June 21, 2021

Dr. Melissa R. Bailey Agricultural Marketing Service United States Department of Agriculture 1400 Independence Avenue, SW Washington, DC 20250

RE: Comments in Response to Notice of Request for Public Comment on Supply Chains for the Production of Agricultural Commodities and Food Products

Dear Dr. Bailey,

On behalf of the Union of Concerned Scientists (UCS) and its more than 500,000 supporters nationwide, I am pleased to submit the following comments on "Supply Chains for the Production of Agricultural Commodities and Food Products."

UCS is a national science-based non-profit organization working for a healthy environment and a safer world. We combine independent scientific research and citizen action to develop innovative, practical solutions to secure responsible changes in government policy, corporate practices, and consumer choices.

Introduction

Agricultural and food supply chains are complex, dynamic, and local to global in scale, and they are foundational to our nation's communities, economies, and overall health and well-being. While these supply chains are strong and resilient in some ways, they are also fragile and vulnerable in others. The COVID-19 pandemic has highlighted some of their weaknesses.¹ To prevent future major disruptions like those experienced in 2020, or worse, policymakers must act urgently to counter threats posed by global shocks including disease outbreaks, climate change, and extreme weather. Doing so will help promote nutrition security and prevent harm to communities, especially those who typically bear the brunt of such shocks.

Today, food and farm policies and corporate decision-making rely too heavily on flawed and incomplete measures of the strength and resiliency of our food and agricultural systems— primarily, how much, how consistently, and how cheaply they produce food, fuel, and fiber. As our comments below indicate, food and agricultural systems will only truly be strong and resilient when production levels and methods meet the needs of all populations; when prices, markets, and wages are fair; and when the systems make sustainable use of critical natural resources needed for future generations. Proposed supply chain innovations and solutions that continue to overlook or insufficiently address these fundamental needs will fail to genuinely increase the strength and resiliency of the systems.

¹ https://www.nytimes.com/2020/04/13/business/coronavirus-food-supply.html

Climate change, in particular, poses multiple challenges for agricultural and food systems: these systems are significant contributors of heat-trapping gases, and agriculture is also increasingly vulnerable to current and future climate change impacts. The US agriculture sector is responsible for about 10 percent of the nation's total greenhouse gas emissions.² According to one recent study, the food systems (including agricultural production) that feed our country are responsible for 16 percent of US greenhouse gas emissions.³ Consequently, the federal government must act urgently to support farmers in adapting to climate change while simultaneously reducing the emissions they contribute to the problem. Moreover, federal efforts to spur agricultural climate adaptation and mitigation must be equitable, ensuring that Black, Indigenous, and other People of Color (BIPOC) and small and midsize farmers are included and supported.

Because people are essential to making our food and agricultural systems run, efforts to make these systems stronger and more resilient must prioritize the health and safety of farmers, workers, and communities. Today's food and agricultural systems too often endanger the health and safety of farmworkers,⁴ leave behind BIPOC farmers and communities,⁵ degrade soils that take many years to form naturally,⁶ and pollute water resources⁷ and damage marine ecosystems and fisheries that communities rely on for their livelihoods.⁸ In addition, farmland consolidation, policy and market barriers to entry for new farmers,⁹ and consolidation of food processing have resulted in food and agricultural systems that are concentrated economically and geographically in ways that serve some people and communities, while harming others. Protecting the health, safety and economic livelihoods of all food system workers and communities is a matter of ethics and human morality, and would help to address historical and ongoing racial discrimination and other inequities faced by people who are vital to the systems that put food on dinner tables across the United States every day. Moreover, protecting workers and communities can help safeguard food and agricultural systems from problems of reduced competition in labor markets and reduced labor supply (due to worker avoidance of unfair or dangerous working conditions). Ensuring the health and safety of food system workers not only improves the quality of life for workers and communities but also reduces expenses incurred by families, communities, and taxpayers, including the costs of anti-poverty programs and the medical and lost productivity costs that result from worker injuries and illness.

