognize and elevate organic agriculture as a climate solution and emphasize systems-based solutions.

USDA sustainability policies primarily emphasize Best Management Practices for individual components of an agricultural production system, such as fertilizer application, no-till practices, etc. without contemplating a systems approach focused on agroecosystem resilience and carbon balance. As a result, policies unilaterally promoting one practice (e.g., no till) may achieve their target (e.g., carbon sequestration) while indirectly causing harm (e.g., increased herbicide application affecting biodiversity) to other aspects of the system. Organic agriculture offers a systems approach for ecosystem resilience and mutually beneficial practices.

To make the most of the potential for organic agriculture to reduce agriculture's overall impact on climate change, we need to go beyond simply encouraging organic conversion, and include organic farm management within a broader range of GHG mitigation strategies<sup>80,81</sup> such as complementing agroecology principles with reducing food waste and facilitating animal and human dietary shifts. Organic systems tend to reduce food loss through on-farm biomass recycling, integrate livestock diets with grass and roughage, and encourage consumption of less GHG-intensive food by favoring unprocessed food such as vegetables, fruits and whole grains.<sup>81,82</sup>

Across important meetings, congressional hearings, and conferences related to climate change policy development, we see few organic leaders. The vast expertise in the organic sector needs to be tapped by US policymakers to help construct sensible and comprehensive climate change solutions.

### 34. Strengthen organic system plan requirement

The full promise of the Organic Systems Plan as a tool for continuous improvement and a guide to addressing site-specific needs as envisioned in the OFPA has yet to be realized. Certifiers need additional guidance on expectations for the Organic Systems Plan and USDA needs more oversight to ensure that plans are more than a paperwork exercise. Among other things, a strengthened Organic Systems Plan could help producers deliver on climate mitigation objectives. Under the Strengthening Organic Enforcement Proposed Rule, there is opportunity to adjust Plan requirements to make the process more farmer-friendly, in that, on an annual basis, only those portions of the plan that change from the previous year need to be submitted for review. This will allow all organic businesses and those who certify them to focus on what is important. But this is only one step of many needed to make the Organic Systems Plan one of the most important components of US organic standards as envisioned

in OFPA.

USDA should convene a special panel to advise on the Organic Systems Plan and how to make it a linchpin of certification and communicate its importance to consumers.

### 35. Promote ecosystem services markets

The 2008 Farm Bill established the USDA Office of Environmental Markets (OEM) and required the Secretary of Agriculture to “establish technical guidelines that measure the environmental services benefits from conservation and land management activities”.<sup>83</sup> This work is underway and should be expanded. OEM has several tools and market development projects underway that relate to greenhouse gasses, carbon, water quality and quantity, wetlands, and habitats. For example, COMET-Farm is a whole farm and ranch carbon and GHG accounting system available for farmers to use. A Minnesota study found that producers are more interested in programs that assess multiple ecological indicators rather than just soil carbon sequestration assessment<sup>84</sup>. A broad range of “Pay for Environmental Services” programs are emerging that encourage the provision of multiple ecosystem services from agricultural lands. Given the comprehensive environmental benefits from organic production, a comprehensive ecosystem market that takes into account multiple ecosystem services is most desirable. Carbon is a general indicator of soil health, but it should not be relied upon exclusively. For example, for semiarid regions of the country, the multi-functional tool LandPKS, developed by Colorado State University, is well suited to access rangeland health across a breadth of attributes.<sup>85</sup> Carbon level changes in semiarid lands will not show significant change for years, if not decades.<sup>86</sup> Yet there are many things ranchers can do to improve rangeland health and such practices should be encouraged. Many other examples could be cited that argue for a comprehensive approach to soil health assessment. In whatever approach is taken, it is also critical that measurement tools are fair. The Soil Conditioning Index, which is at the heart of many NRCS calculations, is well known to discriminate against organic and other sustainable systems. It is time for it to be revamped and modernized.

