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Regenerative Agriculture and Related Food Product Labeling and Marketing Claims

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SUMMARY

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Renée Johnson
Specialist in Agricultural Policy

Megan Stubbs
Specialist in Agricultural Conservation and Natural Resources Policy

Regenerative Agriculture and Related Food Product Labeling and Marketing Claims

Regenerative agriculture (RA) generally refers to a sustainable agricultural production system centering on soil health and involving certain agronomic and scientific principles. In some cases, RA often also includes broader efforts to balance environmental, economic, and social welfare principles. The term *regenerative* in the context of agricultural practices first appeared in the early 1980s and was mainly associated with organic production practices. *Regenerative organic agriculture* (ROA) combines RA with organic production practices. ROA is often cited as building on RA practices and sometimes used interchangeably with RA. Since the mid-2010s, research and advocacy focused on RA and ROA have increased sharply.

Despite the growing popularity of RA and ROA labeling and marketing claims, neither term has been formally codified in either federal or state statutes or regulations. There also is no widely accepted consensus about how to define these terms. Regenerative farming principles have not been formally identified and are not enforceable under existing federal programs or certification standards subject to oversight by the U.S. Department of Agriculture (USDA) or the Food and Drug Administration (FDA). Despite a lack of consensus about how to define *regenerative* and the absence of federal enforceable certification standards, several food companies and retailers have adopted policies to label and market some food products as regenerative or as regenerative organic based on criteria developed under private sector (nongovernmental) initiatives.

Uncertainty about what is meant by RA and ROA and how to interpret marketing claims about foods labeled as regenerative compared with other sustainable product claims may create challenges for farmers, consumers, researchers, and policymakers. While there are no statutory, regulatory, or formal administrative definitions of RA and ROA, many of the soil-related practices incorporated into private sector initiatives are consistent with soil health principles recommended by USDA's Natural Resources Conservation Service (NRCS). These NRCS conservation practice standards often share with the organic agriculture sector the common goal of optimizing soil health but differ from USDA National Organic Program regulations and federal certification standards that prohibit certain practices and external inputs for products labeled organic (such as the use of certain synthetic chemicals, sewage sludge, and biotechnology). USDA has administered climate and carbon sequestration initiatives that share some practices and goals with private RA and ROA initiatives. Regardless of what practices are required under various private sector initiatives, federal labeling requirements and rules prohibiting unfair or deceptive acts or practices, such as those under the authorities of FDA and the Federal Trade Commission, still apply.

Congress has debated regenerative farming and its potential role in improving soil biodiversity, fertility, and structure or achieving other goals. Congress has conducted hearings on RA, and some Members have introduced bills and resolutions involving RA and ROA, although few bills have attempted to define either term. In the 118th Congress, H.R. 598 would have identified 32 different farming conservation practices considered to be *regenerative agricultural practices*, or other practices as determined by the USDA Secretary. H.R. 9631 included a definition of *regeneratively produced* agricultural products and a definition of *regeneratively-organically produced* agricultural products based on USDA-certified organic production methods. In the 117th Congress, H.Res. 1234 referred to RA as a "system of farming and ranching principles and practices that increases biodiversity, enriches the soil, and purifies watersheds, all while increasing in-farm fertility." H.Res. 1234 also expressed "support for regenerative agriculture and other conservation practices to support more sustainable and resilient agriculture, and compensating farmers for providing environmental services" and resolved to "support and fund programs that provide resources to agricultural scientists and other public interest scientists to work with farmers to identify innovations, the replicability of regenerative practices, and sustainable and resilient systems." To date, Congress has not enacted legislation defining RA or ROA, and no introduced legislation has proposed to establish a federal regulatory framework to oversee marketing claims of foods labeled as regenerative or produced using regenerative agricultural practices.

Congress may continue to discuss a next farm bill, and whether to establish federal definitions of RA and/or ROA could be a topic of interest. Congress may consider whether to incorporate farming practices considered to be regenerative into existing USDA conservation standards and product marketing schemes and whether to establish a federal regulatory framework to oversee marketing claims for food products labeled as regenerative. The 119th Congress may also consider related legislative efforts, such as promotion of regenerative farming principles by the Make America Healthy Again congressional caucus, which has a stated goal of "advancing regenerative and precision agriculture and environmental efforts."

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Among food manufacturers, retailers, and consumers, interest is increasing in RA and ROA as well as other related sustainable consumer product labeling and marketing claims. Some policymakers also have shown interest in regenerative farming as a way to potentially improve (i.e., regenerate) soil biodiversity, fertility, and structure, among other environmental and societal goals. For example, H.Res. 1234 (117th Congress) expressed "support for regenerative agriculture and other conservation practices to support more sustainable and resilient agriculture, and compensating farmers for providing environmental services." Congress has conducted hearings on RA, although few bills have attempted to define regenerative or promote the term's use. Some policymakers have expressed concern about efforts to advance RA, when related objectives (e.g., use of certain pesticides and chemicals in food production) could result in limited options for agricultural production practices.[1]

To date, RA and ROA have not been defined in statute, and regenerative farming principles are not enforceable under existing federal or state programs or policies. There also are no federal or state certification standards or rules for what can be defined as RA or ROA practices subject to oversight by the U.S. Department of Agriculture (USDA) or the Food and Drug Administration (FDA) within the U.S. Department of Health and Human Services (HHS).[2] There also is no clear scientific definition of or agreement on the types of farming practices and product standards that might qualify as regenerative. This lack of consensus complicates the ability of food producers, manufacturers, and retailers to make certain labeling and marketing claims about food products. In contrast, the term *organically produced* agricultural product has a federally recognized and enforced statutory definition, and USDA administers an organic certification program.[3]

Food companies and retailers have adopted policies to label and market some food products as regenerative or as regenerative organic based on criteria developed under various private sector (nongovernmental) initiatives. Definitions and marketing claims under these initiatives vary, depending on the food product sold and the specific goals and objectives of the group promoting the initiative. Some RA and ROA initiatives are broadly focused on certain minimally applied production practices, and others are highly prescriptive and specify wide-ranging and explicit practices intended to achieve certain production and environmental outcomes. Some initiatives include a wide range of social welfare outcomes, such as assurances of farmer profitability and minimum salaries and benefits for workers, promotion of locally sourced foods, and considerations of Indigenous agricultural practices and animal welfare protections. Aside from general labeling requirements and rules prohibiting unfair or deceptive acts or practices, private sector efforts are not verifiable or enforceable by federal or state rules. Farmers, consumers, researchers, and policymakers may find it challenging to navigate uncertainty about what is

[1] U.S. Congress, House Committee on Agriculture, *Past Breakthroughs and Future Innovations in Crop Production*, hearing, 119th Cong., 1st sess., July 22, 2025, https://docs.house.gov/Committee/Calendar/ByEvent.aspx?EventID=118519.

[2] Since the start of the second Trump Administration, both the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (HHS) have announced reorganization and restructuring plans. Such plans could change certain USDA and HHS oversight functions. See CRS Legal Sidebar LSB11311, *The Reorganization of the U.S. Department of Health and Human Services: Selected Legal Issues*.

[3] 7 U.S.C. §6502.

meant by RA and ROA and how to interpret marketing claims on foods labeled as regenerative compared with other sustainable food product claims.

As Congress debates a next farm bill, it may consider whether to establish federal definitions of RA and/or ROA. Congress may consider whether to identify which USDA conservation standards and product marketing schemes are considered to be regenerative and whether to establish a federal regulatory framework to oversee marketing claims about foods labeled as regenerative or labeled as produced using regenerative farming practices. The 119th Congress may also consider related legislative efforts and policies, such as promotion of regenerative farming principles by the Make America Healthy Again (MAHA) congressional caucus, which has a stated goal of "advancing regenerative and precision agriculture and environmental efforts."[4]

Terms and Definitions

Absence of Uniform RA and ROA Definitions

Some federal legislation and state initiatives have proposed definitions of RA and ROA, but no such defined terms have been codified in federal or state laws and regulations to date. In addition, there is no widely accepted consensus about how to define these terms. Currently, companies that label or market foods as regenerative are likely participating in various private sector (nongovernmental) initiatives. Foods labeled and marketed as regenerative under these initiatives are not certified or governed by any federal or state program, although some private sector initiatives may include regenerative practices and outcomes outlined in some federal programs and policies, such as standards and requirements comprising some USDA conservation and organic certification programs, along with a focus on efforts to balance environmental, social, and economic principles. In addition, federal laws and regulations govern the labeling and marketing of food products to ensure foods sold in the United States are properly labeled and are not misbranded; however, current federal guidance does not specifically address "regenerative" food product labeling claims.[5]

USDA scientists note that RA "seems to be defined differently by different people" and that most definitions are "based on the goal of regenerating soil" and largely include practices that are "in line with the USDA Natural Resources Conservation Service (NRCS)'s soil health principles" and share a common goal with organic agriculture (i.e., optimizing soil health).[6] NRCS conservation practices include minimizing tillage, maximizing the amount of time roots are growing in soil, and adding organic amendments to soil (e.g., manures, crop and cover crop residues).[7] NRCS conservation practice standards are broadly applicable to most conventionally produced agriculture and may differ from those under USDA-certified organic agriculture regulations that prohibit certain practices and external inputs (such as the use of synthetic chemicals, sewage sludge, and biotechnology). Some researchers define RA according to NRCS principles: "keeping soils continuously covered, minimizing soil disturbance, increasing biological diversity, keeping

[4] See Sen. Roger Marshall, "Make America Healthy Again (MAHA) Caucus Mission Statement," https://www.marshall.senate.gov/wp-content/uploads/MAHA-Caucus-copy.pdf.

[5] Further discussion is provided in the "Federal Food Product Labeling Requirements" section of the report.

[6] Michel Cavigelli, "The Economics of Regenerative Agriculture: Reaping the Rewards of Healthy Soil," *Under the Microscope*, USDA, Agricultural Research Service, January 2025, https://www.ars.usda.gov/oc/utm/the-economics-of-regenerative-agriculture/.

[7] Ensuring soil health and rebuilding soil organic matter is broadly associated with food, water, and climate security. See Center for Food Safety, *Soil & Carbon*, 2015, https://www.centerforfoodsafety.org/files/soil-carbon-pamphlet_finalv2_88688.pdf.

living roots in the soil, and integrating livestock" to ensure soil health and carbon sequestration and reduce inputs while "not sacrificing profitability."[8]

Illustrative Examples of Soil Health Principles Related to Regenerative Agricultural Practices

Regenerative agriculture (RA) generally refers to a soil health-centered system of agricultural production that incorporates agronomic principles and farming practices considered to be regenerative given their potential to restore soil health and reverse biodiversity loss. Examples of general principles and practices include the following:

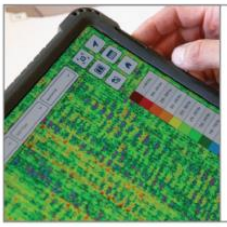
Minimizing soil disturbance, such as through adopting residue and tillage management like no-till or reduced-till methods

Fostering plant diversity, such as through implementing diverse crop rotations, intercropping, multispecies cover cropping, and agroforestry

Maintaining soil cover, such as through planting cover crops, mulching, and planting perennials to keep plants in ground year-round

Building and sequestering soil carbon, such as through applying compost, green and animal manures, or biochar, and through agroforestry, silvopasture, and planting trees or perennials

Practicing pest management, such as through diverse crop rotations, multispecies cover cropping, and agroforestry



Practicing nutrient management, such as through using precision technology to apply biological and chemical inputs

Encouraging water percolation, such as through applying compost, green and animal manures, or biochar, as well as practicing fallowing, land retirement, and wetland restoration

Maximizing biodiversity, such as through crop rotations, cover crops, and livestock integration with managed grazing

Source: Figure created by CRS using photos from U.S. Department of Agriculture (USDA), available at https://www.flickr.com/photos/usdagov/; practice information from USDA, Natural Resources Conservation Service, *Principles for High Functioning Soils*, February 2013, https://www.nrcs.usda.gov/sites/default/files/2022-10/Soil-Health-Starter-Kit-reduced.pdf; and Carolina Córdova, "Crossroads in Agriculture: Innovation, Resilience, and Opportunity," presented at the National Academies of Sciences, Engineering, and Medicine congressional seminar, June 26, 2025, https://www.nationalacademies.org/event/45153_06-2025_crossroads-in-agriculture-innovation-resilience-and-opportunity.

[8] Testimony of Dr. Jason Rowntree, C. S. Mott Professor of Sustainable Agriculture and Director of the Center for Regenerative Agriculture, Michigan State University, in U.S. Congress, Senate Committee on Agriculture, Nutrition, and Forestry, *Farm Bill 2023: Research Programs*, hearing, 117th Cong., sess. 2, December 6, 2022, https://www.agriculture.senate.gov/hearings/farm-bill-2023-research-programs-12-06-2022.

Some agronomists note there is "no universal, technical, [or] quantifiable definition" for regenerative farming. In practice, they acknowledge that the regenerative label "has been applied to nearly anything that improves farm outcomes and minimizes environmental impact."[9] This includes common agricultural and soil health practices intended to boost crop yields, mitigate production risks, improve soil conditions, increase input efficiency, reduce synthetic inputs, support new crop development, or enable new or alternative revenue streams (e.g., carbon credits or products marketed as organic or locally produced). The **text box** above illustrates some of the farming practices that may be considered to be regenerative.