Importantly, the food and agricultural system and supply chain does not stop at the farm gate or the meatpacking plant. It also includes people who buy and eat food. Thus, efforts to make the system stronger and more resilient must include attention to impacts on consumers and what they eat. For example, today's predominant US diet contributes to dangerous rates of chronic

² https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions

³ https://www.sciencedirect.com/science/article/abs/pii/S0306919217310552

⁴ https://www.ucsusa.org/resources/farmworkers-at-risk

⁵ https://www.ucsusa.org/resources/leveling-fields

⁶ https://www.ucsusa.org/resources/eroding-future

⁷ https://www.ucsusa.org/resources/dirty-water-degraded-soil

⁸ https://www.ucsusa.org/resources/reviving-dead-zone

⁹ https://www.ucsusa.org/resources/losing-ground

diseases.¹⁰ At the same time, even prior to the COVID-19 pandemic, more than 10 percent of US households did not have access to the food they needed at some point during 2019.¹¹

Accordingly, our responses to the USDA's questions below center on the need for public policies grounded in equity, public health, and the science of agroecology,¹² which would address key supply chain weaknesses and help create sustainable food and agricultural systems better equipped to withstand future pandemics, extreme weather events caused by climate change, and other looming global threats. We believe that without sufficient attention to these considerations, efforts to improve the resilience of food and agricultural supply chains could have unintended consequences, particularly for vulnerable communities and economies. They could also exacerbate the environmental, economic, and social issues already present in our food and agricultural systems.

We appreciate this opportunity for stakeholder feedback and applaud the USDA's interest in meaningfully improving and increasing the resilience to supply chains.

Below are UCS's responses to specific questions in the Request for Public Comment.

Responses to Questions

USDA is particularly interested in comments and information directed to the policy objectives listed in E.O. 14017 as they affect agricultural and food products supply chains, including but not limited to the following elements:

(i) The critical goods and materials underlying agricultural and food product supply chains. Under section 6(b) of E.O. 14017, "critical goods and materials" means goods and raw materials currently defined under statute or regulation as "critical" materials, technologies, or infrastructure;

(ii) other essential goods and materials underlying agricultural and food product supply chains, including digital products, and infrastructure. Under section 6(d) of E.O. 14017, "other essential goods and materials" means those that are essential to national and economic security, emergency preparedness, or to advance the policy set forth in section 1 of E.O. 14017, but not included within the definition of "critical goods and materials." USDA also will consider "other essential goods and materials" relative to nutrition security given its related importance to national and economic security. USDA is particularly interested in comments on the following goods and materials pertaining to agricultural and food supply chain resilience including, but not limited to: Seed, fertilizer, pesticides, livestock/animal health, feed and feed additives, plant health, soil health, water (availability, quality, access, infrastructure), energy (availability, access, infrastructure), viability of pollinators, the agricultural workforce (sufficiency, reliability, documentation, health and well-being), access to capital/financing, access to farm production tools (including for farmers interested in value-added agriculture such as USDA organic

¹⁰ https://www.ucsusa.org/resources/delivering-dietary-guidelines

¹¹ https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx

¹² https://www.ucsusa.org/resources/counting-agroecology

certification), access to critical food distribution assets (shipping containers, cold chain equipment, and materials such as packaging) and technology, access to food processing and markets (including traceability and transparency), and access to training, education, and technical assistance;

Numerous essential ecological goods and services underlie agricultural and food product supply chains and are too often overlooked. For example:

