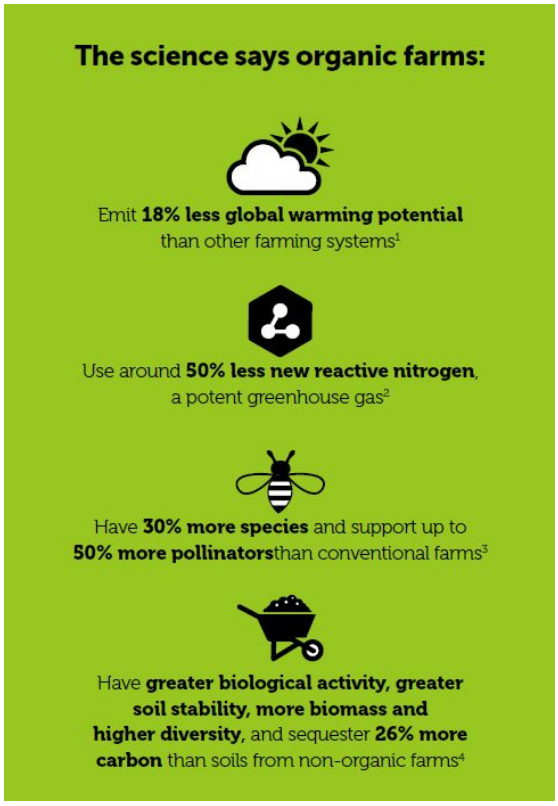
ADVANCING ORGANIC TO MITIGATE CLIMATE CHANGE

The Organic Trade Association recently published a white paper on organic and climate change. The full report is available for download at OTA.com/climate.

Climate change poses an existential threat to our world, and bold policy solutions are needed to mitigate the impacts and help farmers and communities adapt to the changing climate. Organic agriculture presents a growing opportunity to mitigate climate change while creating economic, environmental, and health benefits for all food system participants. Organic agriculture mitigates climate change by reducing direct and indirect sources of greenhouse gas emissions, and acting as a carbon sink via soil carbon sequestration. Organic agriculture helps adapt to climate change by promoting soil health, biodiversity and resilient agroecosystems. Public and private efforts to support organic as a climate mitigation tool exist, but need stronger federal support to maximize benefits.

Organic protects natural resources.

Organic farming is a production system of cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Organic farmers are required to manage their operations in a manner that does not contribute to environmental contamination of crops, soil, or water. Production and management practices on organic farms must maintain or improve the natural resources of the farm, including soil, water, wetlands, woodlands, and wildlife.



Organic reduces emissions of carbon dioxide by avoiding fossil fuel-based fertilizers

The production, transport and use of fossil fuel-based fertilizers and pesticides are the main uses of energy in agriculture, and are significant contributors to greenhouse gas emissions, particularly carbon dioxide. Petroleum-based fertilizers are prohibited in organic, as are most synthetic pesticides. Instead of relying on energy-intensive synthetic pesticides and fertilizers that can deplete the soil of valuable nutrients and increase environmental degradation, organic farmers build soil and plant health using practices that incorporate organic materials like manure and compost.

Organic sequesters carbon by promoting soil health

Organic standards require that farmers use practices that maintain or improve the physical, chemical, and biological condition of soil and minimize soil erosion. Organic production methods utilize a suite of soil management practices to build soil health and crop fertility in lieu of artificial fertilizers. The four key organic farming techniques that improve soil health outcomes are cover cropping, crop rotation, organic soil amendments, and conservation tillage. Organic farms may also integrate livestock. These practices increase soil health and help farms store more carbon in the soil than other farming methods [5].

Organic protects biodiversity and beneficial organisms

Research shows that organic production increases beneficial insect biodiversity without increasing pest insect diversity [6]. Organic practices benefit pollinators by avoiding toxic chemicals, providing diverse habitat, and providing an abundance of food sources. Organic farming also supports soil biodiversity. Soil organic carbon found in organic farms provides important building blocks for beneficial microorganisms in the soil that are vital to decomposition and nutrient cycling.

Organic increases resiliency of agricultural systems

Soils high in organic matter support healthy crops, are less susceptible to drought, and foster a diversity of organisms vital to soil health. Organically managed soils also tend to have higher water-holding capacity, porosity, and aggregate stability than conventionally managed soils, which can lead to yield advantages in extreme weather events such as droughts and flooding [7].