ROA initiatives generally include RA farming practices (see **text box** above) as a base requirement that is supplemented by organic agricultural practices and standards. While some ROA initiatives require practices and standards under USDA's National Organic Program (NOP) regulations and federal certification process,[10] ROA initiatives, in most cases, reference practices associated with various private sector organic certification programs. Accordingly, ROA initiatives may include practices related to soil health, animal welfare, and social equity, among other practices, including planting perennials, developing pollinator and wildlife habitats, incorporating agroforestry systems, planting vegetative barriers, and implementing practices that may develop soil organic matter. The Organic Farming Research Foundation (OFRF) notes that the leading regenerative practices cited by existing initiatives are reduced tillage, integration of livestock, use of cover crops and crop rotation systems, and low to no application of external inputs (such as chemicals and biotechnology). According to OFRF, current initiatives' leading desired outcomes include improved soil health and fertility, increased carbon sequestration and biodiversity, and improved water health and economic well-being of communities. OFRF claims that the aim of minimizing external inputs while maximizing ecological practices is captured in the principles of organic agriculture.[11]

Ambiguity about what is meant by RA and ROA has made it difficult to develop legislation on this topic and has raised concerns about potential misleading or deceptive claims related to the sustainability and environmental benefits of a product or practice claiming to be regenerative.[12] Despite the lack of clarity, some food companies and retailers continue to incorporate sustainability and regenerative initiatives into their global supply chains.

Early Efforts to Define Regenerative Farming

The historical origins of RA and ROA are considered debatable. Most researchers cite the Rodale Institute—a nonprofit organization that supports organic farming research, practices, and education—as among the first to formally coin the phrase "regenerative agriculture" in the early 1980s. Others cite earlier work by the National Association of Conservation Districts (NACD)

[9] Shane Thomas, "If Every Company Is a Regenerative Ag Company, Then No Company Is a Regenerative Ag Company," *Upstream Ag Insights*, May 10, 2025, https://upstream.ag/p/if-every-company-is-a-regenerative-ag-company-then-no-company-is-a-regenerative-ag-company-4bcb8c340.

[10] The Organic Foods Production Act of 1990 was enacted as part of the Food, Agriculture, Conservation, and Trade Act of 1990 (P.L. 101-624, Title XXI; 7 U.S.C. §§6501 et seq.). USDA regulations were finalized in 2000 (see USDA, Agricultural Marketing Service [AMS], "National Organic Program," 65 *Federal Register* 80548, December 21, 2000; 7 C.F.R. 205). See section titled "USDA National Organic Program Standards."

[11] Organic Farming Research Foundation, "Organic Is Regenerative," https://ofrf.org/organic-is-regenerative/.

[12] Tatenda Mambo and Guillaume Lhermie, "The Futures for Regenerative Agriculture: Insights from the Organic Movement and the Tussle with Industrial Agriculture," *Frontiers in Sustainable Food Systems*, vol. 8 (December 2024), https://doi.org/10.3389/fsufs.2024.1455024.

and other groups.[13] Some acknowledge general contributions in the early 20th century by soil scientist George Washington Carver of Tuskegee University,[14] among other pioneers of sustainable, organic, and alternative agriculture.[15] Overall, *regenerative farming* has become one among several terms used to describe farming systems that seek to balance agricultural production with environmental goals.[16] The following definition of RA is attributed to Robert Rodale of the Rodale Institute in 1983:[17]

> *Regenerative agriculture* is one that, at increasing levels of productivity, increases our land and soil biological production base. It has a high level of built-in economic and biological stability. It has minimal to no impact on the environment beyond the farm or field boundaries. It produces foodstuffs free from biocides. It provides for the productive contribution of increasingly large numbers of people during a transition to minimal reliance on non-renewable resources.

Historically, the Rodale Institute promoted regenerative farming as creating a "permanently sustainable system," mainly through the use of organic farming and "nonmainstream" farming methods.[18] This included "avoiding the use of synthetic fertilizers and pesticides" in exchange for "more natural fertilizers and totally biological approaches to insect control," as well as growing a mixture of annual and perennial wild plants instead of monocropping annual crops, thus reducing the need for tillage and weed control. Similarly, NACD's promotion of regenerative farming cited efforts to "slow the advance of desertification and soil salinization, reduce the loss of prime farmlands and fragile topsoils," support wildlife habitats, and reduce waste and water contamination, as well as "in general, make rural America a far more healthy, satisfying, and financially rewarding place to live."[19] The Rodale Institute also has advocated for adding "regenerative components to the present [farming] system in a bit-by-bit way."[20]

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[13] R. Neil Sampson, "Saving Agricultural Land: Environmental Issue of the 1980's," *Environmentalist*, vol. 2 (December 1982), pp. 321-332, https://doi.org/10.1007/BF02603089 (hereinafter Sampson, "Saving Agricultural Land"). The National Association of Conservation Districts represents local and state conservation districts. Others credit work by Medard Gabel and the World Game Institute (e.g., Ken E. Giller et al., "Regenerative Agriculture: An Agronomic Perspective," *Outlook on Agriculture*, vol. 50, issue 1 (March 2021), pp. 13-25, https://doi.org/10.1177/0030727021998063).

[14] See, for example, Anil Shrestha and David Horwitz, "Variations and Commonalities of Farming Systems Based on Ecological Principles," *Crops*, vol. 4, no. 3 (May 2024), pp. 288-307, https://doi.org/10.3390/crops4030021; and Sheryl Karas, "Regenerating the Earth While Regenerating the Lives of People of Color," California State University-Chico (CSU-Chico), Center for Regenerative Agriculture and Resilient Systems (CRARS), https://www.csuchico.edu/regenerativeagriculture/blog/blm-reg-ag.shtml.

[15] References include but are not limited to Sir Albert Howard, *An Agricultural Testament* (Oxford University Press, 1943); Wes Jackson, *New Roots for Agriculture* (Friends of the Earth, 1980); and Lady Eve Balfour, "Towards a Sustainable Agriculture: The Living Soil," presented at the International Federation of Organic Agriculture Movements, Switzerland, 1977, https://journeytoforever.org/farm_library/balfour_sustag.html.

[16] Other commonly used terms include, but are not limited to, *sustainable*, *conservation*, *alternative*, *agroecological*, *green*, *biodynamic agriculture*, *ecological*, *carbon* or *nature inclusive farming*, *climate-smart*, *conservation*, *farming for soil health* and *organic agriculture*.

[17] R. R. Harwood, "International Overview of Regenerative Agriculture," in *Proceedings of Workshop on Resource-efficient Farming Methods for Tanzania*, Faculty of Agriculture, Forestry, and Veterinary Science, University of Dar es Salaam (Rodale Press, May 16-20, 1983), p. 31. Rodale's *regenerative agriculture* (RA) definition is sometimes miscited as originating in other Rodale-related documentation.

[18] Robert Rodale, "Breaking New Ground: The Search for Sustainable Agriculture," *The Futurist*, vol. 17, no. 1 (February 1983), pp. 15-20. See also Robert Rodale, "Chapter 6: Sustainability: An Opportunity for Leadership," in *Sustainable Agricultural Systems*, 1st ed., eds. Clive A. Edwards et al. (CRC Press, 1990), pp. 84-85, https://doi.org/10.1201/9781003070474.

[19] Sampson, "Saving Agricultural Land," pp. 321-332.

[20] Rodale, "Breaking New Ground," p. 18.

In the 1980s, regenerative farming was closely associated with organic production goals; promotion of such practices predates Congress's establishment of USDA's NOP and the program's federal regulations and organic certification process. Most current ROA-recommended practices tend to be associated with private organic certification programs rather than with federal NOP certification standards and policies. These private sector programs may include practices similar to those required under NOP (e.g., cover cropping, crop rotation, low- to no-till farming, composting, and reduced use of persistent chemical pesticides and fertilizers), but they often include additional practices related to soil health, animal welfare, and social equity. In private programs, soil health practices (such as the development of soil organic matter) may include, for example, the "addition of perennials, development of pollinator and wildlife habitats, incorporation of agroforestry systems, [and] vegetative barriers," among other practices.[21]

In 1985, Rodale defined ROA as a practice that "improves the resources it uses, rather than destroying or depleting them" and as a "holistic systems approach to agriculture that encourages continual on-farm innovation for environmental, social, economic and spiritual wellbeing."[22] ROA was said to be distinct from sustainable agriculture since it "takes advantage of the natural tendencies of ecosystems to regenerate when disturbed"; is "marked by tendencies towards closed nutrient loops, greater diversity in the biological community, fewer annuals and more perennials, and greater reliance on internal rather than external resources"; and is "aligned with forms of agroecology practiced by farmers concerned with food sovereignty the world over."[23]

Unlike RA and ROA, *sustainable agriculture* is defined in statute for the purposes of USDA program implementation (see the **text box** below). Although this term is defined in statute, multiple interpretations of sustainability are used to market food products and there is limited federal guidance regarding sustainable food labeling and packaging claims.

Process-Based and Outcome-Based Definitions

While research and initiatives focused on RA and ROA have increased since the mid-2010s, the meaning of each term varies depending on the group defining, certifying, and promoting such product claims. How RA and ROA are defined has led to tension.[24] In general, such definitions vary depending on whether labeling a product as regenerative is determined by the use of specific farming practices (i.e., *process-based*) or certain desired goals (i.e., *outcome-based*) or both.[25] Process-based RA definitions identified across most research studies include a range of soil health practices (e.g., minimizing soil disturbance, protecting soil, increasing diversity, and integrating crops and livestock) and may include practices such as minimizing synthetic pesticides (or using alternative pest controls), using methods focused on organic agricultural methods or small-scale

[21] Regenerative Organic Alliance, "Why Regenerative Organic?," https://regenorganic.org/why-regenerative-organic/.

[22] USDA's National Agricultural Library (NAL), oral history interview with Robert Rodale in 1989, available at Rodale Institute, "Regenerative Organic Agriculture: Beyond Sustainable," https://rodaleinstitute.org/why-organic/organic-basics/regenerative-organic-agriculture/.

[23] Rodale Institute, *Regenerative Organic Agriculture and Climate Change*, 2014, https://rodaleinstitute.org/wp-content/uploads/rodale-white-paper.pdf.

[24] Janet Ranganathan et al., "Regenerative Agriculture: Good for Soil Health, but Limited Potential to Mitigate Climate Change," World Resources Institute, May 12, 2020, https://www.wri.org/insights/regenerative-agriculture-good-soil-health-limited-potential-mitigate-climate-change; David Bronner, "Regenerative Agriculture: The Good, the Bad and the Ugly," *All-One Blog*, Dr. Bronner's, March 11, 2024, https://info.drbronner.com/all-one-blog/2024/03/regenerative-agriculture-good-bad-ugly/; and Keith Paustian et al., *Climate Mitigation Potential of Regenerative Agriculture Is Significant!*, Regenerative Agriculture Foundation, June 2020, https://hal.inrae.fr/hal-04538542v1/document.

[25] See, for example, Peter Newton et al., "What Is Regenerative Agriculture? A Review of Scholar and Practitioner Definitions Based on Processes and Outcomes," *Frontiers in Sustainable Food Systems*, vol. 4 (October 2020), https://doi.org/10.3389/fsufs.2020.577723. The study was based on 229 journal articles and 25 practitioner websites.

or locally sourced production.[26] Outcomes-based RA definitions similarly vary, covering a range of environmental goals, such as preserving natural resources (e.g., water, air, and farmland) and addressing perceived climate impacts. Outcomes-based definitions also cover a wide range of social goals, such as strengthening local food systems and community self-sufficiency, training the next generation of land managers and farmers, benefitting certain underserved communities, and restoring Indigenous food systems and techniques.[27]

Sustainable Agriculture Product Claims

As defined in the Food, Agriculture, Conservation, and Trade Act of 1990 (1990 farm bill; P.L. 101-624, §1603; 7 U.S.C. §3103(19))

> The term "sustainable agriculture" means an integrated system of plant and animal production practices having a site-specific application that will, over the long-term-
>
> (A) satisfy human food and fiber needs;
>
> (B) enhance environmental quality and the natural resource base upon which the agriculture economy depends;
>
> (C) make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural biological cycles and controls;
>
> (D) sustain the economic viability of farm operations; and
>
> (E) enhance the quality of life for farmers and society as a whole.

Elsewhere, USDA's Sustainable Agriculture Research and Education (SARE) program, funded by USDA's National Institute for Food and Agriculture, has identified sustainability as encompassing "three common goals while running productive operations": (1) profitability over the longer term, (2) natural resource stewardship, and (3) "quality of life" for farmers, ranchers, and their communities. Regarding sustainable agriculture, USDA cites various "proven practices," including climate resilience, soil health, livestock health and animal husbandry, community vitality, health and well-being of people, ecological pest management, biological diversity, and innovative technologies and enterprises. Another widely cited definition of sustainable agriculture identifies the need to integrate environmental health, economic profitability, and social and economic equity.

