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Organic is Regenerative:

Messaging for Organic Advocates

ORGANIC FARMING RESEARCH FOUNDATION

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Organic is an age old, holistic system of farming. Many organic practices are rooted in Indigenous land stewardship and Traditional Ecological Knowledge (TEK).

Organic is principles-based, works with nature, builds healthy soil, and enhances clean water, biodiversity, and farm communities.

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Organic & Regenerative

Common Goals

The term ‘regenerative’ has been widely adopted in agriculture and the food industry, but definitions of the term vary widely.

However evidence shows that *Organic* is a *Regenerative* farming system that works to strengthen ecosystems and communities.

Advancing organic promotes these benefits.

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Organic agriculture has a legal definition that is federally recognized and enforced.

Currently regenerative does not have a legally binding definition or system for enforcement, though there has been initiative to establish definitions.

Top 5 Cited Practices

1. Reduce Tillage (40.9%)
2. Integrate Livestock (40.9%)
3. Use Cover Crop (36.4%)
4. Use Crop Rotations (31.8%)
5. Low to no external inputs (31.8%)

Top 5 Desired Outcomes

1. Improve Soil Health and Fertility
2. Increase Carbon Sequestration
3. Increase Biodiversity
4. Improve Water Health
5. Improve soil and/or economic wellbeing of communities

Organic agriculture employs these practices and achieves these goals.

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Minimizing Inputs & Maximizing Practices

Proponents of regenerative farming systems point to its focus on minimizing external inputs while maximizing practices that work with nature and the ecology.

Organic farming does both of these things, and does them very well. They are part of what is legally required for organic certification.

Organic is a verifiable legal standard that can be relied upon in the journey towards creating more regenerative farming systems.

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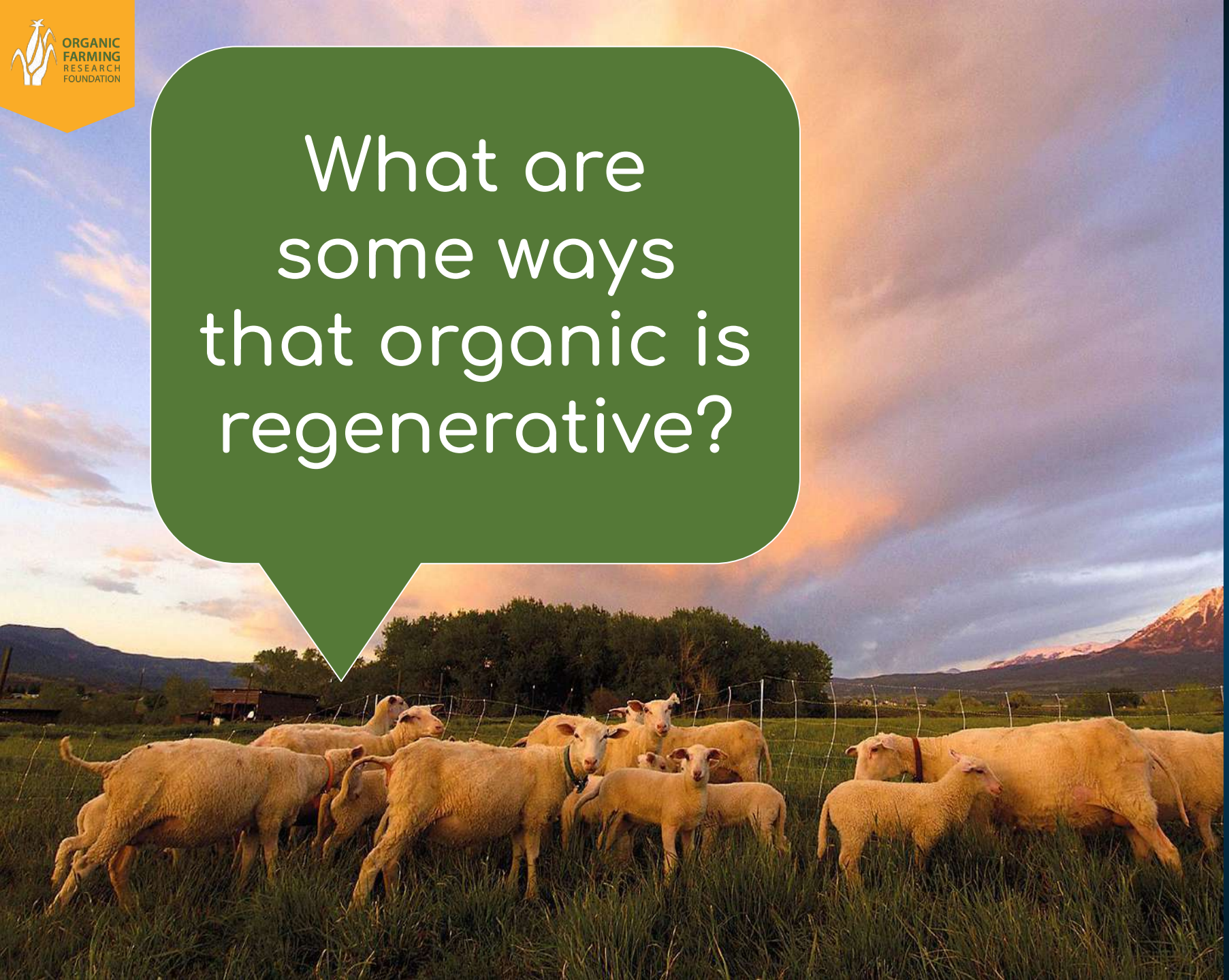
What are some ways that organic is regenerative?