To learn more about the organic standards visit OTA.com/organic-101

OTHER BENEFITS OF ORGANIC

Growth

The $55 billion-a-year organic industry is a bright spot in the U.S. farm economy supported by more than 28,000 certified organic operations nationwide. U.S. organic food sales continue to grow at a rate more than double the rate of the overall U.S. food market, and organic now accounts for nearly 6% of all food sales.

Rural Development

Between 2012 and 2017, the number of organic farms grew by 39%, while the total number of farms in the U.S. shrank by 3%. During that same time period, organic farm income nearly doubled while the income of all U.S. farms remained stagnant. Organic hotspots— counties with high levels of organic agricultural activity whose neighboring counties also have a high level of organic activity — boost median household incomes by an average of $2,000, and reduce poverty levels by an average of 1.3 percentage points.

Health

The prohibition of the most toxic agricultural chemicals in organic farming not only benefit consumers and the environment, but also reduces farmer and farmworker exposure and improves occupational health. Avoiding pesticide exposure reduces health risks associated with cancer, neurodegenerative disorders and poor reproductive health.

KEY POLICY RECOMMENDATIONS

Given the many benefits that organic farming contributes to environmental health and sustainability, policies that support organic farmers and encourage transition to organic farming should be considered by policymakers as a key strategy for climate change mitigation in the agriculture sector. However, the challenges for U.S. agriculture in reducing its carbon footprint and serving as a climate mitigation tool while also adapting to the impacts of a changing climate are immense and go beyond organic.

- Establish a national program to incentivize transition to organic with a specific focus on reducing financial risks, improving market and infrastructure development, increasing access to land and providing technical assistance.
- Develop policies and programs that help all farmers improve soil health, protect farmland, invest in on-farm renewable energy and increase research.
- Ensure organic farms and businesses are given a seat at the table in the development of policy to address the climate crisis.
- Support legislation that decarbonizes the U.S. economy, addresses social and environmental inequities, and helps communities mitigate and adapt to climate change.

10 PRINCIPLES TO ADVANCE ORGANIC

As policymakers consider solutions, the Organic Trade Association will evaluate opportunities for engagement in climate policy guided by the following core principles:

1. Advance organic agriculture: Any policy that addresses the role of climate change in food and agriculture should advance the opportunity for organic to be a climate change solution, allow organic to be successful and not undermine organic.

2. Are Science-based, data-driven and verifiable: Policy solutions should be based on and supported by science and data, with strong verification measures to meaningfully reduce agriculture's impact on climate change. Tools for conducting data collection and life-cycle analysis should be best in class and subject to continual improvement with support from USDA and experts across science, industry, and agriculture.

3. Focus on outcomes and continuous improvement: Policies should reward the outcomes of good agricultural practices and enable a system of continuous improvement that achieves specific positive outcomes over time.

4. Promote soil health and carbon sequestration: Improving soil health is an important and central component in addressing agriculture's role in climate change. Policies should include provisions for advancing soil health and carbon sequestration.

5. Lower the use of fossil-fuel based chemicals: Chemical fertilizers and pesticides are a key source of greenhouse gas emissions in agriculture. Climate policies should minimize the use and eliminate the dependency on fossil-fuel based inputs, especially of synthetic nitrogen fertilizers.

6. Provide solutions for mitigation and adaptation: Policies should provide the resources not only to mitigate the impacts of climate change but also help the agricultural sector adapt to a changing climate.

7. Incentivizes farmers and businesses: Farmers should not have to bear the brunt when making transformational changes. Public and private sector programs should provide tools and resources to achieve outcomes through market-based incentives or financial payments that encourage conservation practices or ecosystem services.

8. Decarbonize the economy: Policies that increase greenhouse gas emissions or rollback progress in decarbonizing the economy and reducing emissions should be opposed.

9. Foster agricultural diversity and innovation: Climate policies should foster diversity and innovation in farming systems, and provide incentives for increasing diversity in cropping systems.

10. Address equity and inclusion: Policies should address the environmental and economic inequities caused by climate change and include ways to support disadvantaged communities in adapting to climate change.

ABOUT THE ORGANIC TRADE ASOCIATION

As the membership-based business association for organic agriculture and products in North America, the Organic Trade Association is the leading voice for the organic trade in the United States, representing over 9,500 organic businesses across 50 states. Its members include growers, shippers, processors, certifiers, farmers' associations, distributors, importers, exporters, retailers and others. Our missions is to promote and protect organic with a unifying voice that serves and engages its diverse members from farm to marketplace. Our vision is to grow organic to achieve excellence in agriculture and commerce, protect the environment and enhance community well-being.

CITATIONS

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