- Regionally tailored seeds and cultivars can help farms tolerate extreme weather, resist diseases and pest, and provide nutritious and high-value products.¹³ However, the decline in investment in public breeding programs in recent decades in the United States puts at risk the future availability of seeds, particularly those that best serve the public interest.¹⁴
- Soil is at the foundation of our food system and is vital for our future,¹⁵ yet soils across the country are eroding at dangerous rates.¹⁶ Degraded soils are also more vulnerable to droughts and floods,¹⁷ exacerbating supply chain risks associated with extreme weather and climate shocks.
- Clean and abundant water resources are essential for food production, as well for numerous other products required across food and agricultural supply chains. Current farming methods pollute water with excess fertilizer, pesticides, and sediment, contaminating drinking water supplies and disrupting freshwater and marine ecosystems.^{18, 19} Many farms also rely on irrigation from water resources that are particularly strained, such as in California²⁰ and regions that draw from the Ogallala Aquifer.²¹ Climate change is expected to worsen these water-related challenges.^{22, 23}
- Many foods rely on pollinators that are in decline in large part due to today's farming methods and systems.²⁴

Several social factors are also crucial to functioning supply chains, and are currently lacking:

• The estimated 2.4 million farmworkers in the United States are vital to food production. However, these workers are exploited in large part due to their lack of

¹³ https://www.ucsusa.org/resources/seeds-future

¹⁴ DOI: 10.1002/csc2.20227

¹⁵ https://www.ucsusa.org/resources/safeguarding-soil

¹⁶ https://www.ucsusa.org/resources/eroding-future.

¹⁷ https://www.ucsusa.org/resources/turning-soils-sponges

¹⁸ https://www.ucsusa.org/resources/reviving-dead-zone

¹⁹ https://www.ucsusa.org/resources/dirty-water-degraded-soil

²⁰ DOI: 10.1061/(ASCE)WR.1943-5452.0001014.

²¹ https://link.springer.com/article/10.1007%2Fs10584-017-1947-7

²² https://doi.org/10.1007/s10584-019-02585-5

²³ https://nca2018.globalchange.gov/

²⁴ https://royalsocietypublishing.org/doi/10.1098/rspb.2020.0922

access to US citizenship, they are paid poverty wages, and their health is vulnerable to climate change impacts and other compounding occupational threats.²⁵

• Capital and financing, technology, markets, training, and technical assistance helps to ensure that farmers can be successful but are too often lacking. This is particularly true for new and beginning farmers, and for BIPOC farmers who have been historically marginalized and discriminated against.^{26, 27}

(iii) the manufacturing or other capabilities necessary to produce the materials identified in subsections (i) and (ii) of this section, including emerging capabilities. USDA is particularly interested in comments on the processing and distribution, capacity, and access issues associated with food production across all agricultural commodities, the varying scales at which processing is available (including availability for small to mid-size producers), the geographic distribution of such processing (e.g., availability to local and regional producers and food hubs), access to transportation hubs and export facilities, and cold chain infrastructure and capacity, access to packaging (including the availability of sustainable packaging), as well as the ownership and financial viability of such facilities;

Current food and agricultural systems are dominated by large-scale operations, which is partly a function of economies of scale present in agricultural production and food processing and the advantages some regions have in producing specific crops and livestock. Comparative advantage in certain regions of the United States (for example, the advantages of California's Mediterranean climate, engineering of surface waters into canal systems, and access to plentiful groundwater sources for growing fruits and vegetables) is also a reason for the consolidated nature of agriculture we see today. However, domestic agricultural policies including farm tax rates, lending policies, government research programs that affect the availability and cost of technology, and taxpayer-subsidized crop insurance markets also play a role in the trend toward large, consolidated operations.²⁸ This trend has negative consequences for our supply chains, communities, and economies. First, it has reduced the diversity of US agriculture, as midsize farms have been squeezed out by very large farms in recent decades.²⁹ Second, it has created high barriers to entry for beginning and new farmers who want to enter the sector, because both the input sector for agriculture and downstream supply chains are built for large-scale agricultural producers.³⁰

Geographically consolidated agricultural production—due in part to the increasing trend toward large, one or two crop operations—has major ramifications for the sector's resilience and security, particularly in the face of climate change and extreme weather