ORGANIC IS:

- Climate-Friendly
- Healthy for Soils
- Protective of Biodiversity
- Systems-Focused
- Good for the Economy
- Safer for Farmworkers & Rural Residents
- Better for People
- Better for Animals
- Third-Party Certified
- Non-GMO
- Tried and True
- Evolving

ORGANIC FARMING RESEARCH FOUNDATION

Organic IS Regenerative: Organic agriculture…

…supports a resilient planet

- Climate-Friendly
- Healthy for Soils
- Protective of Biodiversity
- Systems-Focused

… builds healthy communities

- Good for the Economy
- Safer for Farmworkers and Rural Residents
- Better for People
- Better for Animals

… is trustworthy

- Third-Party Certified
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- Evolving

ORGANIC FARMING RESEARCH FOUNDATION

Organic Supports a Resilient Planet

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.

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Organic is Climate-Friendly

Organic farming reduces greenhouse gas emissions and builds climate resilience.

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Organic is Healthy for Soils

Organic farming practices contribute to the long-term fertility of the soil.

A note on Tillage in Organic Systems

Research has shown that judicious use of shallow cultivation does not negatively impact most of the soil profile and can benefit soil microbial biomass.

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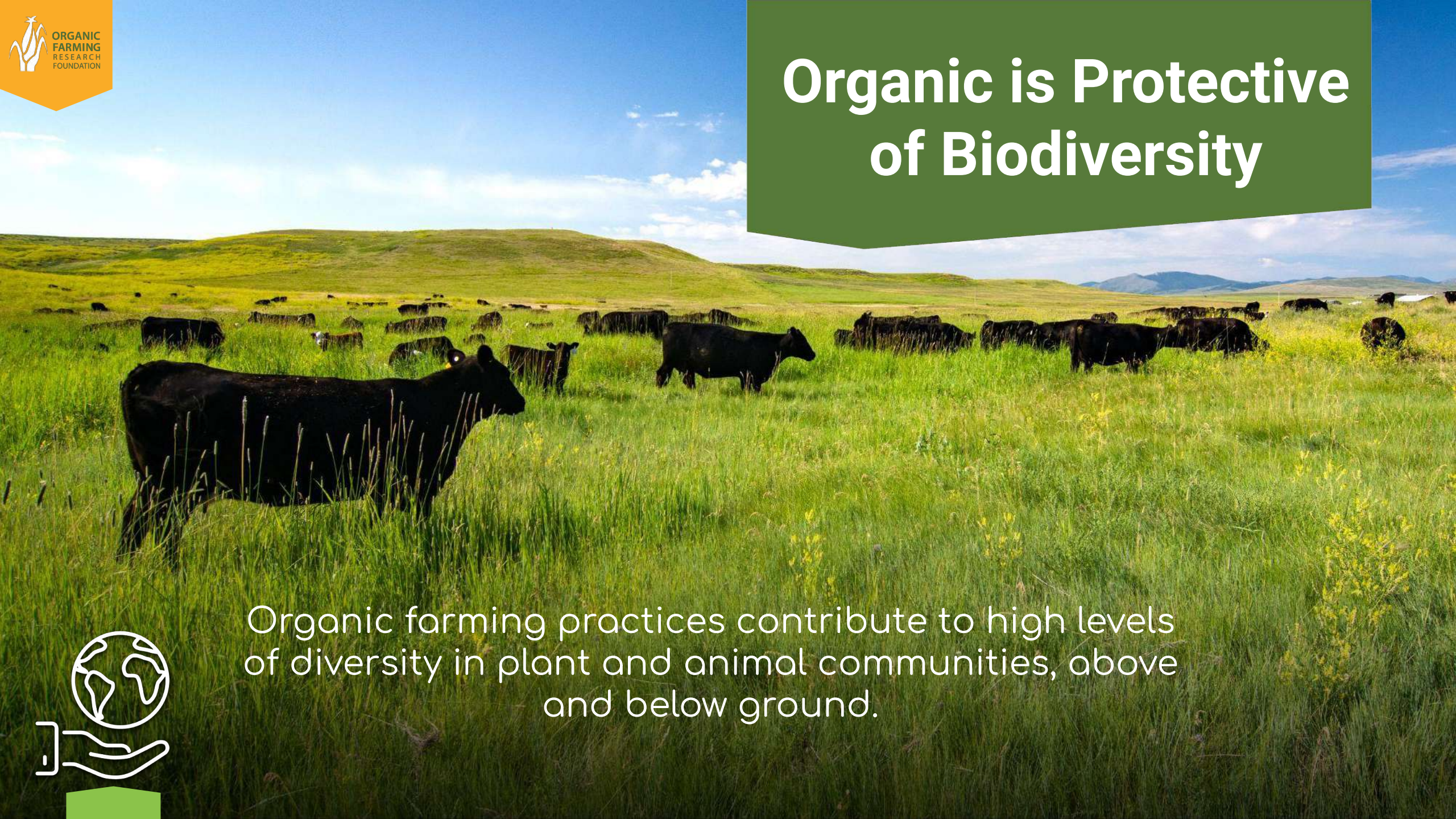
Organic is Protective of Biodiversity



Organic farming practices contribute to high levels of diversity in plant and animal communities, above and below ground.

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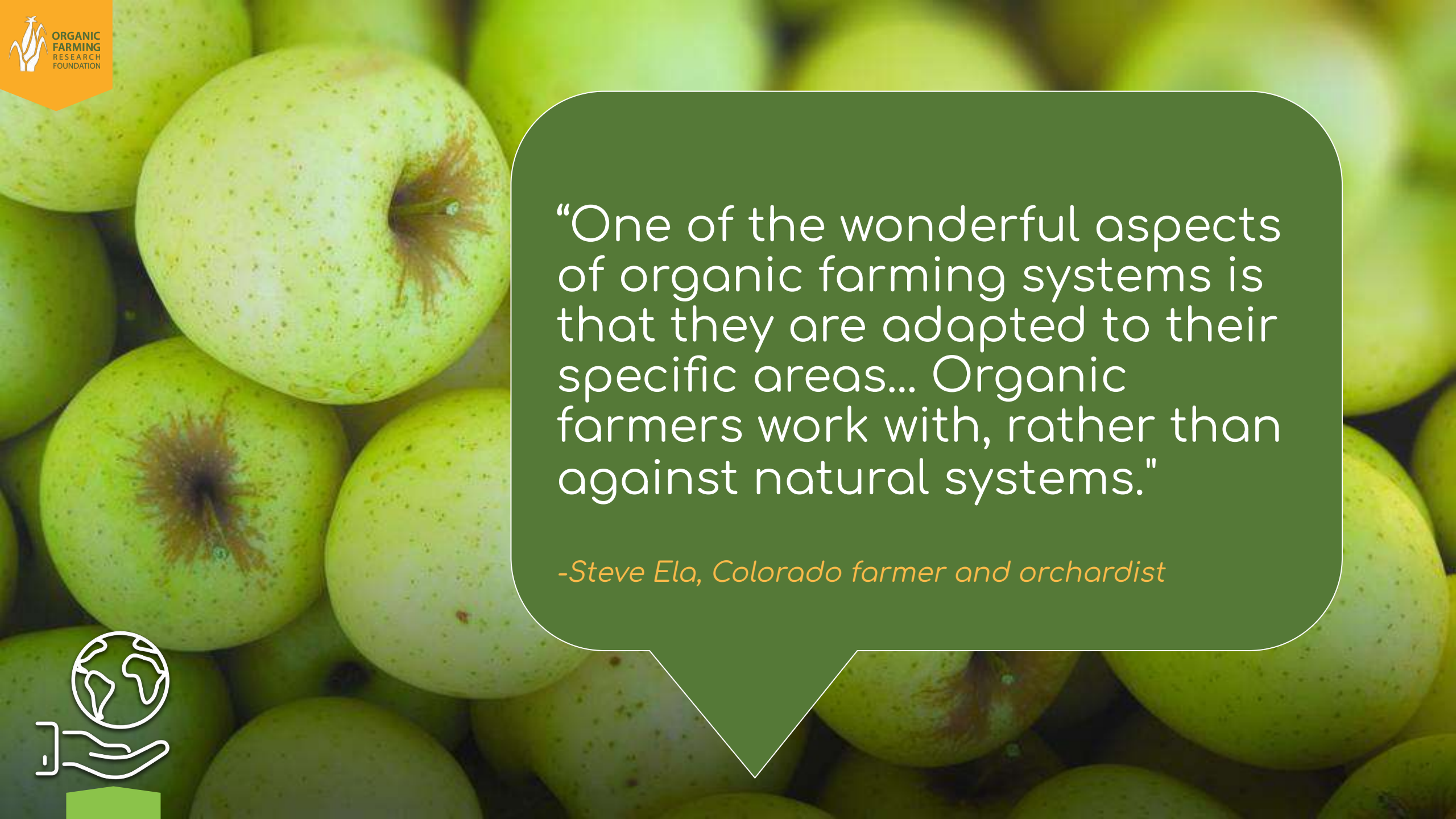
Organic is Systems-Focused