There is no formal regulatory framework for how to oversee marketing claims on consumer products that are labeled as sustainable or as produced using sustainable practices. Challenges—including research gaps and oversight difficulties for regulatory agencies—remain, and efforts are ongoing to define sustainability for the purpose of food product labeling.

Sources: USDA, SARE, *What Is Sustainable Agriculture?*, 2023, https://www.sare.org/wp-content/uploads/What-is-Sustainable-Agriculture.pdf; University of California-Davis, "What Is Sustainable Agriculture?," https://sarep.ucdavis.edu/sustainable-ag; and Robert Kluson, "Sustainable Agriculture: Definitions and Concepts," University of Florida, Institute of Food and Agricultural Sciences, https://sfyl.ifas.ufl.edu/media/sfylifasufledu/sarasota/documents/pdf/ag/SusAgFAQ.pdf. See also National Academies of Sciences, Engineering, and Medicine, "Food Product Labeling: Challenges of Defining Sustainability," Food Forum (webinar), October 12, 2023, https://www.nationalacademies.org/event/40313_10-2023_food-product-labeling-challenges-of-defining-sustainability; and KPMG, "Sustainability Standards and Labels," https://kpmg.com/ch/en/insights/esg-sustainability/eco-label-standards.html.

Regenerative practices tend to be highly site-specific and not associated with a fixed list of practices; they also may vary by type and duration depending on their anticipated ecological outcomes. Process-based RA (or ROA) definitions may explicitly exclude certain practices, such

[26] Newton et al., "What Is Regenerative Agriculture?," p. 3; Jeff Moyer et al., *Regenerative Agriculture and the Soil Carbon Solution*, Rodale Institute, September 2020, https://rodaleinstitute.org/wp-content/uploads/Rodale-Soil-Carbon-White-Paper_v11-compressed.pdf; Rodale Institute, *Regenerative Organic Agriculture and Climate Change*, 2014, https://rodaleinstitute.org/wp-content/uploads/rodale-white-paper.pdf; and Soil Health Institute, *Soil Health: The Foundation for Regenerative Agriculture*, report of the 5th annual meeting (virtual), July 30-31, 2020, https://soilhealthinstitute.org/app/uploads/2021/10/Report-of-SHI-5th-Annual-Meeting.pdf.

[27] See, for example, Regenerative Agriculture Foundation, https://regenerativeagriculturefoundation.org/about/.

as those that negatively impact soil health and biodiversity as well as those that use synthetic fertilizers, pesticides, biotechnology, intensive tillage, monocropping, concentrated animal feeding systems, or soilless production systems (e.g., hydroponic and aquaponic). Overall, a process-based RA definition is based on an actual or perceived relationship between a process and a particular outcome.[28]

In contrast, examples of outcome-based RA definitions may include claims such as enhanced soil health (e.g., regarding structure, organic matter, and fertility); improved ecosystem function (e.g., water quality and pasture quality); increased biodiversity; carbon sequestration and reduced greenhouse gas (GHG) emissions; improved farm productivity (e.g., better crop yields and crop resilience) and profitability; reduced waste; improved human health (e.g., food safety, access, and nutritional quality); and improved animal health and welfare, among other social or community well-being benefits.[29] In general, outcome-based RA is accepting of all of the processes that lead to a desired outcome; if the approach includes multiple outcomes, then any process used would have to contribute to (or at least not hinder) the accomplishment of all outcomes.[30]

Claimed Benefits and Criticism

Advocates of RA and ROA claim the benefits of implementing regenerative practices include improved soil quality and resilience, sequestration of carbon in soil, climate change mitigation, improved crop yields and ecosystem services, reduced runoff and subsequent soil and water resource degradation, minimized pesticide residues and exposure, reduced energy use, improved biodiversity conservation, and enhanced food security.[31] In addition to environmental benefits, other research suggests possible benefits include enhanced food nutritional quality and improved human health as well as food availability and affordability if food is produced locally.[32] Other research claims economic and social benefits, including improved farmer profitability from reduced input costs, risk mitigation, and higher output value; enhanced local food production; food security; and employment.[33] Although regenerative farming is generally more labor-

[28] Some studies have examined outcomes using combined (or stacked) practices based on different growing or geographic conditions. See, for example, CSU-Chico, CRARS, "Regenerative Agriculture Systems," https://www.csuchico.edu/regenerativeagriculture/regen-ag-systems/index.shtml.

[29] Newton et al., "What Is Regenerative Agriculture?," p. 3; Moyer et al., *Regenerative Agriculture and the Soil Carbon Solution*; Noble Research Institute, "What Is the Difference Between Organic and Regenerative Agriculture?," https://www.noble.org/regenerative-agriculture/organic-vs-regenerative-agriculture/; and Lela Nargi, "Making Sense of Regenerative Labels," *FoodPrint* (blog), February 12, 2025. For background on using agricultural soils for climate change mitigation, see CRS In Focus IF11693, *Agricultural Soils and Climate Change Mitigation*.

[30] Newton et al., "What Is Regenerative Agriculture?," Table 1.

[31] Sandeep Kumar et al., eds., *Regenerative Agriculture for Sustainable Food Systems* (Springer Singapore, 2024), https://link.springer.com/book/10.1007/978-981-97-6691-8; Ravjit Khangura et al., "Regenerative Agriculture: A Literature Review on the Practices and Mechanisms Used to Improve Soil Health," *Sustainability*, vol. 5, no. 3 (January 2023), Figure 1, https://doi.org/10.3390/su15032338; and Alam Sher et al., "Importance of Regenerative Agriculture: Climate, Soil Health, Biodiversity and its Socioecological Impact," *Discover Sustainability*, vol. 5, no. 462 (December 2024), Figures 1 and 2, https://doi.org/10.1007/s43621-024-00662-z.

[32] Davendra Ramkumar et al., "Food for Thought: Making the Case for Food Produced via Regenerative Agriculture in the Battle Against Non-communicable Chronic Diseases (NCDs)," *One Health*, vol. 18, article no. 100734 (April 2024), https://doi.org/10.1016/j.onehlt.2024.100734; and David Montgomery et al., "Soil Health and Nutrient Density: Preliminary Comparison of Regenerative and Conventional Farming," *PeerJ*, vol. 10, no. e12848 (January 27, 2022), https://doi.org/10.7717/peerj.12848.

[33] Owen Stockdale et al., "Revitalizing Fields and Balance Sheets through Regenerative Farming," McKinsey, December 4, 2024, https://www.mckinsey.com/industries/agriculture/our-insights/revitalizing-fields-and-balance-sheets-through-regenerative-farming.

intensive than conventional farming, the labor costs might be offset by lower input costs elsewhere, such as reduced agrochemical and energy inputs and possible higher farm income.

Critics of RA and ROA debate its scientific basis, question its supply scalability and farmer profitability given the risks and costs associated with transitioning to such practices, and highlight potential concerns that related food product claims may be unsubstantiated, misleading, or deceptive.[34] The potential that consumers may be misled into purchasing products they believe to be less harmful to the environment remains a concern to some consumer advocates and to some market analysts concerned about potential business risks to financial investors.[35] Some regenerative practices may not be optimal "in every setting, geography or time horizon" and could adversely impact farmer productivity and profitability in some cases.[36] Others note that many of the agricultural practices claimed to be regenerative are already widely applied across a range of common practices employed by most successful agricultural operations.[37]

Market studies show that consumers are increasingly demanding foods they perceive to be less harmful to the environment, among other product attributes. Foods labeled and marketed as "organic" account for a growing share of retail sales compared with nonorganic or conventionally produced foods; this is in part attributable to consumer perceptions that organic foods may be more nutritious, environmentally friendly, and "natural" because they are produced with fewer chemicals and without the use of biotechnology.[38] Studies show that foods labeled and marketed as RA are less familiar to consumers; other studies suggest consumers may be confusing RA-labeled foods with certified organic foods.[39]

[34] Stockdale et al., "Revitalizing Fields and Balance Sheet"; Agritecture, "A Vision for Technology in Regenerative Agriculture," April 7, 2024, https://www.agritecture.com/blog/a-vision-for-technology-in-regenerative-agriculture; Christine Zulkosky, "Is the Greenwashing Wave Crashing?," *The Food Institute*, September 29, 2023, https://foodinstitute.com/focus/is-the-greenwashing-wave-crashing/; and KPMG, "The Challenge of Greenwashing: An International Regulatory Overview," https://kpmg.com/xx/en/our-insights/esg/the-challenge-of-greenwashing.html.

[35] New Climate Institute, *Navigating Regenerative Agriculture in Corporate Climate Strategies*, September 2024, https://newclimate.org/resources/publications/navigating-regenerative-agriculture-in-corporate-climate-strategies; Changing Markets Foundation, *Feeding Us Greenwash: An Analysis of Misleading Claims in the Food Sector*, March 2023, https://changingmarkets.org/wp-content/uploads/2023/03/Feeding-us-Greenwash-final.pdf; and Environmental Working Group, "Beware Misleading 'Regenerative' Soil Claims on Non-Organic Foods," May 2022, https://www.ewg.org/news-insights/news/2022/05/beware-misleading-regenerative-soil-claims-non-organic-foods.

[36] Fran Lessiter, "Yes, He's a Regenerative Agriculture Skeptic," *No-Till Farmer*, January 16, 2025, https://www.no-tillfarmer.com/blogs/1-covering-no-till/post/13970-yes-hes-a-regenerative-agriculture-skeptic.

[37] See, for example, Shane Thomas, "Regenerative Agriculture Doesn't Have to Be Contentious: Take 2," Science for Sustainable Agriculture, July 2023, https://www.scienceforsustainableagriculture.com/shanethomas2; and Shane Thomas, "If Every Company Is a Regenerative Ag Company, Then No Company Is a Regenerative Ag Company," *Upstream Ag Insights*, May 10, 2025, https://upstream.ag/p/if-every-company-is-a-regenerative-ag-company-then-no-company-is-a-regenerative-ag-company-4bcb8c340.

[38] Andrea Carlson et al., *U.S. Organic Production, Markets, Consumers, and Policy, 2000-21*, USDA, Economic Research Service, ERR-315, March 2023, https://www.ers.usda.gov/publications/pub-details?pubid=106015; and Raghava Gundala and Anupam Singh, "What Motivates Consumers to Buy Organic Foods?," *PLoS One*, vol. 10, 16(9) (September 2021), https://doi.org/10.1371/journal.pone.0257288.

[39] Brian Ronholm, *Consumer Reports* survey data, presented at NASEM, Food Forum (webinar), October 12, 2023, https://www.nationalacademies.org/event/40313_10-2023_food-product-labeling-challenges-of-defining-sustainability; International Food Information Council, *Consumer Perspectives on Regenerative Agriculture*, February 2022, https://foodinsight.org/wp-content/uploads/2022/02/IFIC-Regenerative-Ag-Consumer-Survey.pdf; Steve Markenson, "Sustainable Shopper Segments" (blog), FMI-The Food Industry Association, August 30, 2023, https://www.fmi.org/blog/view/fmi-blog/2023/08/30/sustainable-shopper-segments; and EIT Food, "Cultivating Resilience: Regenerative Agriculture," July 2024, https://www.eitfood.eu/cultivating-resilience-regenerative-agriculture.

Federal, State, and International Activities

Congressional Legislative Examples

To date, few congressional bills have attempted to formally define RA or ROA or establish a regulatory framework to oversee marketing claims of foods labeled as regenerative or produced using regenerative agricultural practices. In the 118th Congress, H.R. 598 identified 32 different farming conservation practices considered to be *regenerative agricultural practices*, or "any other highly effective and evidence-based vegetative or management practice, as determined by the Secretary, based on an annual review, that significantly reduces agricultural greenhouse gas emissions or assists producers in adapting to, or mitigating against, increasing weather volatility." Practices identified in H.R. 598 were part of broader efforts to address climate-related concerns.

Another 118th Congress bill, H.R. 9631, included a definition of *regeneratively produced* agricultural products—those that use an "integrated approach to farming and ranching rooted in the principles of soil health leading to improved target outcomes" and "in a manner that fosters community and social wellness." H.R. 9631 also included a definition of *regeneratively-organically produced* agricultural products as those that also meet additional requirements and production methods described in the Organic Foods Production Act of 1990 (7 U.S.C. §§6501 et seq.). H.R. 9631 proposed these definitions for the purposes of establishing a Food as Medicine program promoting foods that are regeneratively produced, organically produced, or both.

Committees in the 117th Congress conducted a series of hearings on RA in 2022.[40] Also in the 117th Congress, H.Res. 1234 would have expressed "support for regenerative agriculture and other conservation practices to support more sustainable and resilient agriculture, and compensating farmers for providing environmental services" and resolved to "support and fund programs that provide resources to agricultural scientists and other public interest scientists to work with farmers to identify innovations, the replicability of regenerative practices, and sustainable and resilient systems." H.Res. 1234 referred to RA as a "system of farming and ranching principles and practices that increases biodiversity, enriches the soil, and purifies watersheds, all while increasing in-farm fertility." H.Res. 1234 claimed "regenerative practices and sustainable agriculture works to restore ecosystems, combat climate change, build soil health, prevent erosion, and improve water quality," among other benefits.