 ²⁵ https://www.ucsusa.org/sites/default/files/2019-12/farmworkers-at-risk-report-2019-web.pdf
²⁶ https://www.ucsusa.org/resources/leveling-fields

²⁷ https://online.ucpress.edu/elementa/article/doi/10.1525/elementa.356/112494/Securing-the-future-of-US-agriculture-The-case-for

²⁸ https://www.ers.usda.gov/webdocs/publications/45108/39359_err152.pdf

²⁹ https://www.ucsusa.org/resources/losing-ground

³⁰ https://online.ucpress.edu/elementa/article/doi/10.1525/elementa.356/112494/Securing-the-future-of-US-agriculture-The-case-for

events. Concentrated production in one region or state could put at risk a large share of domestic supply. Consequently, having production in many parts of the country to smooth out supply shocks due to local or regional extreme weather events can help make agricultural supply chains more resilient in the face of climate change.

(iv) the defense, intelligence, cyber, homeland security, health, climate, environmental, natural, market, economic, geopolitical, human-rights or forced-labor risks or other contingencies that may disrupt, strain, compromise, or eliminate the supply chain including risks posed by supply chains' reliance on digital products that may be vulnerable to failures or exploitation, and risks resulting from the elimination of, or failure to develop domestically, the capabilities identified in subsection (iii) of this section—and that are sufficiently likely to arise so as to require reasonable preparation for their occurrence;

While there are many factors that could disrupt or compromise food and agricultural supply chains in the future, we want to draw specific attention to climate change, environmental and ecosystem degradation, and risks to the health and well-being of food system laborers.

Devastating climate change impacts are already unfolding across the country, including on many farms and ranches. These include changing precipitation and temperature patterns, floods, droughts, changes in crop and livestock viability, and new pests, pathogens, and weed problems.^{31, 32} In many of these cases, climate change is serving as an amplifier of pre-existing challenges.

As noted in (ii) above, environmental risks, including soil erosion and water degradation or scarcity, also pose a major threat to supply chains. For water degradation and scarcity, agriculture itself has significant responsibility. However, other sources of water use and water pollution must also be addressed to ensure food and agricultural water needs can be met.

Also as noted in (ii) above, our agricultural system relies on an estimated 2.4 million farmworkers, who are exploited, undervalued, and vulnerable to compounding climate change threats.³³ Other workers throughout the food supply chain also face similar, devastating conditions.³⁴

(v) the resilience and capacity of American manufacturing supply chains, including food processing (e.g., meat, poultry, and seafood processing) and distribution, and the industrial and agricultural base—whether civilian or defense—of the United States to support national, economic, and nutrition security, emergency preparedness, and the policy identified in section 1 of E.O. 14017, in the event any of the contingencies identified in subsection (iv) of this section occurs, including an assessment of:

³¹ https://www.ucsusa.org/resources/climate-change-and-agriculture

³² https://nca2018.globalchange.gov/

³³ https://www.ucsusa.org/sites/default/files/2019-12/farmworkers-at-risk-report-2019-web.pdf

³⁴ https://blog.ucsusa.org/rebecca-boehm/with-trump-executive-order-are-meat-and-poultry-plants-a-covid-19-ticking-time-bomb/

(A) The manufacturing or other needed capacities of the United States, including the ability to modernize to meet future needs, including food processing (such as meat, poultry, and seafood processing) and distribution;

(B) gaps in domestic manufacturing capabilities, including nonexistent, extinct, threatened, or single-point-of-failure capabilities;

(C) supply chains with a single point of failure, single or dual suppliers, or limited resilience, especially for subcontractors, as defined by section 44.101 of title 48, Code of Federal Regulations (Federal Acquisition Regulation). USDA is particularly interested in comments related to the role of market concentration and consolidation in agricultural sectors and how it affects food system resilience, including potential system failures in the face of supply chain disruptions;