Organic agriculture is based on whole-systems thinking, not on any single practice.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"One of the wonderful aspects of organic farming systems is that they are adapted to their specific areas... Organic farmers work with, rather than against natural systems."
-Steve Ela, Colorado farmer and orchardist

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Organic IS Regenerative: Organic agriculture…

…supports a resilient planet

- Climate-Friendly
- Healthy for Soils
- Protective of Biodiversity
- Systems-Focused

… builds healthy communities

- Good for the Economy
- Safer for Farmworkers and Rural Residents
- Better for People
- Better for Animals

… is trustworthy

- Third-Party Certified
- Non-GMO
- Tried and True
- Evolving

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Organic Builds Healthy Communities

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Organic is Good for the Economy

Organic agriculture provides economic benefits and opportunity for growth.

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Organic is Safer for Farmworkers & Rural Residents

Organic protects the health of farmers, farmworkers, and people in agricultural areas.


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Given the cancer, neurodevelopmental, and other health risks associated with synthetic pesticides, organic agriculture is an important alternative approach for protecting farmworkers and their families.

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Organic is Better for People

Eating organically helps protect people from toxic pesticide and herbicide residue on food products.

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Organic is Better for Animals

Organic farming prioritizes healthy animals.

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Organic IS Regenerative: Organic agriculture…

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Organic is Trustworthy

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Organic is Third-Party Certified

The National Organic Program (NOP) provides integrity and accountability.

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Organic is Non-GMO

Organic is THE choice for consumers wanting to avoid GMOs.

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Organic is Tried and True

Organic agriculture is time-tested and scientifically supported.

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Here are just some of the results from over 40 years of research at the Rodale Institute Farming Systems Trial:

- Yields from organic systems were statistically comparable with conventional yields after a 5-year transition period.
- In years of drought or excess rainfall, organic system yields surpassed those of conventional systems.
- Organic plots were able to tolerate higher weed pressure than conventional, while producing equivalent yields and reducing both herbicide usage and soil compaction.
- Organic systems were more profitable while maintaining lower risk due to lower total costs and high premiums; however, even without price premiums, Rodale's organic manure system was still the most profitable.

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Organic is Evolving and Improving

The organic standards are designed to be responsive to changing needs.

Organic farming practices support the same goals as regenerative farming: building healthy ecosystems and communities. And organic farming does this in a way that already has a clear legal definition, and scientific backing.