### 36. Facilitate organic farmers' access to voluntary carbon markets

Efforts to determine soil carbon sequestration face manifold data gaps and methodological difficulties. Although there is an urgent need for more science and better measurement techniques of soil carbon before setting-up markets, as of 2017, 42 countries and 25 subnational jurisdictions such as cities, states, and regions had already committed to carbon pricing initiatives.<sup>84,87</sup> Several bills were introduced in the 116<sup>th</sup> and 117<sup>th</sup> Congresses that would, if passed, facilitate voluntary carbon market development. The trajectory seems clear - we are hurtling toward various carbon market schemes. Organic achievements should be recognized when or if those markets are established.



Organic farmers have been implementing climate-friendly practices for decades. However, soil organic matter (SOM)/ soil organic carbon (SOC) schemes have so far only rewarded improvements, which discriminates against those who have been following sustainable practices well ahead of the relatively recent climate concerns. Organic agriculture comprises a number of practices that should be considered together within a carbon offset methodology, including: the replacement of chemical fertilizers, production and application of compost, utilization of legumes in crop rotations, avoidance of burning agricultural residues, all of which contributed to increased SOM. Such on-site monitoring, reporting and verification is applicable without prohibitive costs if reliable default values are defined. Alternatively, existing methodologies (e.g., WB Voluntary Carbon Standard, International Fertilizer Industry Association 4R, Sustainable Agricultural Land Management, US N<sub>2</sub>O protocols) for soil carbon and nitrous oxide via optimized fertilizer management could be revised for their applicability to organic farming.

Finally, evidence from existing carbon markets shows that these markets tend to favor large scale producers.<sup>84,88</sup> As policymakers contemplate ways to facilitate carbon market development, it is critical that, in addition to organic, the needs of smaller scale farmers, including immigrant and minority farmers, are considered. Strategies and support systems must be developed to help small scale and socially disadvantaged producers overcome market access challenges and share in market rewards.

### 37. Increase organic conservation support

To help advance the industry and realize the full potential of organic production to mitigate climate change, organic producers should receive enhanced support from USDA Natural Resources Conservation Service (NRCS). The contribution of organic farming to climate change mitigation and adaptation should be rewarded by the NRCS Conservation Stewardship Program (CSP) that provides financial incentives to ecosystem services. US maps indicate hotspots of soil carbon loss are often associated with major cropping regions and degraded grazing lands, which suggests that there are identifiable regions that should be targets for soil carbon restoration efforts.<sup>89</sup> To this end, organic ranchers could be recruited to regenerate US grazing lands hotspots for soil carbon. The organic payment caps under NRCS Environmental Quality Incentives Program (EQIP) should be raised (it is now limited to \$140,000 over five years) and a special set-aside allocation should be made in each state for organic applicants.

Organic farmers and ranchers are research pioneers for all of agriculture. In pursuit of sustainability innovations, within strict regulatory requirements, and with little federal and state research support, organic producers oftentimes find themselves on the frontline, trying out new practices and learning through trial and error. Once proven, these new practices may be adopted by conventional producers across the country. Given the climate mitigation and adaptation potential of organic practices, as well as the need to provide farmers and ranchers with technical advice, NRCS should consider allocating an organic specialist in every State. This would facilitate mapping of needs and identify specific agroecosystems opportunities and challenges for both conservation and development. Establishing such a fair playing field would facilitate, among other things, the access of organic farmers to USDA crop insurance discounts for cropping systems that reduce climate risks.

### 38. Provide market support for pulse and perennial crops

The NOP requires crop rotation, a long-standing organic practice because of its many benefits. Multi-year, sophisticated rotations are very effective in breaking pest cycles and building soil fertility and health.<sup>90</sup> That said, many crops that are desirable from a sustainability point of view are not particularly successful in the marketplace. Take the example of pulse crops, the edible seeds of legumes (e.g., lima, pinto, garbanzo beans), which are highly desirable from a climate perspective. Pulses are nitrogen-fixing crops, meaning that rather than needing fertilizer, the crops themselves act as natural fertilizers. Pulses are hardy, being both drought tolerant and frost hardy. They are a nutrient-dense, plant-based source of protein and use water efficiently. Despite all of these advantages, overall pulse production has not significantly increased since 1970<sup>91</sup> and the price for pulses has steadily decreased, with the price per cwt in real dollars 41% lower in 2019 than in 1980.<sup>92</sup>