(D) the location and geographic distribution of key manufacturing and production assets, with any significant risks identified in subsection (iv) of this section posed by the assets' physical location or the distribution of these facilities. USDA is interested in comments on the risks associated with the current geographic distribution and diversification of where U.S. crops and livestock are grown/raised, processed, and marketed;

(E) exclusive or dominant supply of critical goods and materials and other essential goods and materials, as identified in subsections (i) and (ii) of this section, by or through nations that are, or are likely to become, unfriendly or unstable;

(F) the availability of substitutes or alternative sources for critical goods and materials and other essential goods and materials, as identified in subsections (i) and (ii) of this section. For example, USDA encourages commenters to consider agricultural products that could be domestically grown but are not practically available today for various reasons, and to describe whether and how such products (or their alternatives) could be made available through supply chain resilience efforts;

(G) current domestic education and manufacturing workforce skills for the relevant sector and identified gaps, opportunities, and potential best practices in meeting the future workforce needs for the relevant sector;

Ensuring the presence of a highly and appropriately skilled workforce will be critical to establishing sustainable and resilient food and agricultural supply chains. It is anticipated that ownership of 44 percent of the nation's farmland will be transferred over the next 10 years.³⁵ The next generation of farmers will need more and better training and technical assistance to equip them with the skills to adapt their operations to increasing shocks, including skills that can help then to successfully adopt ecologically informed and socially sustainable management practices.³⁶

 ³⁵ https://civileats.com/2020/02/24/an-enormous-land-transition-is-underway-heres-how-to-make-it-just/
³⁶ https://food.berkeley.edu/wp-content/uploads/2020/07/2019_Carlisle-et-al_Transitioning-to-Sustainable-Agriculture-Requires-Growing-and-Sustaining-an-Ecologically-Skilled-Workforce.pdf

(H) the need for research and development capacity to sustain leadership in the development of critical goods and materials and other essential goods and materials, as identified in subsections (i) and (ii) of this section. USDA is particularly interested in comments related to education, technical assistance, capacity building, organizational development, and support necessary for success in U.S. agriculture and food production, processing, distribution, and marketing, including how to best target support for socially disadvantaged producers and processors, tribal communities, small businesses, beginning farmers and ranchers, and other key stakeholder groups;

Research and development is a crucial lever in attaining sustainable food systems, particularly in the face of increasing shocks from climate change or other factors.³⁷ Publicly funded research is especially important because it can focus on conducting research that is not just in the best interest of a particular firm, but in the broader public interest. For example, publicly funded research can focus on essential public goods and services such as water and air quality, climate change resilience, nutrition security, and social equity.^{38, 39} Despite its importance, US public agricultural research funding has been in decline, and critical research areas pertaining to agroecology, sustainable food systems, and sustainable diets are extremely underfunded.^{40, 41, 42} Particularly needed is interdisciplinary research informed by systems science and agroecology that considers simultaneously the social, health, equity, and economic aspects of food system sustainability.

Finding ways to support BIPOC researchers, producers, processers, and other food system stakeholders must be a top priority of the federal and public research agenda.⁴³ Achieving this will require taking the lead directly from BIPOC communities and stakeholders. One important step to achieving this could be actively seeking and fairly compensating BIPOC participation in decision making roles and venues, such as on grant panels, advisory boards, committees, and conferences. Another opportunity could be holding the nation's land-grant university system accountable to a revitalized public mission to support a more equitable and sustainable agriculture, including by directing more resources to the 1890 land-grant institutions (historically Black colleges and universities), the 1994 land-grant institutions (the Tribal colleges and universities), and the Hispanic-serving agricultural colleges and universities. The USDA can also foster BIPOC leadership by leveraging communications platforms, including BIPOC stakeholders in decision-making venues, and supporting leadership development programs.