It is critical that we continue to invest in organic agricultural research, practices, and farmers.

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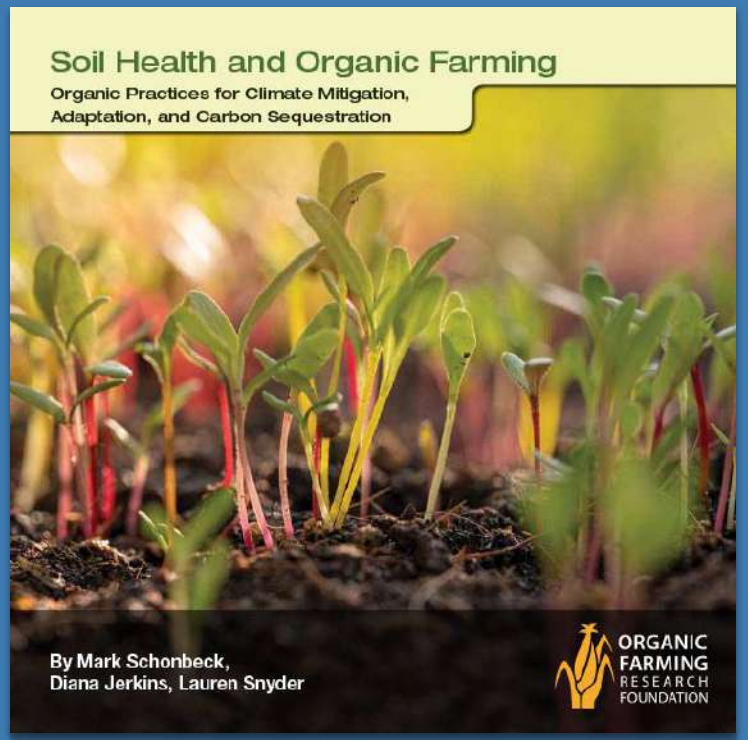

