

REPORT

# GROW ORGANIC:

## THE CLIMATE, HEALTH, AND ECONOMIC CASE FOR EXPANDING ORGANIC AGRICULTURE



### AUTHORS:

Kathleen Merrigan, Estève G. Giraud, Nadia El-Hage Scialabba, *Swette Center for Sustainable Food Systems at Arizona State University*

Lena Brook, Allison Johnson, *NRDC*

Sarah Aird, *Californians for Pesticide Reform*

## ACKNOWLEDGMENTS

The Natural Resources Defense Council (NRDC) published this report in partnership with the Swette Center for Sustainable Food Systems at Arizona State University and Californians for Pesticide Reform. Kathleen Merrigan, Estève G.e Giraud, and Nadia El-Hage Scialabba of the Swette Center are the lead authors, with significant contributions from Lena Brook and Allison Johnson of NRDC and Sarah Aird of Californians for Pesticide Reform.

The authors would like to thank our peer reviewers, Amber Sciligo from The Organic Center; Jessica Chiartas from the University of California, Davis; Margaret Reeves from Pesticide Action Network; Brise Tencer and Gordon Merrick from the Organic Farming Research Foundation; and Catherine Greene from the Swette Center, as well as numerous other partners for taking time out of their busy lives to provide invaluable input on our early drafts. We are also grateful to our NRDC colleagues for their support, wisdom, and input: Arohi Sharma, David Wallinga, Jennifer Sass, Miriam Rotkin-Ellman, Melodie Mendez, and Leah Stecher.

We are especially grateful to Sarahlee Lawrence, Benina Montes, Kanoa Dinwoodie, Yasmin Alvarado, Klaas Martens, Arnott Duncan, Loretta Adderson, Andrea Davis-Cetina, Daphne Snow, Will Glazik, Carmen Mendoza, Sedrick Rowe, Patricia Rodriguez, Anna Jones-Crabtree, and Doug Muller for informing our policy recommendations and allowing us to share their stories.

### About NRDC

NRDC is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC has offices in New York City, Washington, D.C., Los Angeles, San Francisco, Chicago, Montana, and Beijing. Visit us at [nrdc.org](http://nrdc.org).

*NRDC Interim Chief Communications Officer:* Jenny Powers  
*NRDC Managing Director of Communications:* Lisa Goffredi  
*NRDC Policy Publications Editor:* Leah Stecher

*Cover image:* © Lance Cheung/USDA

*Design and Production:* [www.suerossi.com](http://www.suerossi.com)

© Natural Resources Defense Council 2022

# Executive Summary

---

Organic agriculture holds significant and largely untapped potential to address multiple crises facing our society, including climate change, health, and struggling economies. Public policies that support expansion of organic farming and ranching across America—including substantial investments in the next Farm Bill—can unlock this potential and deliver a critical triple win for our climate future, the health of farmworkers and consumers, and prosperity in farming communities.

Organic agriculture is a time-tested, scientifically supported approach to farming and ranching that centers ecological diversity, soil fertility, and natural systems rather than chemical interventions. The Organic Foods Production Act of 1990 (OFPA) created a National Organic Program (NOP) that provides a consistent framework and third-party certification system for agricultural products labeled “organic,” informed by decades of experience of farmers and ranchers, soil and plant scientists, food system workers, environmentalists, and consumers.

In contrast, the dominant, conventional agriculture system is extractive and exploitative. It relies on fossil fuel-intensive synthetic pesticides and fertilizers that harm human health through contamination of air, water, and food. Large-scale conventional livestock operations are a major source of methane, a potent greenhouse gas, as well as environmental pollution that threatens neighboring communities. And conventional agriculture as a system disproportionately benefits corporate agribusiness—just a handful of companies—rather than farmers and consumers.