Planting perennial crops is another good option for organic farmers, but like many pulse crops, market opportunities can be limited. The climate advantage of perennial crops is that there is no annual plowing of soil, thus reducing soil erosion. As well, woody perennial horticultural plants grow long roots overtime, which contribute to improved soil structure and water percolation, especially when integrated with annual crop rotations or perennial pasture. The Land Institute is a leader in perennial research and is investigating ways to advance perennial grains, legumes, and oilseed crops.<sup>93</sup> USDA programs and experts should be deployed to think through how to stimulate consumer demand for pulse and perennial crops (e.g., through dietary guidance and government procurement) and provide greater market infrastructure to allow farmers to profit from these soil enriching cropping practices.

### 39. Fund research on breeds and seeds adapted to climate change

The organic community is hungry for public and private investments in research to better understand potential solutions based on biological principles and ecosystem processes that support climate change mitigation and adaptation, including soil fertility management, adapted varieties and breeds, and appropriate mechanization. The system-oriented concept of organic agriculture, especially if combined with research investments to advance ecological knowledge would offer greatly needed solutions in the face of climate mitigation and chiefly, climate variability. With high climate variability, engineering single climate-resistant traits will undoubtedly fail farmers. Experiments are ongoing for system-wide shifts for climate-friendly organic systems. For instance, research on agriculture in drought conditions undertaken at the International Center for Agricultural Research in the Dry Areas has in place an adaptive crop management system in arid and semi-arid areas where organic farmers seed tens to thousands of varieties of wheat in the same field in order to match rapidly evolving climate conditions and thus, decrease risk of crop failure due to climate change.<sup>94</sup> Such research increases variety supply by accelerating crop breeding while offering climate resilience.

Organic plant breeders favor adaptation of low input conditions and fluctuating nutrient dynamics, efficient capture of water and nutrients, deep intensive root architecture, ability to interact with beneficial soil organisms, weed competition in soil coverage and light uptake, durable genetic resistance to pests, diseases, and more generally, local field tolerance. Farmer-participatory plant breeding networks in which field selection is conducted in the context of organically managed soils and agroecosystems have shown promising initial results for developing cultivars suited to organic systems. Genetic resources that could be utilized in organic breeding include wild relatives of cultivated organisms, local

populations that are well adapted to local environmental conditions due to natural and/or instinctive selection, old varieties commonly obtained in pre-Green Revolution breeding programs, and even modern varieties that could carry some useful genes to meet certain challenges of biotic and/or abiotic stressful growth conditions.<sup>95</sup> Similarly, investments in developing locally-adapted breeds is necessary, such as done by the organic community in Italy for the pasture-based native Maremmana beef that is able to survive difficult environments, while contributing to climate mitigation.<sup>96</sup>

#### 40. Identification of organic as climate smart

The organic label is the original climate-smart label for all the reasons discussed in this report. A NOP carbon crediting certification, complete with measurement and verification details, could and should be easily integrated within the NOP as a practical means to facilitate organic farmers' participation in the voluntary carbon market and avoid organic producers having to seek for and pay for two certification schemes. As well, USDA should consider a minor redesign of the organic label that would add to it an indicator to consumers that the organic choice is a pro-climate choice.