Other introduced legislation would have amended USDA conservation programs to include RA but did not specifically define RA-related terms or practices. For example, in the 118th Congress, H.R. 5951/S. 3023 suggested that, at minimum, RA training would cover conservation practices that "improve soil health, reduce production inputs, and regenerate soil, farmland, and nearby ecosystems," as well as organic and diversified practices (such as perennial cropping systems, agroforestry or silvopasture systems, livestock integration into cropping systems, and prescribed grazing) and practices that mitigate climate impacts and draw on "traditional ecological knowledge" from various producer groups.

[40] See, for example, U.S. Congress, House Committee on Agriculture, "Soil Health Practices and Programs that Support Regenerative Agriculture," hearing, 117th Cong., 2nd sess., September 14, 2022, https://www.congress.gov/event/117th-congress/house-event/LC69492/text; and U.S. Congress, House Oversight and Reform Committee, Subcommittee on Environment, "Regenerative Agriculture: How Farmers and Ranchers are Essential to Solving Climate Change and Increasing Food Production," hearing, 117th Cong., 2nd sess., July 19, 2022, https://www.congress.gov/event/117th-congress/house-event/115012. These hearings reviewed RA and ROA practices and challenges and examined RA's potential to address climate change and food security, respectively.

State Government Example

In January 2025, the California State Board of Food and Agriculture (CSBFA) finalized its recommendations to the California Department of Food and Agriculture (CDFA) on defining RA for the purpose of the state's agricultural policies and programs.[41] See the **text box** below.

State of California Proposed Definition of Regenerative Agriculture

A proposed staff draft definition of *regenerative agriculture* within the California Department of Food and Agriculture (CDFA) defines RA "as an integrated approach to farming and ranching rooted in principles of soil health leading to improved targeted outcomes." Examples of target outcomes include the following:

> (a) Building soil health, soil organic matter and biodiversity; ([CDFA] Healthy Soils Program); (AB 1757)
>
> (b) Increasing statewide implementation of conservation practices that improve soil health, sequester carbon and reduce greenhouse gases; (USDA NRCS Conservation Practice Standards)
>
> (c) Furthering sustainable pest and integrated pest management to reduce the reliance on pesticides; ([CDPR] *Accelerating Sustainable Pest Management: A Roadmap for California*); (UC Statewide Integrated Pest Management); (USDA NRCS pest management conservation system)
>
> (d) Protecting the welfare and care of animals in agriculture; ([CDFA] Animal Care Program)
>
> (e) Building healthy, local communities; ([CDFA] Ag Vision [Plan])
>
> (f) Protecting spiritual and cultural traditions as well as supporting Native-led stewardship practices;
>
> (g) Minimizing negative impacts to other target outcomes;
>
> (h) Maintaining positive impact on the economic vitality/livelihoods of farmers and ranchers.
>
> Regenerative agriculture will require processes, practices, monitoring, evaluation, and innovation to be customized to specific production systems, ecoregions, and local Indigenous cultural regions. Practice selection is based on the best available science and practice, including but not limited to, organic and traditional ecological knowledge, for production systems.
>
> State agencies and departments shall coordinate with the Department, contingent upon resources, in the development of measurable and verifiable outcomes related to individual policies and programs and are responsible for incorporating verification and reporting.

The proposed RA definition is intended to inform state agencies, boards, and commissions on CDFA's definition of regenerative agriculture as it relates to state policies and programs. The proposed definition is intended as "continuous implementation of practices that over time minimize inputs and environmental impacts and further enhances the ecosystem while maintaining or improving productivity, economic contributions and community benefits." This approach is said to have been informed "by the traditions and innovations from the original Indigenous stewards of the land." The definition is not intended for use in certification.

Source: CDFA, *Staff Draft: Defining Regenerative Agriculture for State Policies and Programs*. The proposed draft definition references policies and practices at USDA Natural Resources Conservation Service; the California Department of Pesticide Regulation; and various University of California research initiatives. AB-1757 refers to Assembly Bill 1757 (California Global Warming Solutions Act of 2006).

CSBFA's recommendations incorporate certain RA-related target outcomes found in state and federal sustainability strategies, including in CDFA's Healthy Soils Program, USDA conservation standards, and the California Department of Pesticide Regulation's sustainable pest management efforts. CDFA's definition does not include organic certification as a base requirement to qualify as regenerative, despite related efforts to increase transition from conventional to organic

[41] California Department of Food and Agriculture (CDFA), "Defining Regenerative Agriculture for State Policies and Programs," https://www.cdfa.ca.gov/RegenerativeAg/. The recommendation fulfills a board project outlined within CDFA, *Ag Vision for the Next Decade*, 2023, https://www.cdfa.ca.gov/agvision/docs/AgVision_2023_Plan.pdf.

agriculture in the state.[42] To date, these recommendations have not been codified in state law. No other state government has initiated similar efforts to officially define RA or ROA.

International Examples

Sustainable agriculture and RA topics are being debated and examined within a variety of international forums and intergovernmental organizations, including the United Nations (UN) and the World Trade Organization (WTO).

The UN Environment Programme (UNEP) has set broad sustainability goals since the 1970s, resulting in efforts to address sustainable agriculture and resilient agroecosystems. Some earlier efforts encompassed objectives spanning ethics and fairness, resource protections, biodiversity, economic viability, rural and socioeconomic development, and social responsibility.[43] Decades later, these topics continue to be debated. For example, sustainable and regenerative production were topics at the 2023 Conference of the Parties (COP28) to the UN Framework Convention on Climate Change and its subsidiary agreement, the Paris Agreement.[44] Among other outcomes, COP28 identified a target related to food and food systems involving the need for "implementation of integrated, multi-sectoral solutions, such as land use management, sustainable agriculture, resilient food systems" and "attain[ment of] climate-resilient food and agricultural production and supply and distribution of food, as well as increas[ed] sustainable and regenerative production and equitable access to adequate food and nutrition for all" by the year 2030.[45] The COP28 decision on the Paris Agreement's global goal on adaptation sets an identical 2030 target.[46] Although RA has been said to be closely aligned with the UN Sustainable Development Goals (SDGs) that seek to "promote sustainable agriculture" (SDG-2),[47] the term is not explicitly referenced in the SDGs.

WTO's 1995 Agreement on Agriculture does not reference sustainable agriculture or RA but includes multiple references to agro-environmental issues. These include the need to protect the environment, support research and infrastructural works associated with environmental programs, and make allowances for "special treatment reflecting factors of non-trade concerns, such as food security and environmental protection," including payments to agricultural producers that are

[42] Rebekah Weber, "California Creates Guidance for Regenerative Agriculture—A Mixed Bag," California Certified Organic Farmers, January 14, 2025, https://www.ccof.org/news/california-creates-guidance-for-regenerative-agriculture-a-mixed-bag/; and Brad Hooker, "In Defining Regenerative Ag, CDFA Ignites Debate over California's Farming Future," *Agri-Pulse*, September 13, 2023.

[43] Heinrich Wohlmeyer and Theodor Quendler, eds., *The WTO, Agriculture and Sustainable Development* (Routledge, 2017), pp. 244-245, https://doi.org/10.4324/9781351282123.

[44] Conferences of the Parties (COPs) are convened under the UN Framework Convention on Climate Change (UNFCCC), a multilateral treaty adopted in 1992, and seek to identify and assess climate measures (see UAE Consensus COP 28 UAE, https://www.cop28.com/en/; and UNFCCC, "The Paris Agreement," https://unfccc.int/process-and-meetings/the-paris-agreement). See also CRS Insight IN12294, *Selected Outcomes of COP28: Agriculture and Food Systems*.

[45] UNFCCC, *First Global Stocktake*, FCCC/PA/CMA/2023/L.17, December 13, 2023 (see "B. Adaptation" section, paragraphs 43-65), https://unfccc.int/sites/default/files/resource/cma2023_L17_adv.pdf.

[46] UNFCCC, *Matters Relating to Adaptation*, FCCC/PA/CMA/2023/L.18, December 13, 2023, https://unfccc.int/sites/default/files/resource/cma2023_L18_adv.pdf.

[47] Sustainable Agriculture Network, "Cultivating Sustainability: The Role of Sustainable and Regenerative Agriculture in Achieving the SDGs," January 22, 2024, https://www.sustainableagriculture.eco/post/cultivating-sustainability-the-role-of-sustainable-and-regenerative-agriculture-in-achieving-the-sd. For background on the SDGs, see United Nations, "Sustainable Development Goals (SDGs)," https://www.un.org/en/common-agenda/sustainable-development-goals.

"part of a clearly-defined government environmental or conservation program."[48] WTO members continue to discuss how to facilitate sustainable agriculture within the global trade system,[49] and industry groups continue to propose ways to incorporate sustainability goals as part of agricultural subsidies subject to WTO commitments and obligations under the agreement.[50] Previous multilateral agricultural trade talks, such as those at the WTO 12th Ministerial Conference in 2021-2022, discussed but did not implement possible sustainable trade liberalizations, among other topics.[51]

Private Sector Activities

Efforts to Substantiate Nonfederal Labeling Claims

Over the past decade, some large food companies and retailers have embraced regenerative practices and incorporated various sustainability initiatives into their global supply chains.[52] A 2023 study by the FAIRR Initiative, an "investor network covering risks and opportunities in the global food system," assessed 79 publicly listed agri-food companies with a combined annual revenue of $3 trillion (or about one-third of the global agri-food sector) and found that 50 companies (63%) mentioned RA initiatives in their annual financial disclosures, most commonly highlighting soil health and carbon-related activities.[53] The companies' disclosures highlight six commonly cited RA outcomes: (1) carbon reduction, removals, and sequestration; (2) soil health improvements; (3) biodiversity improvements; (4) water quality, infiltration, and cycle improvements; (5) farmer income and/or cost, yield, livelihood, and other economic-related improvements; and (6) agrochemical input reduction. Of the 50 companies, FAIRR's study found that 18 (36%) quantified company-wide RA targets; 8 (16%) discussed RA metrics and data; 4 (8%) set baselines to measure progress; and 4 (8%) set targets to financially support farmers in deploying regenerative practices. Other studies corroborate that most labeling schemes do not tend to monitor or evaluate the environmental and social benefits of their programs; others note the need for more and higher-quality information given the proliferation of labels and the

[48] World Trade Organization (WTO), "Agreement on Agriculture," 1995, https://www.wto.org/english/docs_e/legal_e/ag_e.htm.

[49] WTO, "WTO Members Discuss Pathways for Sustainable Agriculture in Global Trade," press release, May 2025, https://www.wto.org/english/news_e/news25_e/agri_07may25_e.htm.

[50] World Business Council for Sustainable Development, *Repurposing Subsidies for Equitable and Regenerative Agriculture: Business Guidance for Navigating the Agenda*, October 22, 2024, https://www.wbcsd.org/wp-content/uploads/2024/10/Repurposing-subsidies-for-equitable-and-regenerative-agriculture-White-paper.pdf.

[51] See CRS In Focus IF11906, *Agriculture in the WTO's 12th Ministerial Conference (MC12)*; and WTO, "MC12 'Geneva Package' - In Brief," https://www.wto.org/english/thewto_e/minist_e/mc12_e/geneva_package_e.htm.

[52] See, for example, R. B. Ross et al., "Sustainability and Strategy in U.S. Agri-Food Firms: An Assessment of Current Practices," *International Food and Agribusiness Management Review*, vol. 18, no. 1 (2015), pp. 17-49, https://cdn.wildapricot.com/196137/resources/Documents/v18i1/Ross-Pandey-Ross.pdf; and Lillianna Byington, "Big Food Turns to Regenerative Agriculture to Meet Sustainability Goals," *Food Dive*, May 2019, https://www.fooddive.com/news/big-food-turns-to-regenerative-agriculture-to-meet-sustainability-goals/552804/. Selected manufacturer programs are including in the following: Cargill, "2024 Impact Report," https://www.cargill.com/sustainability/2022-esg-report; General Mills, "Global Responsibility Report 2025," https://globalresponsibility.generalmills.com/HTML1/general_mills-global_responsibility_2023_0029.htm; and Kellogg, "Corporate Responsibility," https://www.kelloggs.com/en-in/who-we-are/corporate-responsibility.html. Selected retailer programs are included in the following: Whole Foods Market, "Our Commitment to Regenerative Agriculture," https://www.wholefoodsmarket.com/mission-in-action/environmental-stewardship/regenerative-agriculture; and Walmart, "Sustainability," https://corporate.walmart.com/purpose/sustainability.