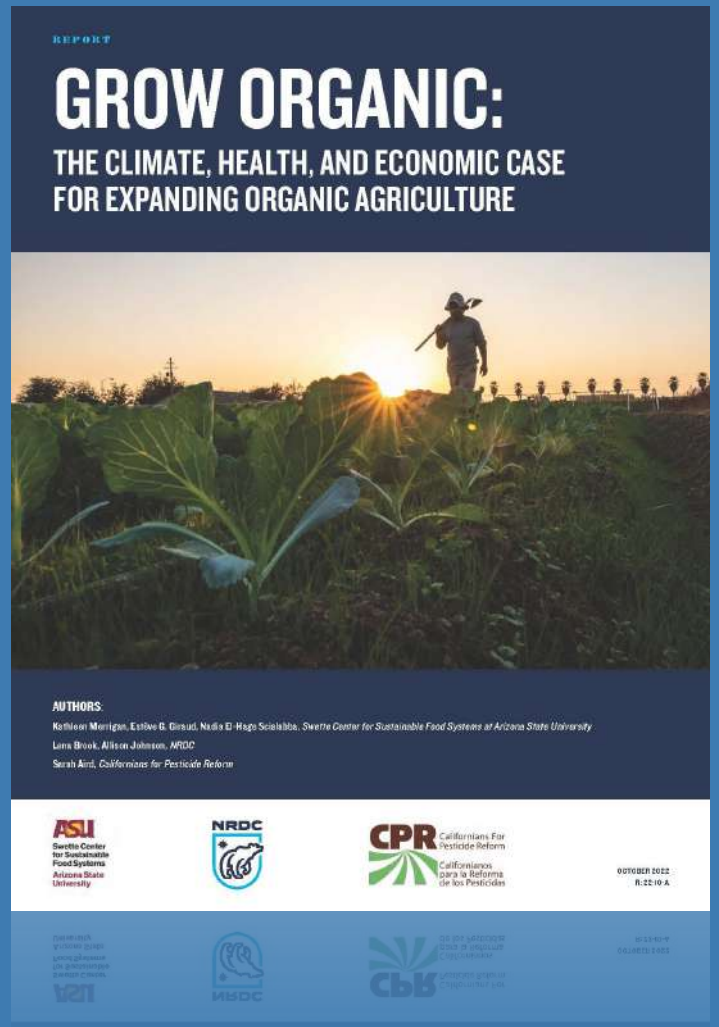

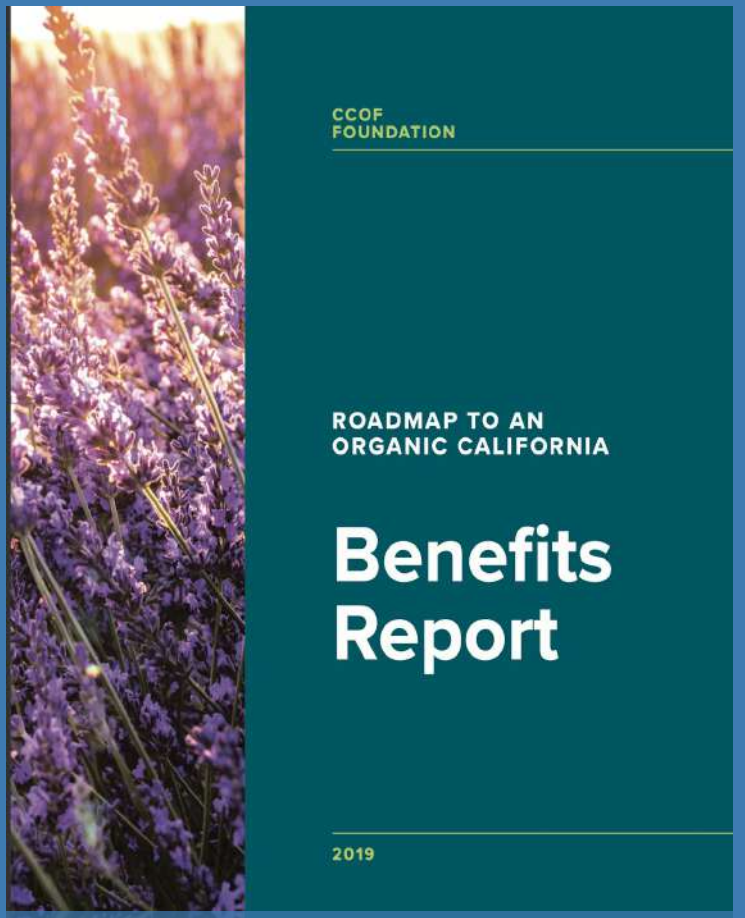

Key Resources

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Organic is Regenerative Message Mapping