#### 41. Develop a water stewardship standard for the NOP

Though arguably the most essential nutrient for agricultural production and the most urgent and at-risk from the effects of climate change, water is often left out of the organic conversation. While water cannot be certified as organic, as is consistent with most organic programs across the world, the NOP has a few important water standards. For instance, water cannot be calculated in organic product composition; chemical-free water must be used for cleaning organic food; chlorine in water is allowed within limits set by the Safe Drinking Water Act; and tap water is allowed in organic production and handling. However, beyond these requirements, it is up to the certifier to determine what, if any, practices are necessary to ensure water quality and prevent poor management of this scarce resource. For example, a certifier might require, as a condition of certification and embedded within the Organic Systems Plan, that a producer establish buffer strips along a waterway to protect it from runoff. A certifier might require identification and special care of a wetland area or practices to ensure that water is used efficiently. The advantage of the current system is the site specificity offered up by the Organic System

Plan requirement. The certifier must review and approve the Organic System Plan and therefore it is a tool to enforce needed water-related practices. The disadvantage is that there is no baseline articulation of water quality and quantity production requirements as part of the NOP. Given the increasing focus on water issues, this may be an opportunity to further articulate NOP standard(s) on water use. The Soil Association in the United Kingdom updated its standards in 2018<sup>97</sup> which touched upon water issues and it is possible that more countries and organizations will decide to identify and enforce water usage practices. It is time to begin NOSB and stakeholder deliberations on water practice standards and lead, rather than follow, global trends.

#### 42. Embrace agroforestry and plant organic food forests in urban centers

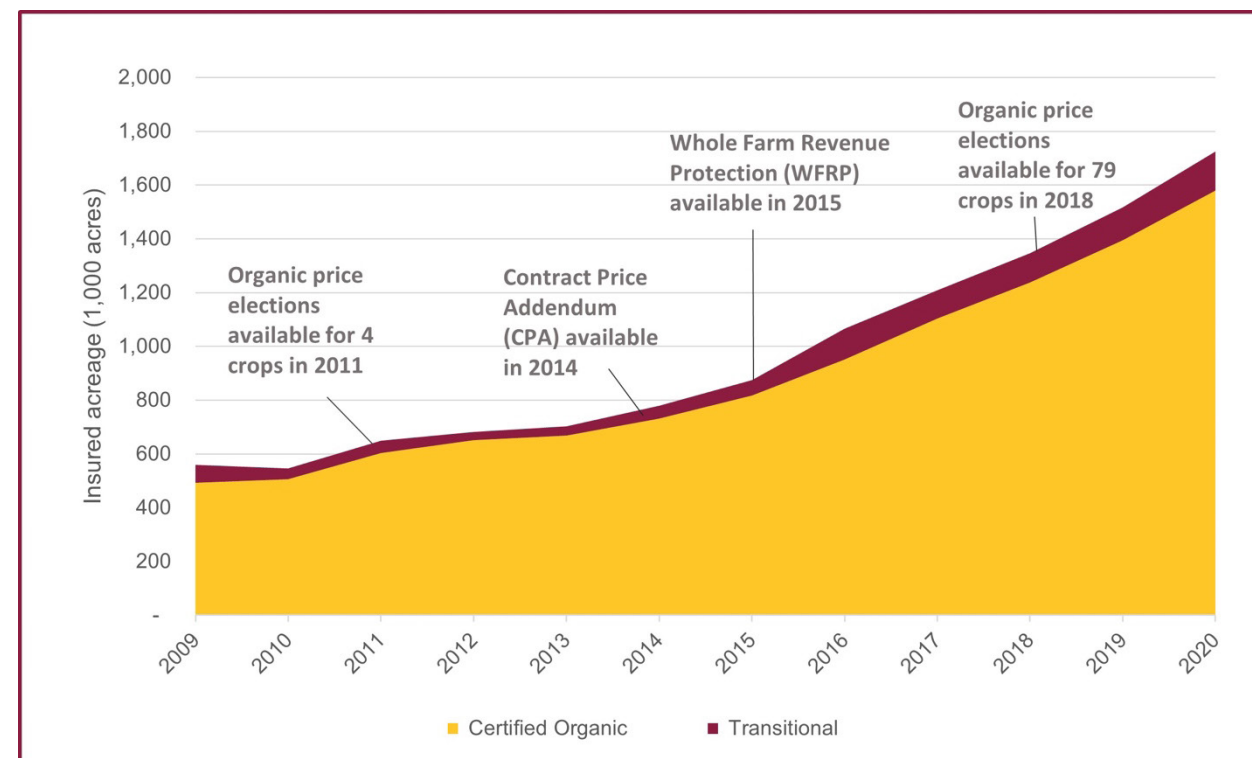
Reforestation is among the best-known strategies to mitigate climate change, with many organizations and governments incenting tree planting across the globe. Trees sequester carbon from the atmosphere, build soil organic matter, and make landscapes more resilient.<sup>98</sup> Given the devastating wildfires of 2020 across many states and most notably California, it is reasonable to expect that a massive reforestation effort will soon be undertaken by the federal government. In our national effort to think about trees as a climate strategy, there is great opportunity to elevate the role of agroforestry, the intentional integration of trees with crop and animal production. The USDA Strategic Plan for Agroforestry notes the five most common agroforestry practices: using trees as windbreaks; riparian forest buffers along waterways; silvopasture systems, forest farming, and alley cropping.<sup>99</sup> Many of these agroforestry practices are undertaken by organic producers. The USDA Strategic Plan does not address the synergies between agroforestry and organic production, and it should. Increased attention to, and investment in agroforestry is merited; a boost to agroforestry should also be a boost to organic production (and vice versa).