[53] FAIRR Initiative, *The Four Labours of Regenerative Agriculture: Paving the Way Towards Meaningful Commitments*, September 2023, https://www.fairr.org/resources/reports/regenerative-agriculture-four-labours.

potential to confuse consumers.[54] These types of findings have caused some to question whether the food industry's adoption of RA and other related sustainability practices has generated expected environmental and societal benefits.[55]

Definitions vary among different producer groups. For example, the American Farm Bureau Federation (AFBF) has called for RA to be "defined as any production system that minimizes environmental impacts, maximizes production and increases the productivity of soil over time."[56] AFBF's broader policy goals related to sustainability, which include RA, focus on the ability of U.S. farmers and ranchers to lead on "climate-smart practices that reduce emissions, enrich the soil and protect our water and air, all while producing more food, fiber and renewable fuel" through "voluntary, market-driven programs."[57] Field to Market, an agricultural membership organization, similarly addresses both agricultural sustainability and regeneration by promoting a systems-based approach that "sequesters carbon in the soil and intentionally improves soil health, biodiversity, water quality and air quality while ensuring the viability of farm production."[58] The International Fresh Produce Association (IFPA) defines RA "as a suite of sustainable farming practices that are holistic and outcome-based, improving soil health, enhancing biodiversity, optimizing water use, and building climate resilience," including "practices such as minimal soil disturbance, cover cropping, diverse crop rotations, and integrated pest and nutrient management," and supports "voluntary and incentive-based transitions to and scaling of RA."[59]

Selected Industry Initiatives

To facilitate the food industry's RA adoption, a network of food companies—including Nestlé, Danone, Unilever, and PepsiCo—released a global framework in 2023 on how to help businesses implement regenerative practices. As defined by the group, RA refers to "an outcome-based farming approach that protects and improves soil health, biodiversity, climate, and water resources while supporting farming business development."[60] The framework covers four impact areas—water, soil, biodiversity, and climate—and recommends actions such as conducting risk screening assessments, selecting and measuring outcomes, adopting RA-related principles and practices, and monitoring and assessing progress. In 2020, a different private sector agribusiness task force composed of financial institutions, food manufacturers, and farmer organizations—

[54] Jay Golden, *An Overview of Ecolabels and Sustainability Certifications in the Global Marketplace*, 2010, https://www.academia.edu/20586265/An_Overview_of_Ecolabels_and_Sustainability_Certifications_in_the_Global_Marketplace; and Jason Czarnezki et al., "Creating Order Amidst Food Eco-Label Chaos," *Duke Environmental Law and Policy Forum*, 2015, https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1314&context=delpf.

[55] Agnieszka de Sousa and Dasha Afanasieva, "Big Food Runs Greenwash Risks Over Regenerative Farming Push," *Bloomberg*, September 20, 2023, https://www.bloomberg.com/news/articles/2023-09-20/big-food-s-regenerative-agriculture-push-is-more-words-than-action-fairr.

[56] American Farm Bureau Federation (AFBF), *National Policies 2025*, January 2025, https://www.idahofb.org/media/s2cgx1za/afbf-policy-book-2025-final.pdf.

[57] AFBF, "Sustainability," https://www.fb.org/issue/sustainability.

[58] Field to Market, "Defining Sustainable and Regenerative Agriculture," https://fieldtomarket.org/defining-sustainability/.

[59] See recommendation #10 in a letter from the International Fresh Produce Association (IFPA) to HHS Secretary Robert F. Kennedy Jr. and Vince Haley, Executive Director of the Make America Healthy Again (MAHA) Commission, July 15, 2025, https://www.freshproduce.com/siteassets/files/advocacy/ifpa-maha-recommendations-july-2025.pdf.

[60] Sustainable Agriculture Initiative (SAI) Platform, "Regenerating Together: A Global Framework for Regenerative Agriculture," September 2023, p. 4, https://saiplatform.org/our-work/news/worlds-leading-fmcg-companies-commit-to-new-global-framework-for-regenerative-agriculture-practices/.

including Bayer AG, McCain Foods, McDonald's Corporation, Mondelēz International Inc., and PepsiCo—released an action plan to accelerate the adoption of regenerative farming. The action plan focuses on five priorities: (1) establishing cost-share mechanisms for farmers; (2) developing sourcing models to share transition costs across the value chains; (3) ensuring farmer income from environmental outcomes; (4) developing government policies to reward farmers who transition to RA; and (5) establishing common metrics to measure environmental outcomes.[61]

Initiatives at some leading U.S. food companies provide financial incentives and technical assistance to farmers who have adopted RA practices that meet specific sustainability goals and commitments. For example, ADM's RA initiative is based on five land management principles: (1) minimizing soil disturbance; (2) maintaining living roots in soil; (3) continuously covering bare soil; (4) maximizing diversity with an emphasis on crops, soil microbes, and pollinators; and (5) responsibly managing inputs, including nutrients and pesticides.[62] Cargill's initiative supports farmers who adopt "regenerative soil health practices," such as planting cover crops, reducing tillage, optimizing nutrients, managing grazing, and implementing agroforestry practices.[63] The General Mills (GM) initiative is part of its broader effort to reduce GHG emissions and address water resources in priority watersheds, among other projects that deliver "positive environmental, social and economic outcomes."[64] GM's practices include minimizing soil disturbance and promoting soil health (e.g., by planting cover crops and reducing tillage); improving water quality (e.g., through water management and infiltration); promoting biodiversity (e.g., wildlife and beneficial organisms); restoring ecosystems and forests (e.g., through nutrient cycling, water infiltration, and pest suppression); and promoting adaptive grazing and livestock feed management.

Some food companies work directly with food retailers (Walmart and Whole Foods Market, for example) that have adopted regenerative initiatives as a way to market foods they sell. Walmart's RA initiative requires producers to follow certain production principles, including soil and nutrient management (e.g., through planting cover crops and implementing conservation tillage, crop rotation, and nutrient management systems); pest management (e.g., implementing integrated pest management or planting diverse flowering native or naturalized plants); and water and land management and priority area protection (e.g., abstaining from using recently converted land and placing land in an agriculture conservation easement to protect, restore, and enhance wetlands, grasslands, and forests).[65] Whole Foods Market's initiative requires foods to be produced using practices that improve soil health through improved biodiversity, minimize soil disturbance, maintain a living root system year-round, maximize soil cover to protect against erosion and improve water retention, and integrate strategic rotational grazing and other animal management practices to improve soil fertility through increased microbial density and organic matter (i.e., animal manure).[66] Some food retailers may require specific third-party certifiers

[61] Sustainable Markets Initiative, Agribusiness Task Force, *Scaling Regenerative Farming: Levers for Implementation*, December 2023, accessible through https://www.sustainable-markets.org/taskforces/agribusiness-task-force/.

[62] ADM, "Regenerative Agriculture," https://www.adm.com/en-us/sustainability/regenerative-agriculture/.

[63] Cargill, "Cargill RegenConnect®," https://regenconnect.cargill.com/; and Cargill, "Regenerative Agriculture," https://www.cargill.com/sustainability/regenerative-agriculture.

[64] General Mills, "Regenerative Agriculture," https://www.generalmills.com/how-we-make-it/healthier-planet/environmental-impact/regenerative-agriculture.

[65] Walmart, "Walmart Policies and Guidelines: Sustainable Row Crop Position Statement—Sustainable Products at Walmart U.S. and Sam's Club U.S.," https://corporate.walmart.com/policies#sustainable-row-crop-position-statement.

[66] Whole Foods Market, "Our Commitment to Regenerative Agriculture," https://www.wholefoodsmarket.com/mission-in-action/environmental-stewardship/regenerative-agriculture. See also Whole Foods Market, *2023 Impact Report*, July 2024, https://assets.wholefoodsmarket.com/www/missions-values/WFM_Impact_Report_2023.pdf.

approve the process labels on the foods they market. In addition to the programs discussed here, there are numerous private RA and ROA certification programs worldwide.[67]

These types of food labeling initiatives represent a subset of food labeling and packaging claims spanning a wide range of product attributes for foods, which are often referred to as food *process labels*. They are used by marketers to distinguish and create a unique brand for their products with the goal of increasing sales and company profits.[68] Process labels usually cover a range of attributes (e.g., the types of practices and ingredients used to produce a product) but may also include certain environmental or societal objectives and certain seals of approval. Examples of product attributes include those attesting to a product's food safety, quality, freshness date, nutrition, or cleanliness, as well as natural, healthy, organic, fair trade, sustainable, kosher, halal, humane animal treatment, bee- or bird-safe, local, and carbon offsetting claims, among other "free-of" claims (e.g., biotechnology-free, cage-free, free-range, and dolphin-free).[69] Some researchers have raised concerns about the extent and scale of such food labeling claims.[70]

Attributes used to market products that meet specific environmental performance criteria are also referred to as "ecolabels," covering both food and non-food products.[71] Ecolabels may be owned or managed by government agencies, but most U.S. food and beverage ecolabeling and certification schemes are voluntary and initiated by private industry, food retailers, and nongovernmental organizations. Compliance with voluntary labeling claims or certification standards may often be self-enforced by the producer or may be verified by the organization to which the producer belongs or by an independent third party. Such product labels and certifications are generally not subject to direct federal or state regulation or oversight unless a product is found to violate food safety laws or other general container or packaging requirements intended to facilitate interstate or international commerce.[72] For some products, environmental claims may follow standards set by the International Organization for Standardization (ISO), such

[67] Certifiers include but are not limited to Certified Regenerative by A Greener World (see A Greener World, "A Greener World Collaborates with Whole Foods Market to Validate Regenerative Claims," press release, February 12, 2025, https://agreenerworld.org/wp-content/uploads/2025/02/Whole-Food-Market-Certified-Regenerative-by-AGW-press-release-FINAL.pdf); FoodChain ID, "Regenerative Agriculture Standard," https://www.foodchainid.com/certification/sustainability/regenerative-farming/; Regenified, https://regenified.com/; Ecological Outcome Verified (see Land to Market, "Ecological Outcome Verification™," https://www.landtomarket.com/eov); Regenerative Organic Certified (see Rodale Institute, "Regenerative Organic Certified®," https://rodaleinstitute.org/regenerative-organic-certification/); Real Organic Project (ROP) (see ROP, *Real Organic Project Standards*, https://realorganicproject.org/wp-content/uploads/2024/12/ROPStandards_Final.pdf); and Certified Naturally Grown, https://www.naturallygrown.org/, among others such as Demeter, Regeneration International, Naturland, and Bioland.

[68] Council for Agricultural Science and Technology (CAST), "Process Labeling of Food," October 2015, https://cast-science.org/publication/process-labeling-of-food-consumer-behavior-the-agricultural-sector-and-policy-recommendations/; and Elise Golan et al., *Economics of Food Labeling*, AER-793, USDA ERS, January 2001, https://www.ers.usda.gov/publications/pub-details?pubid=41204.

[69] Tufts University, *Decoding Food Labels*, August 2016, https://sustainability.tufts.edu/wp-content/uploads/Decoding-Food-Labels.pdf; and CRS In Focus IF10650, *Understanding Process Labels and Certification for Foods*.

[70] Center for Science in the Public Interest, *Food Labeling Chaos*, 2010, https://www.cspinet.org/sites/default/files/media/documents/resource/food_labeling_chaos_report.pdf; and Jason Czarnezki et al., "Creating Order Amidst Food Eco-Label Chaos," Duke University, 2015, https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1314&context=delpf.

[71] The U.S. Environmental Protection Agency (EPA) defines *ecolabels* as marks placed on product packaging intended to help consumers and institutional purchasers identify those products that meet specific environmental performance criteria and are therefore deemed "environmentally preferable" (https://www.epa.gov/greenerproducts/introduction-ecolabels-and-standards-greener-products). See also UN Environment Programme, "What Are Ecolabels?," 2023, https://www.eu4environment.org/app/uploads/2023/06/Ecolabel-Factsheets.pdf.

[72] The Ecolabel Index tracks ecolabels worldwide in the food and fiber sectors (https://www.ecolabelindex.com/).

as ISO 14021 (self-declared environmental claims) and ISO 14024 (environmental labels known as ecolabels).[73]

Federal and Private Sector Shared Criteria

Requirements under existing private sector RA and ROA initiatives and proposals vary widely, but many share criteria with some federal programs. Most private sector RA initiatives broadly reference agricultural practices and standards similar to USDA's national conservation practice standards developed and maintained by NRCS. Some private sector ROA initiatives broadly share some of the practices and standards under USDA's NOP. Various federal laws and regulations govern the labeling and marketing of food products to ensure foods sold in the United States are properly labeled and not misbranded.

Although there are no statutory, regulatory, or formal administrative definitions of RA and ROA, many of the soil health practices incorporated into most private sector initiatives are consistent with NRCS soil health principles. NRCS conservation practice standards and the organic agriculture sector often share the common goal of optimizing soil health. However, the full suite of approved NRCS conservation practice standards include activities that may be prohibited under USDA-certified NOP regulatory standards. Regardless of what regenerative farming practices are required under various private sector initiatives, federal labeling requirements, such as those under the authorities of FDA and the Federal Trade Commission (FTC), still apply.

USDA NRCS National Conservation Practice Standards

A conservation practice standard describes when, where, and why a practice is applied, as well as the minimum planning criteria required in order to achieve the desired environmental improvement.[74] Standards are developed by NRCS at a national level and then tailored to state- and local-specific requirements based on resource conditions and laws that may be more restrictive than national criteria.[75] NRCS maintains close to 200 national conservation practice standards.[76] These practice standards are based on scientific research and are reviewed and updated on a five-year cycle or earlier based on scientific and technological advancements. New and revised standards are available for public comment through the *Federal Register*.

Conservation practice standards are used by NRCS when providing technical assistance to individual farmers, ranchers, and forest landowners to address natural resource concerns on their operations. NRCS provides free technical assistance through field offices in nearly every U.S. County and territory.[77] Technical assistance generally results in a conservation plan that includes specific conservation practices that, if applied according to the standard, would address or

[73] For example, ISO, Online Browsing Platform, "ISO 14020:2022(en) Environmental Statements and Programmes for Products—Principles and General Requirements," https://www.iso.org/obp/ui#iso:std:iso:14020:ed-3:v1:en.