³⁷ https://www.tandfonline.com/doi/full/10.1080/21683565.2017.1331179

³⁸ https://www.ucsusa.org/resources/counting-agroecology

³⁹ https://doi.org/10.5304/jafscd.2020.092.009

⁴⁰ https://digitalcommons.unl.edu/agronomyfacpub/1331/

⁴¹ https://www.elsevier.com/atlas/story/resources/investing-in-sustainable-agriculture

⁴² https://pubmed.ncbi.nlm.nih.gov/32167128/

⁴³ https://www.ucsusa.org/sites/default/files/2020-06/leveling-the-fields.pdf

(I) the role of transportation systems in supporting existing supply chains and risks associated with those transportation systems; and

(J) the risks posed by climate change to the availability, production, or transportation of critical goods and materials and other essential goods and materials, as identified in subsections (i) and (ii) of this section. Given the risks posed, USDA is particularly interested in the potential to retool, reengineer, or develop new capacity that would address the risks, improve efficiency, and have a climate benefit due to lower energy use, less food waste, or hasten capture of by-products and co-products (among other benefits).

As noted in sections (ii) and (iv) above, climate change poses substantial risks to food and agricultural supply chains. Many changes are required to address these risks.

For one, the United States, as one of the world's biggest contributors to global heattrapping emissions, must take responsibility and commit to cutting its emissions by at least 50 percent below 2005 levels by 2030 and transitioning to a net-zero emissions economy no later than 2050. This goal is both technologically feasible and necessary for ensuring agricultural and food system resiliency and strength. More importantly, it must be achieved through centering the voices and needs of communities disproportionately impacted by environmental and climate injustices. The USDA can help contribute to this goal in a number of ways, including numerous that are outlined in the Agricultural Resilience Act, the Farmers Fighting Climate Change Act, the Justice for Black Farmers Act, and the Climate Stewardship Act.

As described in (H), research on the climate benefits of agroecology and more sustainable diets could also be helpful in identifying systems and practices that are the most efficient and effective at meeting food and other product needs, while reducing waste, energy use, and heat-trapping emissions.

Farmers need to better adapt to climate change to prevent supply chain disruptions.⁴⁴ By building soil health, farmers can increase their resilience to droughts and floods, which are increasing in intensity and frequency due to climate change in many parts of the United States.⁴⁵ Other changes in production—such as farm diversification—can also help farmers to adapt to climate change.

In addition, public policies must protect farmworkers and other workers who will be increasingly at risk of serious health effects, injury, and death due to the extreme weather (i.e. extreme heat, extreme rain events, droughts, and wildfires) caused by climate change.⁴⁶

(vi) allied and partner actions, including whether United States allies and partners have also identified and prioritized the critical goods and materials and other essential goods

⁴⁴ https://www.ucsusa.org/resources/climate-change-and-agriculture

⁴⁵ https://www.ucsusa.org/resources/turning-soils-sponges

⁴⁶ https://www.ucsusa.org/resources/farmworkers-at-risk

and materials identified in subsections (i) and (ii) of this section, and possible avenues for international engagement;

(vii) the primary causes of risks for any aspect of the agricultural and food production supply chains assessed as vulnerable pursuant to subsection (v) of this section;

(viii) a prioritization of the critical goods and materials and other essential goods and materials, including digital products, identified in subsections (i) and (ii) of this section for the purpose of identifying options and policy recommendations. The prioritization shall be based on statutory or regulatory requirements; importance to national, economic, and nutrition security, emergency preparedness, and the policy set forth in section 1 of E.O. 14017;