There is growing interest in urban agriculture and the US Forest Service has a dedicated office for urban forestry. One interesting development is the surging interest in "food forests," which entails placing food producing trees on public lands in urban centers. As of 2018, more than 70 community food forests were known to exist in public places, including major cities such as Atlanta, Philadelphia, and Seattle.<sup>100</sup> The idea of edible forests is the newest variant of community gardens. Because these food forests are in urban centers and produce food available to all, it makes sense that these forests be managed organically for the safety of close-by neighbors, people recreating in the forests, and for those harvesting the food. In the way that USDA has supported community gardens, it may be time to upscale support for organic food forests.

### 43. Reduce the burden of going organic with robust insurance tools

Crop insurance is a critical risk management tool and for this reason, the federal government heavily subsidizes it, covering about 60% of a producer's cost. There are various types of insurance, and not all commodities or geographies are covered, but overall it is financially the largest annual investment within USDA's portfolio of producer support programs, with a budget totaling \$11.8 billion in the 2019 crop year alone.<sup>34</sup> In 2020, more than 100 commodities, including some animal and animal products were eligible for subsidized insurance.<sup>101</sup>

Figure 8: Certified Organic and Transitional Acreage under Federal Crop Insurance



Source: Swette Center Analysis using USDA Risk Management Agency data<sup>103</sup>

For many years, organic producers were effectively shut-out of the USDA Risk Management Agency (RMA) insurance programs; the 2008 Farm Bill sought to reverse history by requiring the Federal Crop Insurance Corporation to study ways to improve crop insurance coverage for organic production with respect to price elections and premium rates. Progress has been made since then, and for example, beginning in 2010 the RMA no longer required organic farmers to pay a 5% surcharge on their crop insurance premiums for certain crops, an unfair practice RMA had previously justified by citing a lack of data on organic crop performance.

Overall, however, progress has been slow. As essential as crop insurance is, and after years of advocating for organic-friendly insurance, organic producers are not significant beneficiaries. For example, USDA places numerous restrictions on insurance for operations that use cover crops<sup>103</sup> and there are few insurance options for many organic crops, particularly fruits and vegetables. Continued progress on organic price elections is necessary, the cap on organic contract price elections needs to be eliminated, and the Whole-Farm Revenue Protection program needs to be improved so to better fit organic needs and support sustainable farming systems.

The 2019 Organic Survey asked producers about their participation in USDA farm programs. A stunning 14,193 farms reported that some or all of their acres were not enrolled in crop insurance. A little more than half (7,478 farms) reported not enrolling in crop insurance because they did not need or want it. However, the remaining farms cited the following reasons for lack of enrollment: too expensive (1,600 farms); unfamiliar with crop insurance (2,165 farms); crop insurance agents unfamiliar with organic crop insurance (115 farms); insurance not available for produced commodities (1,223 farms); organic price selections not offered for the produced commodities (158 farms); and other (1,454 farms).<sup>26</sup> That totals 6,715 organic producers -- 40% of all organic producers filling out the 2019 Organic Census -- who would likely avail themselves of crop insurance for uncovered acreage if various hurdles were removed. Most heartbreaking of all the obstacles is the lack of knowledge of publicly supported insurance tools by both organic producers and crop insurance agents. RMA should begin by addressing this knowledge gap - an easy fix - and proceed to address the other obstacles identified by the survey.