[74] USDA, Natural Resources Conservation Service (NRCS), "Conservation Practice Standards Information," https://www.nrcs.usda.gov/getting-assistance/conservation-practices.

[75] The technical guides, developed by NRCS and published at a geographically specific level, are known as Field Office Technical Guides (FOTGs). FOTGs contain the locally specific practice standards as well as technical information on soil, water, air, animal, and plant requirements of a given area. See USDA, NRCS, "Field Office Technical Guide," https://efotg.sc.egov.usda.gov/#/.

[76] USDA, NRCS, "Conservation Practice Standards," https://www.nrcs.usda.gov/resources/guides-and-instructions/conservation-practice-standards..

[77] USDA, "Service Center Locator," https://offices.sc.egov.usda.gov/locator/app.

improve natural resources on the operation. **Table 1** includes selected examples of national NRCS conservation practices for crops, providing a generic description of the practice.

Table 1. Selected National NRCS Conservation Practices

Practice Name (NRCS Practice Code)	General Conservation Practice Description
Alley Cropping (311)	Combining annual and perennial crop production by growing crops in the "alleyways between widely spaced rows of woody plants."
Conservation Cover (327)	Establishing and maintaining permanent herbaceous vegetative cover; does not include forage or planted crops.
Conservation Crop Rotation (328)	"A planned sequence of crops grown on the same ground over a period of time," including both high-residue (e.g., corn) and low-residue (e.g., soybeans) producing crops. May include forage crops with other field crops.
Residue and Tillage Management, No-Till (329)	Limiting "soil disturbance to manage the amount, orientation, and distribution of crop and plant residue on the soil surface" year-round. Sometimes related to strip-till, which involves a thin strip of tillage at the seedbed.
Cover Crop (340)	"Grasses, legumes, and forbs [broadleaf plants] planted for seasonal vegetative cover" and soil improvement. The cover crop may be planted between successive commercial crops or companion-planted or relay-planted into commercial crops.
Residue and Tillage Management, Reduced Till (345)	Allowing field surface to be disturbed by noninversion tillage methods (e.g., vertical tillage, chiseling, and disking) prior to planting, "while limiting soil-disturbing activities" for the remainder of the year; also known as "mulch tillage" or "conservation tillage."
Contour Buffer Strips (332)	Planting in an alternating pattern, narrow strips of vegetative cover (e.g., perennial grass) "with wider cropped strips that are farmed on the contour."
Forest Farming (379)	Using existing or planted stands of trees or shrubs that are managed as an overstory (canopy) with an understory of woody and/or nonwoody plants that are grown for a variety of non-timber forest products (e.g., mushrooms, berries, roots, and nuts); does not include animal grazing.
Windbreak/Shelterbelt Establishment and Restoration (380)	Planting single or multiple rows of trees or shrubs in linear configurations to address wind, noise, and visual issues. Renovation involves widening, removing, or replacing selected trees and shrubs or rows of trees or shrubs.
Silvopasture (381)	Using a system designed and managed to produce trees, forage, and livestock on the same acreage.
Nutrient Management (590)	Managing the "rate, source, placement, and timing of plant nutrients and soil amendments" to reduce environmental impacts.
Pest Management Conservation System (595)	Using prevention, avoidance, monitoring, and suppression techniques to address pests and natural resource concerns. The system may include multiple conservation practices (e.g., cover crops, crop rotation, and tillage management).
Wetland Restoration (657)	Returning former or degraded wetland sites as close as possible to their original condition.

Source: CRS from USDA, Natural Resources Conservation Service (NRCS), "Conservation Practice Standards," https://www.nrcs.usda.gov/resources/guides-and-instructions/conservation-practice-standards.

Notes: A description of the national NRCS conservation practice standards, conservation practice overviews, conservation practice physical effects, implementation requirements, and network effects diagrams for practices included in this table may be found at the NRCS website cited above. The table is limited to crop-related practices. Livestock- and forestry-related practices are also included at the NRCS website cited above. The conservation practice code refers to practices eligible for financial assistance under NRCS's Environmental Quality Incentives Program. Groups of practices ("bundles") and enhanced conservation practices ("enhancements") are eligible for financial assistance under NRCS's Conservation Stewardship Program. Bundles and enhancements have different codes and may be found at USDA, NRCS, "CSP Enhancement and Bundles," https://www.nrcs.usda.gov/programs-initiatives/csp-conservation-stewardship-program/csp-enhancements-and-bundles.

Some but not all private sector RA and ROA initiatives explicitly reference USDA conservation practice standards, and most private sector initiatives broadly reference conservation practices without directly referencing NRCS standards or specific requirements.[78] While many of the NRCS practice standards may meet the goals of RA and ROA, the specifics of how the practice is implemented may not. For example, as shown in **Table 1**, NRCS conservation practices highlight recommendations involving a series of conventional no-till and reduced till practices, which are widely considered regenerative practices. Some have questioned whether no-till and reduced tillage practices could result in the need for increased pesticide and synthetic fertilizer applications that may harm soil health and public safety; others dispute such ideas.[79]

Following the development of a conservation plan, an agricultural producer may choose to apply for federal financial assistance to offset the cost of implementing the plan and prescribed practices. Federal conservation programs are voluntary and typically cover a portion of the cost to implement an approved conservation plan and related practices.[80] As such, implementation of NRCS conservation practices is voluntary. If financial assistance is provided through a federal conservation program, then, in accordance with a contract, the producer agrees to implement approved conservation practices according to the NRCS standards. NRCS will certify successful completion of the practices under contract, according to the standards, before making payments. Program participants are obligated to maintain conservation practices for the life of the practice.

Climate and Carbon Sequestration Initiatives

Some have identified improved soil health and carbon sequestration as potential benefits of RA and ROA agricultural practices that could help mitigate agricultural GHG emissions and make food systems more resilient.[81] The United States does not have a singular policy to mitigate agricultural GHG emissions, although some individual programs and policies could contribute to such goal. In general, U.S. agricultural policies that address climate change and GHG mitigation promote voluntary and incentive-based actions rather than mandatory or regulatory approaches. Policy approaches have included investing in climate-related research, including mitigation and adaptation, as well as USDA conservation and technical assistance programs that may work to reduce agricultural GHG emissions, increase carbon dioxide removals from the atmosphere, sequester carbon, and adjust to weather variability. USDA's Climate Change Adaptation Plan, issued in 2022 under the Biden Administration, outlined how USDA is taking steps to manage risks and integrate consideration of climate adaptation and resilience into its policies and programs but did not directly reference RA or ROA.[82]

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[78] See, for example, A Greener World, "Certified Regenerative by AGW Standards," https://agreenerworld.org/certifications/certified-regenerative/certified-regenerative-standards/; and Regenified, "Regenified's 6-3-4 Verification Standard," https://regenified.com/about-us/#verification-standard-container.

[79] See, for example, Friends of the Earth, *Rethinking No-Till: The Toxic Impact of Conventional No-Till Agriculture on Soil, Biodiversity, and Human* Health, April 2025, https://foe.org/wp-content/uploads/2025/04/Report_No-Till_Report.pdf. For a counter response to the report, see John Dobberstein, "Activists Take Aim at 'Pesticide Soaked' No-Till, but Industry Disagrees," *No-Till Farmer*, April 29, 2025, https://www.no-tillfarmer.com/articles/14265-activists-take-aim-at-pesticide-soaked-no-till-but-industry-disagrees.

[80] Most federal conservation programs that provide financial assistance for active agricultural operations are authorized through omnibus farm bills. For more information on these programs, see CRS In Focus IF12024, *Farm Bill Primer: Conservation Title*.

[81] World Economic Forum, "How Regenerative Agriculture Can Make Climate Solutions More Resilient," November 18, 2024, https://www.weforum.org/stories/2024/11/regenerative-agriculture-climate-solutions-resilient.

[82] USDA, "Climate Change Adaptation Plan," July 2022, https://www.usda.gov/about-usda/general-information/priorities/climate-solutions/climate-change-adaptation-and-usda. According to the website, as of May 20, 2025, the website and content are under review and subject to change.

Congress increased climate change-related funding with the passage of the law commonly referred to as the Inflation Reduction Act (IRA; P.L. 117-169). The IRA, among many changes, extended and increased funding authority for federal conservation programs that provide technical and financial assistance to implement NRCS conservation practice standards. Congress has since repealed and reallocated IRA funding for federal conservation programs to similar conservation programs but without the requirement that funds be used for climate change specific practices.[83] USDA created climate-focused initiatives, such as the Partnership for Climate-Smart Commodities (PCSC) under the Biden Administration, which was renamed the Advancing Markets for Producers (AMP) initiative under the second Trump Administration.[84] The PCSC/AMP initiative financed partnerships that supported the production and marketing of "climate-smart commodities." Climate-smart commodities refers to agricultural (farm, livestock, and forestry) commodities produced using a subset of NRCS conservation practices that reduce greenhouse gas emissions or sequester carbon.[85] USDA also has funded research efforts related to climate change and carbon sequestration through its research mission area agencies.[86] Research initiatives have included activities such as the USDA Climate Hubs, which deliver geographically specific research to agricultural producers and professionals.[87] In addition, the following **text box** describes USDA's implementation of the Growing Climate Solutions Act, which was enacted as part of the FY2023 Consolidated Appropriations Act (FY2023 appropriations; P.L. 117-328, Division HH). The FY2023 appropriations also included the SUSTAINS Act, which authorized NRCS to accept contributions of nonfederal funds for a range of covered existing conservation programs to address climate change, among other natural resource priorities.

USDA National Organic Program Standards

Some private sector RA and ROA initiatives and proposals specify organic production standards, often similar or in addition to those required under NOP. USDA defines *organic agriculture* as a production system that is managed in accordance with the Organic Foods Production Act (7 U.S.C. §§6501 et seq.; 7 C.F.R. Part 205), which established USDA's NOP,[88] administered by the Agricultural Marketing Service (AMS). NOP regulations describe organic agriculture as "the application of a set of cultural, biological, and mechanical practices that support the cycling of

[83] P.L. 119-21. For additional information, see CRS Insight IN12560, *One Big Beautiful Bill Act (H.R. 1): Section 10102, Agricultural Conservation*.

[84] For additional information, see USDA, "[Archived] Partnerships for Climate-Smart Commodities Project Summaries," as of January 10, 2025, https://web.archive.org/web/20250110181709/https://www.usda.gov/climate-solutions/climate-smart-commodities; and USDA, "USDA Cancels Biden Era Climate Slush Fund, Reprioritizes Existing Funding to Farmers," press release, April 14, 2025, https://www.usda.gov/about-usda/news/press-releases/2025/04/14/usda-cancels-biden-era-climate-slush-fund-reprioritizes-existing-funding-farmers.

[85] USDA, NRCS, *Fiscal Year (FY) 2022 Partnerships for Climate-Smart Commodities*, National Funding Opportunity (NFO), USDA-NRCS-COMM-22-NOFO0001139, March 11, 2022, https://www.grants.gov/search-results-detail/337878. The most recent list of published climate-smart practices can be found at USDA, NRCS, "Climate-Smart Agriculture and Forestry (CSAF) Mitigation Activities List for FY2025," August 2024, https://www.nrcs.usda.gov/sites/default/files/2023-10/NRCS-CSAF-Mitigation-Activities-List.pdf.

[86] For more information on USDA's research mission area, see USDA, Research, Education, and Economics, https://www.ree.usda.gov/.

[87] For more information, see USDA, "Climate Hubs," https://www.climatehubs.usda.gov/. The House Appropriations Committee-reported bill for FY2026 (H.R. 4121, H.Rept. 119-172) would terminate funding for USDA Climate Hubs, consistent with the proposal put forth in the FY2026 budget request (see USDA, *2026 USDA Explanatory Notes - Agricultural Research Service*, p. 20-16, https://www.usda.gov/sites/default/files/documents/20-2026-CJ-ARS.pdf). The Senate Appropriations Committee-introduced bill for FY2026 (S. 2256, S.Rept. 119-37) would maintain funding for USDA Climate Hubs at the FY2024 level.

[88] USDA, AMS, "National Organic Program," https://www.ams.usda.gov/about-ams/programs-offices/national-organic-program. For background, see CRS In Focus IF10278, *U.S. Farm Policy: USDA-Certified Organic Production*.

on-farm resources, promote ecological balance, and conserve biodiversity."[89] NOP standards cover maintenance or enhancement of soil and water quality; conservation of wetlands, woodlands, and wildlife; and avoidance of synthetic fertilizers, sewage sludge, irradiation, and genetic engineering.[90] In some cases, NOP standards are aligned with NRCS conservation practice standards. Compliance with NOP standards, which AMS enforces, is required for a food product to be legally labeled as USDA-certified organic.