© Candy Kempsey/Offset



## Organic Means:

---



- ✓ Healthy soil with compost, cover crops, crop rotation
  - ✓ Natural pest control
- ✓ Organic feed and pasture for animals
  - ✓ Ecosystem protection
- ✓ Climate-friendly and resilient
- ✓ Legally defined, third-party verified

- ✗ No synthetic fertilizers
- ✗ Few synthetic pesticides
- ✗ No antibiotics or growth hormones
- ✗ No GMOs, irradiation, sewage sludge
- ✗ Limited food additives

## ORGANIC AGRICULTURE BENEFITS OUR CLIMATE, OUR HEALTH, AND OUR LOCAL ECONOMIES

OFPA and the NOP ensure that organic producers:

- Build healthy soil with holistic practices like composting and cover crops, without synthetic fertilizers;
- Rely on natural pest and disease control strategies instead of synthetic pesticides;
- Raise animals with more time on pasture and without antibiotics and other drugs;
- Reduce additives and protect against chemicals in processed organic foods;
- Avoid genetically modified organisms (GMOs), irradiation, and sewage sludge; and
- Preserve and protect biodiversity and natural resources.

**CLIMATE:** Organic agriculture reduces the greenhouse gas (GHG) footprint of farming by eliminating most fossil fuel-based inputs, and it builds climate resilience by promoting healthy soils, diversifying food crops, and supporting threatened wildlife habitats and biodiversity. Data show that organic farming emits less nitrous oxide by avoiding chemical fertilizers and pesticides commonly used in conventional agriculture, and organic livestock production leads to fewer methane emissions compared with conventional concentrated animal feeding operations (CAFOs). And by building healthy soils that retain water and store carbon, organic agriculture builds resilience and stabilizes our food supply in the face of drought and other extreme weather conditions that will occur with increasing frequency in a changing climate.

**HEALTH:** Research demonstrates that organic agriculture benefits our health by dramatically reducing exposure to agricultural pollution in air, water, and food. Farmworkers and others working and living near conventional farms suffer serious acute and chronic health ailments associated with pesticide exposure, and studies indicate that pesticide residues in our food may be harmful to consumer health. Organic producers avoid dangerous synthetic pesticides and numerous additives and processing chemicals that are allowed in or on nonorganic foods, and they limit fertilizer and waste contamination of waterways. In addition to protecting health by cutting toxins from our environment,

organic agriculture produces healthier, more robust crops that have enhanced nutritional benefits. As a holistic approach to food production, organic protects the health of farmworkers, farmers, eaters, ecosystems, and our environment.



**ECONOMIES:** Evidence shows that organic agriculture creates economic vitality and growth important to farmers and farming communities. Researchers have identified “organic hotspots” across the United States where increased organic production generates new jobs, lowers unemployment, and spurs agricultural business growth across a region. An emerging generation of young farmers is discovering that organic agriculture can be both highly productive and profitable, enabling these farmers to stay in business and expand production for local and regional markets.

However, in spite of its many public benefits, organic agriculture does not receive the governmental support necessary for widespread adoption. Only 1 percent of U.S. agricultural land is managed organically, and organic agriculture receives only a sliver of federal agriculture spending annually. Meanwhile, conventional agriculture is supported by billions of taxpayer dollars a year.

We need to transform our agricultural policies to ensure that many more people can farm, ranch, and eat organically. In the next Farm Bill, Congress should significantly increase support for organic, to align public investments with the climate, health, and economic outcomes communities across the country need. In parallel, the executive branch should make a strong commitment to advancing organic.

### OUR FEDERAL LEADERS SHOULD:

1. Expand organic production by reducing barriers to organic transition
2. Ramp up federal resources that promote organic innovation, success, and accessibility
3. Ensure racial and Indigenous justice and equitable participation in organic agriculture
4. Use true cost accounting to identify agricultural investments that benefit the public
5. Create stable organic markets and expand access through public procurement
6. Reward organic management and ecosystem services in agricultural policies
7. Educate the public about the benefits of organic
8. Invest in regional supply chains to meet growing demand for organic
9. Strengthen organic rules and enforcement
10. Integrate organic throughout public institutions

Today’s conventional agriculture system contains immense hidden health, environmental, social, and economic costs—subsidized by our tax dollars—that we can no longer afford. Expanding organic agriculture is an investment in a sustainable, healthy future.