### 44. Incent recoupling of crop and livestock production

It is rare to see a farming operation that includes both crop and livestock production. Over the decades, the quest for efficiency has led to specialization of production, leaving few remaining multifunctional integrated crop-livestock operations in the US. With greater understanding of, and appreciation for, the value of a circular economy, organic producers are especially keen to explore opportunities to (re) develop whole farm systems that recycle nutrients and balance farm imports and exports. Research is underway to document the value of recoupling crops and livestock and the Rodale Institute provides a library of resources and lists the values of crop livestock integration: reduced animal feed costs, reduced fertilizer input costs, reduced labor, improved soil health, increased farm biodiversity, utilization of marginal lands, reduced machinery inputs, reduced tillage, reduced pests, source for plant fertility.<sup>104</sup> As USDA and Congress develop agenda items for the next Farm Bill, a new program should provide incentives to facilitate integrated production to help the organic sector and smaller scale farmers seeking to scale and match production of animal manure with land resources and crop needs.

## 45. Manage federal grazing lands organically

Overall, the federal government owns roughly 640 million acres, which is about 28% of all land in the US.<sup>105</sup> Of this amount, the Bureau of Land Management (BLM) in the Department of Interior manages 244.4 million acres and the USDA Forest Service manages 192.9 million acres.<sup>105</sup> Many ranchers graze their animals on public lands, most notably those managed by the BLM and Forest Service. Many of these lands are subject to chemical treatments. For example, the Forest Service applies zinc phosphide as a control for prairie dogs, a rodent prevalent in prairies and native grasslands. Such chemical applications mean that the many ranchers who depend on public lands cannot market their animals as organically produced. The reason for this is that the NOP requires animals to be fed a 100% organic diet, which includes the grasslands that they graze. The BLM and Forest Service should develop pest management strategies and materials that meet NOP rules to help ranchers transition to organic production, and furthermore, to advance the ecological health of public lands.

## 46. Restore the Organic Field Buffer Initiative

NRCS describes field buffers as “common sense conservation.” Field buffers are areas in which farmers maintain permanent, non-cropped vegetative cover. While there are multiple kinds of field buffers to fit various needs, they all provide a range of benefits from helping build soil organic carbon, to preventing soil erosion, providing habitat for pollinators and other wildlife, and promoting water holding capacity and infiltration, among other things. The Organic Field Buffer Initiative, launched by the USDA FSA in 2016, provided organic farmers cost-share and land rental payments for installation of field buffers through the Continuous Conservation Reserve Program. This initiative was discontinued at the beginning of the Trump administration and should be resurrected by the Biden-Harris team.



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KATHLEEN MERRIGAN

Section 5

# Conclusion

## LOW HANGING FRUIT...

The goal of this report is to present the Biden-Harris Administration a list of easily achievable actions to immediately power-boost organic agriculture. Based on our experience and discussions with experts, we categorize 36 of these recommendations as ‘low hanging fruit,’ meaning that the President has the power TODAY to implement most, if not all of elements of these 36 recommendations. Action on 10 recommendations depends on Congress providing new money and/or statutory authority. All told, these 46 recommendations add up to a modest ask of our new leaders.