Greenhouse Gas Technical Assistance Provider and Third-Party Verifier Program

The Consolidated Appropriations Act, 2023 (FY2023 appropriations; P.L. 117-328), authorized a new USDA climate change program. The Greenhouse Gas Technical Assistance Provider and Third-Party Verifier Program requires USDA to carry out three main actions:

- Establish the program, to include
  - evaluating and publishing a list of recognized protocols for voluntary agriculture or forestry carbon credit markets;
  - determining qualifications for private sector entities to register under the program;
  - providing a process for registration of private sector entities (covered entities) under the program to provide technical assistance to producers interested in carbon markets or to verify protocol processes (verify carbon credits); and
  - providing information for producers on participating in voluntary credit markets.
- Establish an advisory council to advise the Secretary of Agriculture on the program.
- Conduct a general assessment every four years of the state of the voluntary credit market, including on the supply and demand of credits, state of technology, barriers to participation, and potential roles for USDA. [91]

USDA began to implement the program during the Biden Administration, including conducting the general assessment of the state of voluntary credit markets, establishing the advisory council, publishing its intent to establish the program, and developing a draft federal strategy for measuring, monitoring, reporting, and verifying agriculture and forestry greenhouse gas emissions.[92] No additional implementation actions for the program have been reported by USDA during the Trump Administration.

The role of agriculture in carbon markets has produced a variety of perspectives, including support for and opposition to a USDA role in standardizing voluntary carbon markets for agriculture and forestry.[93] This debate could include similarities to the RA and ROA debate, including what role USDA could play in assisting agriculture producers to establish RA and ROA operations as well as administer a program that may generate marketable environmental credits or products.

Some private sector RA and ROA initiatives require USDA-certified organic certification as a base requirement to qualify as regenerative, although most reference other private sector organic production standards.[94] While most ROA labeling schemes include elements of NOP

[89] USDA, AMS, "Introduction to Organic Practices," fact sheet, September 2015, https://www.ams.usda.gov/sites/default/files/media/Organic%20Practices%20Factsheet.pdf.

[90] See, for example, 7 C.F.R. §205.2 (Excluded methods; Prohibited substance).

[91] P.L. 117-328, §201, Title I, Division HH; 7 U.S.C. §6712; and USDA, *Report to Congress: A General Assessment of the Role of Agriculture and Forestry in U.S. Carbon Markets*, October 2023, (hereinafter referred to as USDA General Assessment, 2023).

[92] See USDA General Assessment, 2023; USDA, AMS, "Greenhouse Gas Technical Assistance Provider and Third-Party Verifier Program Advisory Council: Notice of Intent to Establish Charter and Solicitation for Nominations," 89 *Federal Register* 65836, August 13, 2024; USDA, *Justification Report: USDA Intent to Establish the Greenhouse Gas Technical Assistance Provider and Third-Party Verifier Program*, February 2024, https://www.usda.gov/sites/default/files/documents/GCSA-JustificationReport.pdf; and Greenhouse Gas Monitoring & Measurement Interagency Working Group, *Federal Strategy to Advance Greenhouse Gas Emissions Measurement and Monitoring for the Agriculture and Forest Sectors*, July 12, 2023, https://www.usda.gov/sites/default/files/documents/Draft-Federal-Ag-and-Forest-MMRV-Strategy.pdf.

[93] CRS Report R46956, *Agriculture and Forestry Offsets in Carbon Markets: Background and Selected Issues*.

[94] See footnote 67 for examples of some private organic certification programs.

requirements (e.g., cover cropping, crop rotation, low- to no-till practices, composting, and limited use of chemical pesticides and fertilizers), they generally do not rely on NOP compliance only and often include additional requirements that may not be directly linked to production. For example, Regenerative Organic Certified requires USDA-certified organic as base certification plus additional soil health, animal welfare, and social welfare requirements (often referred to as *USDA Organic Plus*). Under such ROA initiatives, other requirements outside NOP may include, but are not limited to, animal welfare protections; development of pollinator and wildlife habitats; incorporation of agroforestry systems and vegetative barriers; promotion of locally sourced foods; considerations of Indigenous agricultural practices; and social equity considerations, such as farmer and farmworker protections.[95] There is limited information comparing NOP requirements with those of private certification programs.

There is debate about whether USDA-certified organic foods provide additional benefits to the environment and consumers compared with conventionally produced foods. USDA's National Agricultural Library (NAL) examined scientific literature to study whether organically produced foods might be more nutritious (i.e., contain more vitamins, minerals, and phytonutrients), more environmentally friendly (i.e., have fewer negative impacts on soil resources, water quality, energy consumption, and climate change), or safer (i.e., contain fewer pesticides or antibiotic and hormone residues) compared with conventionally produced foods.[96] Based on its examination of peer-reviewed literature in 2008, NAL concluded there was evidence that organically produced foods, in general, may convey benefits to the environment and may contain fewer chemical residues compared with conventionally produced foods.[97] NAL was not able to conclude that organically produced foods were more nutritious than conventionally produced foods,[98] and subsequent research has not definitively settled this question.[99]

Federal Food Product Labeling Requirements

Most RA and ROA initiatives and proposals administer private label certification schemes that specify a food product's adherence to the initiative's regeneration goals. These private labeling requirements are in addition to existing general federal labeling requirements.

FDA and FTC share responsibility for regulating food labeling and advertising.[100] Pursuant to a formal agreement between the two agencies, FDA regulates food labeling and packaging, and

[95] Some specific examples include requiring that animals have access to outdoors and natural daylight and ensuring a diverse workforce and worker protections.

[96] Mary Gold, "Should I Purchase Organic Foods?," USDA, NAL, October 2008, archived at https://web.archive.org/web/20110926220351/http://www.nal.usda.gov/afsic/pubs/faq/BuyOrganicFoodsIntro.shtml (hereinafter Gold, "Should I Purchase Organic Foods?").

[97] See "Part D (Are organic foods more environmentally friendly than non-organic foods?)" and "Part C (Are there fewer pesticide residues on organic foods than on conventionally grown foods?)," in Gold, "Should I Purchase Organic Foods?."

[98] See "Part B (Does organically-grown food contain more or better nutrients)," in Gold, "Should I Purchase Organic Foods?."

[99] See, for example, Vanessa Vigar et al., "A Systematic Review of Organic Versus Conventional Food Consumption: Is There a Measurable Benefit on Human Health," *Nutrients*, vol. 12, no. 3 (March 2020), https://doi.org/10.3390%2Fnu12010007; and Crystal Smith-Spangler et al., "Are Organic Foods Safer or Healthier Than Conventional Alternatives?," *A Systematic Review, Annals of Internal Medicine*, vol. 157. no. 5 (September 4, 2012), https://doi.org/10.7326/0003-4819-157-5-201209040-00007.

[100] Federal Trade Commission (FTC), "Memorandum of Understanding Between the Federal Trade Commission and the Food and Drug Administration," May 1971, https://www.ftc.gov/legal-library/browse/cooperation-agreements/memorandum-understanding-between-federal-trade-commission-food-drug-administration.

FTC regulates food advertising.[101] Laws and regulations governing the labeling and marketing of food products under FDA's jurisdiction include the Federal Food, Drug, and Cosmetic Act (FFDCA) and the Fair Packaging and Labeling Act (FPLA). FFDCA (21 U.S.C. §§301 et seq.) regulates food labeling, ensuring foods (including dietary supplements) sold in the United States are safe, properly labeled, and include accurate nutrition information.[102] FFDCA prohibits the introduction into interstate commerce of misbranded foods and dietary supplements, including foods bearing labels that contain a false or misleading claim.[103] FDA therefore could take action against any RA or ROA claim that is found to be false or misleading, but FDA does not define RA or ROA and does not provide any guidance on how to make such claims in a manner that is not false or misleading. FDA's implementing regulations set out the general requirements that apply to all food labels, which include a statement of identity, the net quantity, a list of ingredients, nutrition labeling, and any required allergen labeling.[104] Under FDA laws and regulations, FDA is not required to preapprove labels for food products. FPLA (15 U.S.C. §§1451-1461; 16 C.F.R. Part 500) directs FDA and FTC to require that all *consumer commodities* be labeled to disclose net contents, identity of the commodity, and the name and place of business of the product's manufacturer, packer, or distributor in order to prevent consumer deception.

Other FTC authorities prohibit unlawful, "unfair or deceptive acts or practices in or affecting commerce" (§5 of the Federal Trade Commission Act; 15 U.S.C. §45(a)).[105] Under this authority, FTC prohibits "any false advertisement" with regard to food products that is "misleading in any respect."[106] FTC thus could take action against a misleading RA or ROA claim used in food advertising. FTC, however, generally does not take action against a marketing claim that complies with FDA regulations because FTC has "traditionally accorded great weight to FDA's scientific determinations in matters of nutrition and health."[107] It is unclear if FTC would similarly defer to FDA's judgment regarding RA and ROA claims that are found to be false or misleading.

FTC produces *Guides for the Use of Environmental Marketing Claims* (commonly known as "Green Guides") that provide nonbinding guidance to help marketers understand how to avoid making deceptive environmental advertising claims across a range of consumer products (including foods) and marketing strategies (e.g., advertising, promotional materials, wording,

[101] While the U.S. Food and Drug Administration (FDA) regulates the labeling of most food products, USDA regulates the labeling of certain meat, poultry, and egg products. See FDA, "Formal Agreement Between USDA and FDA Relative To Cooperation and Coordination," January 29, 2018, https://www.fda.gov/food/international-interagency-coordination/formal-agreement-between-usda-and-fda-relative-cooperation-and-coordination.

[102] In addition, the Nutrition Labeling and Education Act (NLEA; P.L. 101-535), enacted in 1990, amended the Federal Food, Drug, and Cosmetic Act. NLEA requires that most foods bear nutrition labeling and that food labels bearing nutrient content claims and certain health messages comply with specific requirements.

[103] 21 U.S.C. §343(a).

[104] 21 U.S.C. §343. FDA labeling guidance for industry provides a summary of the required statements that must appear on food labels under these laws and their regulations. FDA, *Guidance for Industry: Food Labeling Guide*, January 2013, https://www.fda.gov/media/81606/download. Industry guidance represents FDA "current thinking" and is nonbinding. It is intended to "help minimize legal action and delays," and it is "recommended that manufacturers and importers become fully informed about the applicable laws and regulations before offering foods for distribution in the United States." For other background, see CRS In Focus IF12801, *Health Claims on Food and Dietary Supplement Labels: FDA Regulation and Select Legal Issues*.

[105] Julia Solomon Ensor, "Guides for the Use of Environmental Marketing Claims ('Green Guides')," presented at NASEM, Food Forum (webinar), October 12, 2023, https://www.nationalacademies.org/event/40313_10-2023_food-product-labeling-challenges-of-defining-sustainability.

[106] 15 U.S.C. §§45, 52, 55. See also FTC, "Enforcement Policy Statement on Food Advertising," May 13, 1994, https://www.ftc.gov/legal-library/browse/enforcement-policy-statement-food-advertising#3.

[107] FTC, "Enforcement Policy Statement on Food Advertising," footnote 78.

symbols, emblems, and logos).[108] FTC's Green Guides focus on environmental claims and were first introduced in the 1990s to address concerns about the proliferation of certification and process label claims specifying the methods used in producing a product. Green Guides do not address RA or ROA claims, but some groups have asked FTC to address these in any future updates to the guides.[109] The most recent revision to date, in 2012, did not address claims such as sustainable, natural, and organic.

Considerations for Congress

Possible Farm Bill Reauthorization

Congress may continue to consider a new farm bill, and whether to incorporate regenerative farming practices into various U.S. federal policies may be of interest. In the 118th Congress, farm bill legislation introduced by leadership in the House and Senate Committees on Agriculture—H.R. 8467, as ordered to be reported, and S. 5335, respectively—would have reauthorized existing USDA conservation and organic programs but did not propose expanding these programs to include RA or ROA principles.[110]

Regenerate America—a U.S. coalition promoting RA to rebuild America's soil—has recommended changes to farm bill legislation to direct conservation funding to support soil health and transition to RA, prioritize soil health in USDA research and education programs, amend USDA farm loan and crop insurance programs to address investment in soil health management systems, and support infrastructure and processing throughout the marketing supply chain.[111] The Natural Resources Defense Council also has recommended establishing a "transition program to fund comprehensive investments in regenerative and certified organic agriculture" to incentivize regenerative stewardship and create "market and operational capacity for regenerative growers" and fund RA research and extension.[112] The World Economic Forum has recommended supporting sustainable farming through a "flexible stack of financial and nonfinancial services," such as loans and crop insurance; upfront payments or guarantees to offset transition costs; and technical assistance, data services, and access to equipment and inputs.[113]

If Congress were to consider whether to incorporate RA or ROA farming practices into federal programs and policies, how to define these terms could serve as a starting point for potential

[108] 16 C.F.R. Part 260. See FTC, "Guides for the Use of Environmental Marketing Claims ('Green Guides')", October 11, 2012, https://www.ftc.gov/legal-library/browse/federal-register-notices/guides-use-environmental-marketing-claims-green-guides; and FTC, "Environmentally Friendly Products: FTC's Green Guides," https://www.ftc.gov/news-events/topics/truth-advertising/green-guides.

[109] See, for example, FTC, "Comment from Center for Biological Diversity," April 24, 2023, https://www.regulations.gov/comment/FTC-2022-0077-1269; and FTC, "Comment from Mars, Incorporated," April 24, 2023, https://www.regulations.gov/comment/FTC-2022-0077-1272.