Audience:	Policy Makers	Food & Ag Leaders	Funders / Companies	Public
	Supporting Statements	Supporting Statements	Supporting Statements	Supporting Statements
	Evidence	Evidence	Evidence	Evidence
#1. Organic is...	...Climate-Friendly	...Climate-Friendly	...Climate-Friendly	...Climate-Friendly
Organic farming reduces greenhouse gas emissions and builds climate resilience.	**Organic farming contributes to the the protection of the environment and the climate. (European Union, EU Organic farming Action Plan)**	Organic agriculture is a climate-friendly food production system that offers an enormous opportunity to dramatically reduce greenhouse gas emissions. (National Resource Defense Council, Grow Organic: The Climate, Health, and Economic Case for Expanding Organic Agriculture (NRDC report), pg 11)	Extensive evidence shows that organic production systems help build climate resilience in various ways. (Thelma Vélez testimony [Vélez testimony] to House Committee on Agriculture)	**Organic farming is the original climate-smart agriculture and continues to lead the way. (Velez testimony)**
	An extensive 2017 study comparing soils from 659 certified organic farms and 728 conventional farms found that organic farms across the United States consistently sequester more carbon than conventional farms. (Ghabbour et al., 2017, as cited in California Certified Organic Farmers Foundation, Roadmap to an Organic California, Benefits Report [COOF report], pg 20, ref 119)	At UC Davis's Long-Term Research on Agricultural Systems (LTRAS) study, researchers found that after 10 years, organic systems resulted in 14 times the rate of carbon sequestration as the conventional system. (Kong et al., 2005, as cited in COOF report, pg 20, ref 118)	Organic agriculture systems have been found to decrease soil loss rates due to erosion, with soils under organic management having greater aggregate stability while increasing water infiltration rates. (Morvan et al. 2010, as cited in Vélez testimony)	Organic practices like cover cropping, mulching, and conservation tillage increase soil health, and keeping soil covered as much as possible results in less heat radiating from soil, better absorption of solar energy, more water infiltration, and ultimately, increased potential for carbon and water storage. (Wszelaki & Broughton, as cited in NRDC report, pg 15, ref 78)
	Analysis of five long-term grain cropping systems across the United States also concludes that organic systems release significantly fewer GHG emissions than conventional no-till grain production. (Cavigelli et al., 2013, as cited in COOF report, pg 21, ref 147)	Organic is among the most comprehensive and time-tested agricultural systems for mitigating and adapting to climate change, and it has the benefit of being enforced through a rigorous legal standard. (7 CFR Part 205, Subpart E as cited in NRDC report, pg 14, ref 60)	The NOP ensures that organic production systems support soil health, reduce or eliminate fossil fuel–based inputs, and diversify crop rotations, among other key strategies that offer significant climate benefits. (USDA National Organics Program, as cited in NRDC report, pg 14, ref 61)	Nearly 90% of organic farmers use cover crops, which protect soil, help sequester carbon, and prevent erosion. (Organic Farming Research Foundation, National Organic Research Agenda (OFRF NORA), pg 39)
	Conservative estimates of potential climate mitigation through sustainable farming range from reducing U.S. agriculture's GHG footprint by a few percent (Galik et al., 2012; Powlson et al., 2011) to "pulling it by half" (Chambers et al., 2016, as cited in Organic Farming Research Foundation, Soil Health and Organic Farming: Organic Practices for Climate Mitigation, Adaptation, and Carbon Sequestration, [OFRF soils report], pg 11)	Nearly 90% of organic farmers use cover crops, which protect soil, help sequester carbon, and prevent erosion. Organic growers also lead the way in crop rotation, intercropping, and green manures, all of which are research-backed methods to improve resilience and increase fertility. (OFRF NORA report, pg 39)	Research indicates that organic farming systems can sustain higher levels of soil organic carbon (SOC) and have lower per acre GHG emissions that conventional systems (Schonbeck 2020; Crystal-Ornelas et al., 2021, as cited in Vélez testimony) In addition to sequestering C and mitigating GHG emissions, building soil health can contribute to the resilience of the production system to abiotic stresses, including those related to climate change (Blanco-Canqui & Francis, 2016; Lal, 2016 as cited in OFRF soils report, pg 13)	The deeper, more biologically active soils of mature organic systems that have higher SOC can improve crop and livestock resilience to drought and other weather extremes. (Lori et al., 2017, as cited in OFRF soils report, pg 34)
	Climate community is waking up to the importance of agriculture and the food system in addressing climate change. Climate experts and policy makers must understand the complexity of the food and agriculture system. (Institute for Agriculture and Trade Policy, article Evaluating solutions for agriculture and climate change)	Organic farming prohibits one of the largest contributors of greenhouse gases in the food system: the production and use of synthetic nitrogen fertilizers. A study published in the journal, Nature last year found that synthetic nitrogen fertilizer contributes 10% of GHG emissions in all of global agriculture. By law, organic farmers grow crops without any synthetic nitrogen fertilizers. So they completely eliminate that major greenhouse gas. (from GM presentation notes)	In the case of extended drought, studies show that cover crops can reduce irrigation needs anywhere from 33%-50% particularly when using integrated strategies such as diversified rotation, reduced tillage, and compost application. (Gaudin et al., 2018; Renwick et al, 2017; DeVincentis, 2019; as cited in Vélez testimony)	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. (NRDC report, pg 6)
