



NATURAL RESOURCES DEFENSE COUNCIL

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The Natural Resources Defense Council (NRDC) respectfully submits these comments in response to docket number AMS-AMS-22-0027, pp.15191-15194 of the Federal Register, regarding Access to Fertilizer: Competition and Supply Chain Concerns.

The announcement by USDA¹ that it will use funds from the Commodity Credit Corporation (CCC) set aside in September for market disruptions to develop a grant program that provides “gap” financing for new, independent domestic production capacity states it is seeking production of fertilizer that is:

- Independent – outside the dominant fertilizer suppliers, increasing competition in a concentrated market;
- Made in America – produced in the United States by domestic companies, creating good-paying jobs at home and reducing the reliance on potentially unstable or inconsistent foreign supplies;
- Innovative – improve upon fertilizer production methods to jump start the next generation of fertilizers;
- Sustainable – reduces the greenhouse gas impact of transportation, production, and use through renewable energy sources, feedstocks, formulations, and incentivizing greater precision in fertilizer use; and
- Farmer-focused – like other Commodity Credit Corporation investments, a driving factor will be providing support and opportunities for U.S. agriculture commodity producers.

We are writing to urge USDA to include compost as eligible under this grant program. As described below, compost meets all the specifications outlined above, while providing a number of additional benefits.

Compost is defined by the U.S. Composting Council² as “the product manufactured through the controlled aerobic, biological decomposition of biodegradable materials. The product has undergone

¹ U.S. Department of Agriculture, *USDA Announces Plans for \$250 Million Investment to Support Innovative American-made Fertilizer to give US Farmers more choices in the Marketplace*, <https://www.usda.gov/media/press-releases/2022/03/11/usda-announces-plans-250-million-investment-support-innovative>.

² U.S. Composting Council, *Composting Definition*, <https://www.compostingcouncil.org/page/CompostDefinition?&hsearchterms=%22definition%22>.

mesophilic and thermophilic temperatures, which significantly reduces the viability of pathogens and weed seeds (in accordance with EPA 40 CFR 503 standards) and stabilizes the carbon such that it is beneficial to plant growth. Compost is typically used as a soil amendment, but may also contribute plant nutrients.” USDA³ defines fertilizer as “Any organic or inorganic material of natural or synthetic origin which is added to soil to provide nutrients, including nitrogen, phosphorus, and potassium, necessary to sustain plant growth.” Given these definitions, compost should be considered as a type of fertilizer, and compost products and infrastructure should be added to any strategies and financial support related to expanding domestic production of fertilizer.

Compost is produced by combining organic materials such as food scraps, yard waste, manures, or crop residues in the right carbon to nitrogen ratio and adding aeration and water as needed to accelerate the process by which the materials break down and form a mature compost product, otherwise known as humus.⁴ Compost processes heat the materials to temperatures sufficient to destroy pathogens and weed seeds.

Adding compost to soil increases the amount of organic matter and nutrients such as nitrogen in soil, which can reduce the need for synthetic fertilizer.⁵ It is important to note that while fertilizer adds nutrients directly to support plant growth, compost not only provides nutrients, but also improves soil structure and soil health⁶ – which assists in numerous aspects of facilitating better plant growth.

There are a number of additional benefits associated with composting, including environmental, economic, and social benefits such as the following:

- **Water retention:** In the United States, agricultural irrigation accounts for over 40 percent of freshwater use⁷. In addition, groundwater resources are increasingly difficult to obtain⁸. When added to soil, compost increases the soil’s water-holding capacity and improves drainage⁹, meaning that farmers do not have to use as much water to irrigate crops¹⁰.

³ U.S. Department of Agriculture, *NAL Agricultural Thesaurus and Glossary*, <https://agclass.nal.usda.gov/mtwdk.exe?k=glossary&l=60&w=6132&s=5&t=2>.

⁴ U.S. Environmental Protection Agency, *Reducing the Impact of Wasted Food by Feeding the Soil and Composting*, <https://www.epa.gov/sustainable-management-food/reducing-impact-wasted-food-feeding-soil-and-composting>.

⁵ Sara Via, *Increasing Soil Health and Sequestering Carbon in Agricultural Soil: A Natural Climate Solution*, Izaak Walton League of America and National Wildlife Federation, 2021, https://www.iwla.org/docs/default-source/conservation-docs/agriculture-documents/via-2021-carbon-sequestration-report-final_lowres.pdf?sfvrsn=2bb28e0d_12.

⁶ Dr. Britt Faucette, *The Soil and Water Connection: A Watershed Manager’s Guide to Organics*, U.S. Composting Council Research and Education Foundation, 2014, <https://cdn.coverstand.com/31014/205210/69948af38be864deaed420d56bb2c29390f0e169.1.pdf>.

⁷ U.S. Department of Agriculture Economic Research Service, *Irrigation and Water Use*, <https://www.ers.usda.gov/topics/farm-practices-management/irrigation-water-use/>.

⁸ Claire O’Connor, *A Tale of Two Farms: How Water Efficiency Could Help Drought-Proof California Farms*, NRDC, June 2014, <https://www.nrdc.org/experts/claire-oconnor/tale-two-farms-how-water-efficiency-could-help-drought-proof-california-farms>.

⁹ University of Georgia Extension, *Composting and Mulching*, Circular 816, <https://extension.uga.edu/publications/detail.html?number=C816&title=Composting%20and%20Mulching>.

¹⁰ Dr. Sally Brown, *Recycled Organics As Drought Resilience Tools*, BioCycle, June 2021, <https://www.biocycle.net/recycled-organics-as-drought-resilience-tools/>.