(ix) specific policy recommendations important to transforming the food system and increasing reliance in the supply chain for the sector. Such recommendations may include sustainably reshoring supply chains and developing domestic supplies, cooperating with allies and partners to identify alternative supply chains, building redundancy into domestic supply chains, ensuring and enlarging stockpiles, developing workforce capabilities, enhancing access to financing, expanding research and development to broaden supply chains, addressing risks due to vulnerabilities in digital products relied on by supply chains, addressing risks posed by climate change, strengthening supply chains' ability to promote nutrition security, and any other recommendations. For example, as a part of this assessment, USDA is interested in recommendations that could improve local and regional food production, processing, packaging, and distribution, particularly for small to midsized producers and processors; support national nutrition security and health; address agricultural workforce needs; strengthen market transparency (such as traceability); and address disproportionate impacts on socially disadvantaged communities. As USDA implements stimulus relief programs and spending authorized by the CAA and ARPA, we seek public comments on targeting funds toward food supply chain resiliency. USDA's initial thinking includes, but is not limited to, funding, through a combination of grants or loans, needs such as: Supply chain retooling to address multiple needs at once (i.e., achieving both climate benefits and addressing supply gaps or vulnerabilities concurrently), expansion of local and regional food capacity and distribution (e.g., hubs, cooperative development, cold chain improvements, infrastructure), development of local and regional meat and poultry processing and seafood processing and distribution, and food supply chain capacity building for socially disadvantaged communities.

To ensure that our agricultural and food systems are resilient and strong now and in the future, we offer a set of priority policy recommendations for the USDA to consider and implement to transform the food system:

- Focus on BIPOC leadership and equitable outcomes for all people operating in agricultural and food systems
 - Research and development: Ensure that USDA research on agricultural innovation and technology is suited to a diversity of agricultural producers, not

just those producing through the most common or conventional means, but also to those using traditional or other alternative approaches. Ensure that USDA is investing in intramural and extramural systems-oriented research that investigates the causes, consequences, and solutions to racial inequities in the system. To support the growth of BIPOC-led research and development, more funding should be directed to the 1890 land-grant institutions (historically Black colleges and universities), the 1994 land-grant institutions (the Tribal colleges and universities), and the Hispanic-serving agricultural colleges and universities.

- Engagement, outreach, and leadership: Ensure that BIPOC stakeholders have a seat at the table in all USDA decision-making venues. Foster this engagement and BIPOC leadership at USDA by improving communication with these communities and support leadership development in them.
- Provide equitable support for BIPOC farmers: USDA policies and programs will only be truly successful if they reach and support all farmers, including BIPOC farmers. Policies and programs must be designed and implemented to ensure equity. In particular, USDA should design programs that specifically help BIPOC farmers more easily access tools and resources such as capital and financing, technology, markets, training, and technical assistance.
- Ensure safety and security for farm and food chain workers: USDA should play a much stronger role in protecting farm and food chain workers from unfair labor practices, injury and illness, and poverty.
- Foster the growth of agroecology and more sustainable agricultural systems
 - Research and development: Increase federal investments in agricultural research, particularly interdisciplinary research informed by agroecology and more sustainable agricultural practices that consider simultaneously the social, health, equity, and economic aspects of food and agricultural system sustainability.
 - Engagement, outreach, and leadership: Ensure that this research is informed by and reaches farmers and other on the ground stakeholders by also increasing investments in and improving agricultural education and extension. More direct farmer engagement in the design and implementation of USDA research and programs could help increase the rate of adoption of beneficial practices and management systems.
 - Spur widespread adoption of agroecology and more sustainable farming systems: The USDA should rethink its approach and prioritize its investments to advance widespread adoption of agroecology and farming systems that increase soil health, protect air and water quality, and help address climate change. These farming systems must be the norm, not the exception. To achieve widespread adoption of these systems, USDA must create policies and programs that are equitable and grounded in agroecology, systems science, and interdisciplinary

research. Further, USDA must more rigorously evaluate current programs and policies to ensure that they are producing outcomes that make agricultural and food systems more sustainable, equitable, and resilient.