#2. Organic is...	...Healthy for soils	...Healthy for soils	...Healthy for soils	...Healthy for soils
Organic farming practices contribute to the long-term fertility of the soil.	**Organic farms are managed in ways that promote the health of the surrounding ecosystem, including air, water, and soil quality.**	**Organic producers are leaders in the adoption of soil health management and climate-friendly practices.**	**Maintaining healthy soil is a core requirement of organic agriculture, making organic agriculture a key tool in addressing climate change.**	**Organic farms are managed in ways that promote the health of the surrounding ecosystem, including air, water, and soil quality.**
	Evidence shows that careful organic management can reduce nitrate leaching from farms. A Washington state study on organic, conventional, and integrated apple production showed that nitrate leaching was four to six times higher in the conventional than the organic plots. (Kramer et al., 2006, as cited in COOF report, pg 25, ref 163)	The USDA National Organic Program Standards mandate best conservation management practices, including diversified crop rotation, cover cropping, careful nutrient management, and other practices to build Soil Organic Carbon and protect soil health. (USDA National Organic Program Final Rule, as cited in OFRF soils report, pg 13)	Organic farmers also grow cover crops, which keeps the soil under vegetative cover for longer periods of time, preventing wind and water from carrying away topsoil. (Snapp et al., 2005 and Hartwig & Ammon, 2002, as cited in COOF report, pg 24, ref 158, 159)	As a consumer, unless you are buying directly from a farmer who you know personally, the USDA Organic label is the only way to know that these sustainable practices are in use. (Notes from partner at GM)
	A Michigan study comparing conventional and organic row crop production showed that, after 12 years, organically managed plots had 50% less nitrate leaching and over twice the nitrogen use efficiency (yield per unit of nitrogen fertilizer) as the conventional plots. (Snapp et al., 2010, as cited in COOF report, pg 25, ref 164)	NOP standard: §205.203 Soil Fertility and Crop Nutrient Management Practice Standard. "(b) The producer must manage crop nutrients and soil fertility through rotations, cover crops, and the application of plant and animal materials." (Retrieved from https://www.ecfr.gov/current/title-7/subtitle-B/chapter-I/subchapter-M/part-205?toc=1)	NOP standard: §205.205 Crop Rotation Practice Standard. "The producer must implement a crop rotation including but not limited to soil, cover crops, green manure crops, and catch crops that … (a) maintain or improve soil organic matter content. (b) provide for pest management … (c) manage deficient or excess plant nutrients; and (d) provide erosion control." (Retrieved from https://www.ecfr.gov/current/title-7/subtitle-B/chapter-I/subchapter-M/part-205/subpart-C#205.205)	
#3. Organic is...	...Protective of biodiversity	...Protective of biodiversity	...Protective of biodiversity	...Protective of biodiversity
Organic farming practices contribute to high levels of diversity in plant and animal communities.	**Fostering robust populations of diverse plants, animals, insects, and soil-dwelling organisms is a fundamental principle of organic production. (Guidance: Natural Resources and Biodiversity Conservation, 2016, as cited in COOF, pg 25, ref 184)**	Farming practices such as cover cropping, crop diversification and composting are fundamental to organic farming and assist in regenerating soil health.	**Organic and transitioning farmers are leaders in the use of cover crops, diversified rotations, perennial buffer and border plantings, and organic amendments to improve soil health and protect resources. (OFRF NORA, pg 167)**	**Organic farmers are required to implement practices that maintain or improve biodiversity on their farms. (Guidance: Natural Resources and Biodiversity Conservation, 2016, as cited in COOF, pg 25, ref 184)**
	A comprehensive meta-analysis shows that organic farming significantly increases populations of beneficial insects, birds, and soil-dwelling organisms, as well as non-bird vertebrates (mammals, reptiles, etc.) and plants. (Crowder et al., 2012, as cited in COOF report, pg 26, ref 167)	The federal organic standards specify that organic farmers must use practices that maintain or improve natural resources, including water quality. (General, 2018, as cited in COOF report, pg 24, ref 160)	The federal organic standards require organic farmers to implement a crop rotation specifically to reduce soil erosion. By increasing the diversity of crops grown in a rotation, organic farmers increase soil organic matter levels, which creates good soil structure that absorbs water and prevents soil from blowing or washing away. (Crop rotation practice standard, 2018, Balvanera et al., 2006, and Lehmann et al., 2017, as cited in COOF report, pg 24, ref 155, 156, 157)	Organic farms support pollinators by growing a diversity of rotating crops, and permanent hedgerows. Diverse crops and hedgerows provide safe habitat and a constant source of food for pollinators. (Tuck et al., 2014, Lichtenberg et al., 2017, Pardalis et al., 2016, Morandin & Kremen, 2013, Hannon & Sisk, 2009, Kovács-Hostyánszki et al., 2017, as cited in COOF report, pg 27, ref 215, 216, 217, 218, 219, 220)

OFRF has a comprehensive resource with further information on this topic

Contact Organic Farming Research Foundation to learn more Brise@ofrf.org or visit www.OFRF.org/organic-is-regenerative