Most of these recommendations spring from ideas that have been kicking around for years. We encourage the Biden-Harris Administration to reach out to organic advocates for more details to guide the work ahead. Research organizations (e.g., Organic Farming Research Foundation, Rodale Institute, The Organic Center); sustainable agriculture groups (e.g., National Sustainable Agriculture Coalition, Pasa Sustainable Agriculture, Midwest Organic and Sustainable Education Service); trade associations (e.g., Organic Trade Association, Accredited Certifiers Association); farmer associations (e.g., Organic Farmers Association, Intertribal Agriculture Council, National Young Farmers Coalition); consumer advocates (e.g., Center for Science in the Public Interest, Consumers Union); environmental groups (e.g., Natural Resources Defense Council, Californians for Pesticide Reform); organic certifiers (e.g., CCOF, Northeast Organic Farming Association, Real Organic Project); and organic advocacy organizations (e.g., National Organic Coalition, Organic Voices) are ready to spring into action to help. Members of Congress, led by Senator Patrick Leahy and Congressman Peter DeFazio, the original sponsors of the 1990 organic law who have worked tirelessly on behalf of organic ever since; organic farmers now seated in Congress, Senator Jon Tester and Congresswoman Chellie Pingree; and members of the bipartisan House Organic Caucus, have ideas on how to move forward. The Swette Center stands alongside hundreds of groups and legislators, ready to assist in any way to help transform these recommendations into reality.

We realize that this report cut to the chase, with no background on organic and why it matters. We look forward to publishing a companion report this fall, in collaboration with NRDC and Californians for Pesticide Reform, that details the compelling rationale for organic. In the meantime, and in brief, there are many reasons for the Biden-Harris Administration to focus on policies to advance organic agriculture. From reduced pesticide exposure to healthier gut microbiomes, organic protects farmworkers and farm communities and advances human and animal health. Organic is a proven community economic development tool and can help farmers achieve profitability. Soil health and the integration of crops and livestock production are just two of the many ways organic is climate-smart agriculture. The desperately needed next generation of farmers and ranchers, including BIPOC producers, are attracted to organic and it is crucial that they see this sector as one of opportunity. Finally, organic farmers are research pioneers for all of agriculture. From rotational grazing, to devising soil building strategies that improve soil water retention and reduce irrigation needs, to discovering cover cropping mixes that increase soil nutrients and suppress weeds, to experimenting with complex crop rotations that advance sustainability, organic farmers are frontline innovators.

As described in the OFPA, organic is a process of continuous improvement. While that concept was originally intended to apply to production practices, it certainly fits policy too. The USDA NOP is imperfect. There have been a few widely publicized enforcement failures. There have been some flawed administrative decisions and too many delays in rulemakings. And there are heated debates over unresolved issues, such as whether hydroponic production can qualify as organic since it is not soil-based. Are we satisfied with all things NOP? – we are not. The good news is that this is all fixable! At 30 years and counting, it is time to reinvest in the NOP. Moreover, there are so many federal policies and programs beyond the NOP that are critically important to organic agriculture, from research investments to certification cost-share, conservation, organic transition support to risk management and more. There are so many opportunities for the Biden-Harris Administration to move organic forward.

Millions of consumers are voting for organic with their forks, yet their actions will never be enough to overcome the avalanche of policies that prioritize conventional agriculture and too often discriminate against organic. The Biden-Harris Administration has announced bold infrastructure plans, climate change policies, pandemic relief, and investments in supply chain resiliency. We are in the midst of a massive ‘build it back better’ reimagining of our country. Organic should be featured in all these efforts and by featured we mean the organic sector should receive hundreds of millions of dollars in investment by the federal government. It is time. It is fair. It is smart.

## INFINITY

There is a seemingly infinite number of policy actions that could be undertaken to advance the organic sector. We conclude this report with unending optimism that, with appropriate and long overdue policy support, organic agriculture will significantly advance health, strengthen the economy, and mitigate climate change.