[110] The Rural Prosperity and Food Security Act of 2024 (S. 5335) included one mention of "regenerative grazing" in provisions that would have amended USDA's Regional Conservation Partnership Program, which supports public-private partnerships involving agricultural conservation.

[111] Regenerate America, "2023 Farm Bill Policy Platform," https://kisstheground.com/wp-content/uploads/2023/10/RA_FarmBillPolicyPlatform.pdf.

[112] Arohi Sharma et al., "Regenerative Agriculture: Farm Policy for the 21st Century (and farm bill recommendations)," Natural Resources Defense Council, March 2022, https://www.nrdc.org/resources/regenerative-agriculture.

[113] World Economic Forum, "100 Million Farmers: Breakthrough Models for Financing a Sustainability Transition," January 2024, https://www.weforum.org/publications/100-million-farmers-breakthrough-models-for-financing-a-sustainability-transition/.

debate. To date, few congressional efforts have attempted to define or regulate RA and ROA.[114] Relatedly, a range of legislative proposals have sought to amend soil health policy by providing additional training, education, and support across a range of USDA programs. In the 119th Congress, some Members have introduced legislation addressing soil health, organic production, and composting, such as H.R. 641, H.R. 3272, S. 1012, and S. 1385, among others.[115] These bills do not address marketing claims for foods labeled as regenerative or produced using regenerative agricultural practices.

Make America Healthy Again Efforts

In Congress, the MAHA Caucus, created by Senator Roger Marshall, focuses on "nutrition, access to affordable, high-quality-nutrient-dense foods, improving primary care, and addressing the root causes of chronic diseases."[116] The MAHA Caucus's "Mission Statement" includes the goal of "advancing regenerative and precision agriculture and environmental efforts" intended to encourage "agricultural practices that boost the nutritional quality of food and soil health."[117] The Trump Administration's Executive Order 14212, which established the MAHA Commission chaired by HHS Secretary Robert F. Kennedy Jr., does not directly reference RA.[118] The commission has announced plans related to food production that include a focus on processes, additives, and nutritional content but do not reference RA or ROA.[119]

In May 2025, the MAHA Commission released a report focused on chronic childhood disease.[120] The MAHA report does not directly address RA; it highlights the need to "better understand the cumulative load of multiple exposures and how it may impact children's health," including exposures from crop protection tools such as pesticides, herbicides, and insecticides, as well as concerns about "possible links between some of these products and adverse health outcomes, especially in children."[121] Public health advocates have expressed support for the report's focus on the use of pesticides as a potential contributor to chronic disease, although some advocates further call for the elimination of liability shields that protect chemical manufacturers from

[114] Previous legislative proposals are discussed in "Congressional Legislative Examples."

[115] Legislation introduced in the 118th Congress included bills promoting soil health, carbon sequestration, and conservation training (H.R. 5951/S. 3023, H.R. 5922/S. 2564, S. 2603, H.R. 3478/S. 1690, H.R. 5500); soil health research (H.R. 3871/S. 3623); manure management (H.R. 4327/S. 4279); organic agriculture (H.R. 2222/S. 1582); climate adaptation (H.R. 4163, H.R. 1840/S. 1016); composting and recycling (H.R. 651/S. 179, H.R. 4040/S. 1194); and food waste reduction (H.R. 652/S. 177).

[116] Sen. Roger Marshall, "Senator Marshall Announces Make America Healthy Again Caucus," press release, December 19, 2024, https://www.marshall.senate.gov/newsroom/press-releases/senator-marshall-announces-make-america-healthy-again-caucus/.

[117] Sen. Roger Marshall, "MAHA Caucus Mission Statement." MAHA is listed as one of the 119th Congress congressional Member organizations. Other nonfederal MAHA-related efforts have similarly promoted "Advancing Regenerative Agriculture," associating RA with "sustainable farming practices that rebuild our soil, reduce chemical reliance, and promote biodiversity," among other general objectives to eliminate environmental toxins and protect natural habitats. See, for example, MAHA, "Key Initiatives and Policies," https://www.maha.vote/issues.

[118] Executive Order (EO) 14212 of February 13, 2025, "Establishing the President's Make America Healthy Again Commission," 90 *Federal Register* 9833, https://www.govinfo.gov/content/pkg/FR-2025-02-19/pdf/2025-02871.pdf. See also White House, "Fact Sheet: President Donald J. Trump Establishes the Make America Healthy Again Commission," February 13, 2025, https://www.whitehouse.gov/fact-sheets/2025/02/fact-sheet-president-donald-j-trump-establishes-the-make-america-healthy-again-commission/.

[119] HHS, "Celebrating Big Wins of the Trump Administration," https://www.hhs.gov/hhs-big-wins-maha/index.html.

[120] Pursuant to EO 14212. White House, *The MAHA Report: Make Our Children Healthy Again: Assessment*, May 22, 2025, p. 3, https://www.whitehouse.gov/wp-content/uploads/2025/05/WH-The-MAHA-Report-Assessment.pdf.

[121] White House, *The MAHA Report*, p. 44.

lawsuits; other advocates claim the report fails to outline necessary policy and legal reforms.[122] Others note that pesticides commonly used in the United States have been banned or are being phased out by other leading agricultural producers worldwide, such as the European Union, Brazil, and China.[123] The HHS Secretary has stated his intention to reduce the use of synthetic pesticides and promote less chemical-intensive farming practices.[124] The Secretary separately has claimed the United States is "destroying our soil because some of the chemicals that farmers use destroy the microbiome and [cause] the erosion of the soil" and said he plans to partner with USDA to "offer and incentivize transitions to regenerative agriculture."[125]

The MAHA report has raised concerns among some U.S. agricultural producers that statements in the report could cause some consumers to question the safety of U.S. food and agricultural products, thereby leading to new policies restricting the use of certain chemicals in food production.[126] HHS has announced it was "launching a stronger, more systematic review process for food chemicals already on the market—especially those that concern consumers most" in order to "ensure the safety of chemicals in our food."[127] Industry groups have continued to reiterate the need for "policies supported by sound science and risk-based analyses," emphasizing that pesticides used by U.S. farmers have been researched and are regulated substances and calling for more stakeholder participation and transparency.[128] Some in Congress have voiced

[122] Letters from United We Eat to HHS Secretary Robert F. Kennedy Jr., USDA Secretary Brooke Rollins, and EPA Administrator Lee Zeldin, June 17, 2025, https://unitedweeat.earth/request-for-congressional-leadership-stand-firm-against-federal-preemption-and-chemical-liability-shields-and-support-farmer-transition-to-regenerative-agriculture/, and July 21, 2025, https://unitedweeat.earth/in-defense-of-health-and-democracy-the-maha-community-opposes-chemical-liability-shields-and-supports-regenerative-and-organic-agriculture/; and from 360 public health advocates, May 22, 2025, https://www.momsacrossamerica.com/in_defense_of_health_accountability; and Center for Food Safety, "Statement on the MAHA Commission 5/22/2025 Report, May 22, 2025," https://www.centerforfoodsafety.org/press-releases/7025/center-for-food-safety-statement-on-the-maha-commission-5222025-report. See also S. 2324.

[123] Nathan Donley, "The USA Lags Behind Other Agricultural Nations in Banning Harmful Pesticides," *Environmental Health*, vol. 18, no. 44 (June 2019), https://doi.org/10.1186/s12940-019-0488-0.

[124] See, for example, Rebekah Alvey, "Kennedy to New Department: 'Nothing Is Off Limits,' Including Ag Chemicals," *Agri-Pulse*, February 18, 2025; Jeff Beach, "North Dakota Farmers Feeling Effects of Robert F. Kennedy Jr.'s Health Kick," *North Dakota Monitor*, April 28, 2025; and Ryan Daily, "RFK Insists Regenerative Practices Are Needed as He Warns About Ag Chemicals," *AgTech Navigator*, January 31, 2025. See also discussions during the FY2026 HHS budget hearings (U.S. Congress, House Appropriations Committee, Subcommittee on Labor, Health and Human Services, Education, and Related Agencies, *Budget Hearing - U.S. Department of Health and Human Services*, 119th Cong., 1st sess., May 14, 2025, https://appropriations.house.gov/schedule/hearings/budget-hearing-us-department-health-and-human-services; and U.S. Congress, Senate Committee on Health Education, Labor, and Pensions, *Hearing on Fiscal Year 2026 Department of Health and Human Services Budget*, 119th Cong., 1st sess., May 14, 2025, https://www.help.senate.gov/hearings/hearing-on-fiscal-year-2026-department-of-health-and-human-services-budget. See also Ryan Daily, "RFK Insists Regenerative Practices Are Needed as He Warns About Ag Chemicals," *AgTech Navigator*, January 31, 2025, https://www.agtechnavigator.com/Article/2025/01/31/rfk-insists-regenerative-practices-are-needed-as-he-warns-about-about-ag-chemicals/.

[125] U.S. Congress, Senate Finance Committee, *Hearing to Consider the Nomination of Robert F. Kennedy, Jr., of California, to be Secretary of Health and Human Services*, 119th Cong., 1st sess., January 29, 2025, https://www.finance.senate.gov/hearings/hearingto-consider-the-nomination-of-robert-f-kennedy-jr-of-california-to-be-secretary-of-health-and-human-services.

[126] Margarita Raycheva, "MAHA Commission's Report Stirs Concerns from U.S. Crop Producers, Ag Groups," *S&P Global*, May 28, 2025.

[127] HHS, "FDA Advances Robust, Transparent Post-Market Chemical Review Program to Keep Food Supply Safe and Healthy," May 15, 2025, https://www.hhs.gov/press-room/fda-review-chemicals-food-supply.html.

[128] Letter to President Donald J. Trump from the National Corn Growers Association, July 16, 2025, https://www.ncga.com/stay-informed/media/in-the-news/article/2025/07/corn-grower-leaders-call-on-trump-to-intervene-with-maha-commission; and letter to HHS Secretary Robert F. Kennedy Jr., USDA Secretary Brooke (continued...)

similar concerns.[129] The chairs of both the House and Senate Agriculture Committees have expressed similar concerns about the MAHA report and have urged that further debate "prioritize sound science, peer-reviewed research, and the buy-in of the agricultural community."[130] In July 2025, the House Agriculture Committee held a hearing broadly related to this topic.[131]

Separately, alleged errors in the initial release of the MAHA report have cast doubt among some in the scientific community about the report's legitimacy.[132] The report describes next steps for the development of the commission's strategy, scheduled to be released later in 2025. Separately, some U.S. producer groups have expressed support for "investments in voluntary and incentive-based transitions to and scaling of regenerative approaches."[133]

Congress could debate the potential role of RA and ROA as part of ongoing MAHA efforts. Alternatively, Congress could consider whether to address RA and ROA outside the MAHA framework through hearings or review of legislative proposals.

Rollins, and EPA Administrator Lee Zeldin from farm groups and food producers, June 17, 2025, https://soygrowers.com/wp-content/uploads/2025/06/6-17-25-Post-Report-MAHA-Commission-Stakeholder-Letter-FINAL81.pdf. See also letter to HHS Secretary Kennedy, USDA Secretary Rollins, and EPA Administrator Zeldin from Agribusiness Association of Iowa et al., March 7, 2025, https://www.wga.com/wp-content/uploads/2025/03/3-7-25-MAHA-Commission-Letter.pdf. See also Farmers Voices Matter, https://farmervoicesmatter.org/.

[129] Letter to HHS Secretary Robert F. Kennedy Jr., USDA Secretary Brooke Rollins, and EPA Administrator Lee Zeldin from Senator Pete Ricketts et al., April 11, 2025, https://www.ricketts.senate.gov/wp-content/uploads/2025/04/25.04.11.-MAHA-Commission-Integrity-FINAL.pdf. See also Letter to House Speaker Mike Johnson, Senate Majority Leader John Thune, House Minority Leader Hakeem Jeffries, and Senate Minority Leader Chuck Schumer from an industry coalition group, May 28, 2025, https://www.nasda.org/coalition-letter-supporting-upcoming-refiling-of-the-agricultural-labeling-uniformity-act/.

[130] Rep. G.T. Thompson, "Thompson, Boozman Respond to MAHA Commission Initial Assessment," press release, May 23, 2025, https://agriculture.house.gov/news/documentsingle.aspx?DocumentID=7918.

[131] U.S. Congress, House Committee on Agriculture, *Past Breakthroughs and Future Innovations in Crop Production*, hearing, 119th Cong., 1st sess., July 22, 2025.

[132] Gaynor Selby, "White House Defends MAHA Report Amid Criticism over Citation Errors, Fake Sources and AI-Generated Content, *Food Ingredients First*, June 5, 2025, https://www.foodingredientsfirst.com/news/white-house-defends-maha-report-citation-errors-ai-content.html.

[133] Letter from IFPA to HHS Secretary Robert F. Kennedy Jr. and Vince Haley, Executive Director of the MAHA Commission, July 15, 2025, https://www.freshproduce.com/siteassets/files/advocacy/ifpa-maha-recommendations-july-2025.pdf. See also AFBF, "Sustainability," https://www.fb.org/issue/sustainability.

Author Information

Renée Johnson
Specialist in Agricultural Policy

Megan Stubbs
Specialist in Agricultural Conservation and Natural Resources Policy

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