- Prioritize climate adaptation in the agricultural sector: Climate change impacts are already upon us. Extreme weather events are increasing in frequency and intensity in many parts of the country, negatively impacting farmers and rural communities in which they operate. USDA must ensure that all farmers—including midsize, BIPOC, and other farmers who are most vulnerable to climate change impacts—are well equipped to manage the challenges that a changing climate poses.
- Address the role that economic structure of agricultural and food system markets plays in ensuring or inhibiting resiliency
 - Research and development: The USDA must invest in economic and social science research that evaluates how the economic structure of upstream and downstream sectors impacts the resiliency of the agricultural sector to various shocks such as climate change, biological threats, and changes in macroeconomic conditions. Such research could include evaluating how investments in diversifying the scale of food processing and distribution systems nationally could improve the economic, social, and environmental sustainability and resiliency of agriculture and food systems. Research should also evaluate how farmland consolidation makes agriculture vulnerable to these shocks and whether increased diversification in cropping systems and geographic concentration of agricultural production could reduce vulnerability.
 - Values-driven food procurement: The federal government funds tens of billions of dollars of food procurement each year for children in schools, military service members, patients in Veterans Affairs hospitals, people incarcerated in federal prisons, and seniors who rely on federal feeding programs. However, most of the spending on public food procurement contradicts the administration's stated interests of addressing climate change, advancing racial equity, protecting public health, achieving nutrition security, and strengthening local economies, among other key goals. Consequently, we urge the administration to bring federal food purchasing practices into alignment with its policy objectives. In particular, we believe the following seven core values⁴⁷ are critical to achieving a just, equitable food system that promotes the health of consumers and benefits producers, workers, educators, and their communities: local economies, environmental justice, nutrition and health, racial equity, worker justice, animal welfare, and transparency in supply chain data.⁴⁸

⁴⁷ Values are adapted from those put forth by the Center for Good Food Purchasing, HEAL Food Alliance, Food Chain Workers Alliance, and the National Farm to School Network.

⁴⁸ Values-driven food procurement as a strategy for achieving resilient, diverse, and secure supply chains. Comment submitted to USDA on June 21, 2021.

- Evaluate what role diets and consumer demand play in enhancing resiliency and strength of agricultural and food systems
 - Dietary Guidelines for Americans (DGAs): The stated goal of the DGAs is "to make recommendations about the components of a healthy and nutritionally adequate diet to help promote health and prevent chronic disease for current and future generations." In order to fulfill this goal, the DGAs must evaluate the scientific basis for sustainable diets and subsequently incorporate its findings into the DGAs. The 2015 Dietary Guidelines Advisory Committee found that "a diet higher in plant-based foods, such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in calories and animal-based foods is more health promoting and is associated with less environmental impact than is the current US diet." Yet this finding was ultimately not incorporated into the 2015 DGAs due to political and industry pressure.⁴⁹ More recently, a July 2020 peer reviewed analysis⁵⁰ broadly supports the findings highlighted above, while pointing to another important conclusion: of eight studies explicitly comparing the current average US diet to the Healthy US-Style Pattern recommended by the DGAs, a majority found that the Healthy US-Style Pattern is not inherently more sustainable. This indicates that if the federal government continues to publish and promote DGAs that disregard sustainability research, the diet it recommends will put a healthy diet further out of reach tomorrow.

Conclusion

The scope of the domestic food and agricultural supply chains is immense, and so too are the vulnerabilities. Yet the inability of today's supply chains to promote climate resilience, worker justice, and racial equity, and to spur thriving economies also represents an opportunity: to transform our supply chains and our society to one in which agricultural production meets the needs of all populations, prices and markets are fair for producers and consumers, and supply chains are sustainable for the planet and for all the people who work in them.

We urge the USDA to use every policy lever at its disposal to achieve this goal.

Sincerely,

Marcia DeLonge, PhD Research Director & Senior Scientist Food and Environment Program

⁴⁹ https://blog.ucsusa.org/sarah-reinhardt/is-the-us-ready-for-sustainable-dietary-guidelines-new-research-makesa-compelling-case/

⁵⁰ https://academic.oup.com/advances/article/11/4/1016/5804823