## List of Acronyms

AI/AN	American Indian and Alaska Natives
AMS	USDA Agricultural Marketing Service
ARS	Agricultural Research Service
BIPOC	Black, Indigenous, People of Color
BLM	Bureau of Land Management
CCOF	California Certified Organic Farmers
CRP	Conservation Reserve Program
CSFP	Commodity Supplemental Food Program
CSP	NRCS Conservation Stewardship Program
DGAs	Dietary Guidelines for Americans
EQIP	NRCS Environmental Quality Incentives Program
EU	European Union
FACA	Federal Advisory Committee Act
FAS	USDA Foreign Agricultural Service
FDA	Food and Drug Administration
FDPIR	Food Distribution Program on Indian Reservations
FMMOs	Federal Milk Marketing Orders
FNS	USDA Food and Nutrition Service
FSA	USDA Farm Service Agency
FSIS	USDA Food Safety Inspection Service
FY	Fiscal Year
HHS	Department of Health and Human Services
HS	Harmonized System

IPIFF	International Platform of Insects for Food and Feed
ITC	U.S. International Trade Commission
KYF2	Know Your Farmer, Know Your Food Initiative
NASDA	National Association of State Departments of Agriculture
NCTP	National Certified Transitional Program
NGO	Non-governmental organization
NIFA	USDA National Institute of Food and Agriculture
NOP	U.S. National Organic Program
NOSB	National Organic Standards Board
NRCS	USDA Natural Resources Conservation Service
NRDC	National Resources Defense Council
OEM	USDA Office of Environmental Markets
OFPA	Organic Foods Production Act
OLPP	Organic Livestock and Poultry Practices
OREI	Organic Agriculture Research and Extension Initiative
ORG	Organic Transitions Program
OTA	Organic Trade Association
PLU	Price Look Up
R&P	Research and Promotion
RD	USDA Rural Development
RMA	USDA Risk Management Agency
SCRI	Specialty Crop Research Initiative
SNAP	Supplemental Nutrition Assistance Program
SOC	Soil organic carbon
SOM	Soil organic matter
TCA	True Cost Accounting
TEFAP	The Emergency Food Assistance Program
TIP	USDA Transition Incentives Program
USDA	United States Department of Agriculture
WIC	Women Infant Children Program

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Merrigan is a professor at Arizona State University and Executive Director of the Swette Center for Sustainable Food Systems. She has a long history in organic policymaking. While working for then-chair of the US Senate Committee on Agriculture, Nutrition and Forestry Senator Patrick Leahy, Merrigan drafted the Organic Foods Production Act of 1990. She served on the National Organic Standards Board. She helped draft the first-ever organic policy paper adopted by the Ministerial Conference of the United Nations Food Agriculture Organization. As Administrator of the USDA Agricultural Marketing Service, she oversaw the second and final rulemaking to implement the National Organic Program. She served on the board of directors of The Organic Center. As USDA Deputy Secretary, Merrigan prioritized organic, local, and sustainable agriculture through many initiatives. She currently serves on the Advisory Committee for the Organic Farming Research Center, whose board she served on in its early years.

### **Esteve G. Giraud**

Esteve Giraud is a PhD candidate at the School of Sustainability at Arizona State University, and her research focuses on the contributions of Care Theory to urban food system resilience. She currently serves as a Research Associate at the Swette Center for Sustainable Food Systems at Arizona State University, where her work centers on organic agriculture. She holds a Master in Economy and Management from the University Pompeu Fabra (Spain), and a Master in Business Administration from Toulouse Business School (France). In 2016 she wrote a book on the ethics of the organic movement which was published in France.

### **Catherine Greene, PhD**

Greene recently retired from USDA's Economic Research Service where her focus for over three decades was to expand research on the U.S. organic sector. She has authored dozens of organic reports on the adoption of organic farming systems, farm profitability, trade, food labeling, consumer demand and other topics—garnering over 3,000 citations on Google Scholar. Early projects included organic pest management research and USDA's first organic market outlook. Greene established the first national organic survey in the 1990s to examine the extent of organic farming across America and subsequently expanded routine ERS farm studies to include organic farm profitability. She worked with numerous stakeholders over the years, including the Organic Farming Research Foundation, National Organic Coalition, Organic Trade Association and other government agencies, to improve organic research and analysis. In 2000, Greene contributed the economic impact analysis to the final rule establishing USDA's National Organic Program. She also led the planning teams that produced the USDA/OECD organic policy conference in 2002 and the USDA organic farming systems research conference in 2011.

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