- Improved soil productivity and soil health: As numerous studies have found, improving soil health by measures including adding compost can be as effective as irrigation at increasing soil productivity and crop yield¹¹. Adding compost to soil can also help improve nutrient retention, suppress plant diseases, and help to limit weed growth¹².
- Climate benefits: When organic materials are disposed in landfills, they generate methane, a powerful global warming pollutant. When organic materials are instead composted, these emissions from landfills (which constitute the third-largest source of anthropogenic methane emissions¹³) are greatly reduced. Additionally, adding compost to soils increases the amount of carbon sequestered in soils, as well as improving the soil's ability to store carbon¹⁴.
- Social and economic benefits: Composting generates as much as twice as many jobs as landfilling and four times as many as incineration¹⁵. In addition, composting infrastructure also adds jobs related to the sales of compost products. Expanding composting can also reduce expenses associated with remediating landfill sites, as landfill use declines with increased diversion of materials¹⁶.

Composting can and does occur at every scale in the U.S., from large industrial composting systems to small backyard bins. In the U.S., more and more cities and communities are adopting composting¹⁷ as a means to reduce the amounts and costs of waste sent to landfills and incinerators, as well as to advance local job growth and soil health. An increasing number of states, such as California¹⁸, are also mandating the diversion of organic material from landfills, creating an even greater need for composting infrastructure expansion. Organic farmers have relied on compost for decades, in lieu of synthetic fertilizers, to nourish soil and crops. These days, more and more farms beyond the organic sector are increasingly using compost as well, to improve soil¹⁹ and to reduce the need for irrigation, including in

¹¹ Claire O'Connor, *Using Compost to Improve Soil Health and Crop Productivity*, NRDC, August 2014, <https://www.nrdc.org/experts/claire-oconnor/using-compost-improve-soil-health-and-crop-productivity>.

¹² Brenda Platt, *The Benefits of Composting & Compost Use*, Institute for Local Self-Reliance, April 2016, <https://ilsr.org/benefits-composting-compost/>.

¹³ U.S. Environmental Protection Agency, *Basic Information about Landfill Gas*, <https://www.epa.gov/lmop/basic-information-about-landfill-gas>.

¹⁴ Dr. Sally Brown, Dr. Britt Faucette, and Kate Kurtz, *The Compost and Climate Connection: A Land Manager's Guide to Organics*, U.S. Composting Council Research and Education Foundation, 2017, <https://cdn.coverstand.com/45085/382693/2f92ce672a555de39d186fd24f96f5ba0d7d3e59.pdf>.

¹⁵ Brenda Platt, *Composting Makes Sense: Jobs through Composting & Compost Use*, Institute for Local Self-Reliance, May 2013, <https://ilsr.org/composting-sense-tables/>.

¹⁶ Seven Generations Ahead, *Analysis of the Barriers and Opportunities for the Use of Compost in Agriculture*, May 2018, https://hub.compostingcouncil.org/wp-content/uploads/2021/08/Barriers_Opportunities_Use_of_Compost_Agriculture_2018.pdf.

¹⁷ Leslie Nemo, *As compost volumes grow, policy and research help boost market expansion*, WasteDive, February 14, 2022, <https://www.wastedive.com/news/compost-organics-policy-markets-procurement-carbon/618525/>.

¹⁸ CalRecycle, *California's Short-Lived Climate Pollutant Reduction Strategy*, <https://calrecycle.ca.gov/organics/slcp/>.

¹⁹ Adam Redling, *Recology's composting crusade*, Waste Today, November 10, 2020, <https://www.wastetodaymagazine.com/article/recology-composting-food-waste-organics/>.

times of drought²⁰. As noted in the request for public comments, a handful of fertilizer companies control the channels through which farmers obtain nutrients to raise a productive crop. Compost can also be produced on farms, using feedstocks from the farm itself (crop residues, manures, etc.), and sometimes adding feedstocks such as food scraps from local food processing industries or surrounding communities²¹. Allowing compost to qualify as a fertilizer under the proposed grant program opens up a pathway by which farmers, typically excluded from the fertilizer supply chain, have the opportunity to produce their own fertilizer, with the support of federal funding.

As noted in the request for public comments, the United States is a major importer of and dependent on foreign fertilizer and is the second or third top importer for each of the three major components of fertilizer. To reduce risk associated with dependence on imports, it benefits the U.S. to become more reliant on domestically produced fertilizer. Compost is produced from feedstocks such as food scraps, yard waste, and crop residues; as long as we have food production and consumption and plant growth in the U.S., there will always be a steady supply of feedstock available to create domestically-produced compost products that enrich our soils while providing a host of additional environmental, economic, and social benefits. However, more investment is needed in composting infrastructure to expand access to composting and increase the amount of compost products made²². By including compost under the definition of eligible fertilizers in this program, USDA can help ensure that funding and support are directed to expanding composting infrastructure, which will boost the production of this vital domestic resource and help reduce our reliance on imported fertilizers.

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²⁰ KTVU Fox 2, *Compost farming in high demand amid drought*, April 8, 2015, <https://www.ktvu.com/news/compost-farming-in-high-demand-amid-drought>.

²¹ California Department of Food and Agriculture, California's Healthy Soils Initiative, *On-Farm Compost Resources*, <https://www.cdfa.ca.gov/healthsoils/ofcwg.html>.

²² U.S. Composting Infrastructure Coalition, *Why Composting Matters*, <https://compostinfrastructure.com/compost-matters>.