Supplementary information for
Controlled environment agriculture: A case in strengthening inter-agency research collaboration in the United States government

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Multi-Agency Collaborations

Joint workshops

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Table S1. Federal expertise and resources related to CEA research, funding, and policy

Agency	Expertise	Resources
USDA	Horticulture, plant physiology, biology, nutrition, food science, animal science, pathogen and disease responses, food safety	ARS, ERS, NIFA, Climate Hubs, Office of Urban Agriculture and Innovative Production (OUAIP), AgARDA
NASA	Engineering, life sciences, innovation, tech transfer, remote sensing	NASA Technology Transfer Program, STEM Engagement programs and funding
DOE	Energy efficiency, renewable power, policy and analysis, decarbonization, building and materials sciences, air quality, water reuse, optimization and control	Office of Energy Efficiency and Renewable Energy (EERE), CEA Accelerator, funding and technical expertise, ARPA-E, NAWI, National Laboratories
FDA	Food safety, nutrition, policy, extension and outreach	Regulatory and safety information, notices of outbreaks, investigations, reports, recommendations, FSMA
NIH	Biomedical science, nutrition, environmental health sciences, extension and outreach	Grants and funding, health and nutrition information, NIH Intramural Research Program, ARPA-H
EPA	Environmental sciences, community engagement	Regulatory information, Office of Agricultural and Rural Affairs (OARA), Agriculture Advisor's Office

Table S2. Links to offices and programs of contributing authors

Agency	Resource	Link
USDA	Urban, Indoor, and Emerging Agriculture	https://www.nifa.usda.gov/grants/programs/urban-indoor-emerging-agriculture
	Environmental, Microbial, and Food Safety Laboratory; Beltsville, MD	https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/emfsl/
	Food Quality Laboratory; Beltsville, MD	https://www.ars.usda.gov/northeast-area/beltsville-md-barc/beltsville-agricultural-research-center/food-quality-laboratory/
	Office of the Chief Scientist; Washington, DC	https://www.usda.gov/our-agency/staff-offices/office-chief-scientist-ocs
NASA	Kennedy Space Center	https://www.nasa.gov/kennedy/
DOE	Office of Energy Efficiency and Renewable Energy	https://www.energy.gov/eere/office-energy-efficiency-renewable-energy
	Industrial Efficiency and Decarbonization Office	https://www.energy.gov/eere/iedo/industrial-efficiency-decarbonization-office
	Lawrence Berkeley National Laboratory; Berkeley, CA	https://www.lbl.gov/
	National Renewable Energy Laboratory; Washington, DC	https://www.nrel.gov/
	Oak Ridge National Laboratory; Oak Ridge, TN	https://www.ornl.gov/
FDA	Center for Food Safety and Applied Nutrition; College Park, MD	https://www.fda.gov/about-fda/fda-organization/center-food-safety-and-applied-nutrition-cfsan

Abbreviations

DARPA: Defense Advanced Research Projects Agency

ARPA-E: Advanced Research Projects Agency for Energy

ARPA-H: Advanced Research Projects Agency for Health

AgARDA: Agriculture Advanced Research and Development Authority

CEA: Controlled Environment Agriculture

NASA: National Aeronautics and Space Administration

USDA: United States Department of Agriculture

DOE: Department of Energy

DOD: Department of Defense

STEM: Science, Technology, Engineering, and Mathematics

ARS: Agricultural Research Service

ERS: Economic Research Service

IEDO: Industrial Efficiency and Decarbonization Office

NIFA: National Institute of Food and Agriculture

OARA: Office of Agricultural and Rural Affairs

OUAIP: Office of Urban Agriculture and Innovative Production

EERE: Office of Energy Efficiency and Renewable Energy

EPA: Environmental Protection Agency

FDA: Food and Drug Administration

FSMA: Food Safety Modernization Act

NIH: National Institutes of Health

MOU: Memorandum of Understanding