

CALL FOR RESEARCH PROPOSALS

Agriculture and Climate Policy Grants

Overview

The Kleinman Center for Energy Policy, with the support of a gift from alumnus Carl H. Goldsmith (W '88), has established a Sustainable Agriculture Fund that aims to frame a research agenda at the intersection of agriculture, energy, and climate policy with a focus on sustainable agriculture practice, policy, science, and technology that alleviate adverse environmental and social impacts.

This year the Sustainable Agriculture Fund will award grants ranging from \$5,000 to \$15,000 to support new research or supplement existing research in agriculture and climate policy. We are seeking requests for proposals from University of Pennsylvania faculty, postdocs, and doctoral students for research projects in the above-mentioned areas that can leverage Penn research and support the advancement of our mission.

Research Example

Agriculture is not only a fundamental pillar of global economies, food security, and rural livelihoods but is also a key sector in the energy transition. As climate change accelerates and energy demands grow, agriculture must simultaneously adapt to new environmental pressures and contribute to decarbonization. While large-scale renewable energy infrastructure—such as solar and wind farms—competes for land with farming and forestry, this is just one dimension of the challenge. The intersection of agriculture and energy spans supply chains, resource efficiency, bio-based energy systems, and emerging technological innovations, to name a few.

A holistic approach to agricultural sustainability must consider not just land-use tensions, but also agricultural outputs are produced, consumed, and interact with energy across entire food systems. Precision agriculture, alternative energy inputs, and circular bio-economies all offer opportunities to cut emissions and improve resilience. Research and policy must evolve to reflect this complexity, ensuring that agriculture remains both a source of food, a pillar of economic stability, and a partner in the clean energy transition.

Below is an expanded exploration of these topics. As you frame your proposal, we invite you to consider some of these opportunities for inquiry, or feel free to propose your own.

Topic 1: Agricultural Adaptation

While urban areas focus on heat mitigation and infrastructure resilience, rural agricultural regions must adapt to [extreme](#) weather events, water scarcity, shifting [growing seasons](#), and economic pressures. Sustainable land-use planning and rural infrastructure investments are needed to increase resilience without displacing food production.

Agroforestry, precision irrigation, and diversified cropping systems offer promising solutions, but [adoption](#) remains uneven due to policy gaps and financial barriers. Additionally, peri-urban agriculture (farming near urban centers) is emerging as an adaptation strategy, providing localized food production while preserving green space and reducing transportation emissions, creating a rich area for inquiry.

Example Questions: How can policy and technology work hand-in-hand to support sustainable agriculture practice adoption? What role do peri-urban farms play in enhancing food security and reducing emissions? What financial models (e.g., crop insurance reform, carbon credits, public-private partnerships) most effectively encourage investment in sustainable farming models?

Topic 2: Sustainable Agriculture Policies

Just as energy decarbonization strategies vary by country, so do agricultural policies. Countries have taken different paths to prioritize the reduction of [emissions](#) while ensuring food security, sometimes with [key trade-offs](#). Similarly, while [federal policies](#) and programs provide broad support, individual states determine zoning laws, water rights, and financial incentives that impact how farmers adopt regenerative practices.

For example, some states provide tax credits for [soil health](#) improvement, while others have no formal policy on soil carbon sequestration. [Water](#) allocation laws differ across states, affecting irrigation practices and farm resilience to drought. As regulators expand efforts to regulate agricultural emissions, from fertilizer use to [livestock methane](#), policy design and effectiveness vary widely, creating opportunities to study best practices. For example, the regulation of livestock methane emissions can [go beyond greenhouse gas](#) reductions to include both human and animal health and welfare.

Example Questions: What are the cumulative health impacts of sustainable agriculture practices on rural and urban communities? What state-level policies most effectively promote soil carbon sequestration, regenerative farming, and climate-smart agriculture? How do tensions between state and federal agricultural policies impact climate resilience and sustainability efforts? What policies have been most effective in reducing livestock methane emissions while maintaining food security? How do policies compare in the EU, U.S., and developing countries in promoting regenerative farming and biodiversity conservation?

Topic 3: Local & Circular Food Systems

A sustainable food system requires [responsible](#) sourcing of inputs and [waste](#) reduction strategies. Just as clean energy supply chains must address critical minerals and geopolitical dependencies, sustainable agriculture must tackle [issues](#) like deforestation from commodity crops, soil degradation, and food waste. Moreover, similar to grid resilience in the energy sector, [food system](#) resilience requires robust infrastructure that can withstand climate shocks, supply chain disruptions, and resource scarcity.

Examples such as nutrient recycling from organic waste streams can reduce reliance on synthetic fertilizers and lower emissions. Other key innovations include on-farm energy independence, climate-resilient crops, precision water management, decentralized food hubs, and regionalized supply chains to reduce reliance on global imports. Scaling these approaches requires both policy support and private-sector investment, presenting a compelling domain for further study.

Example Questions: What policies and incentives best encourage food waste reduction and organic material recycling into biofertilizers or biogas? How can supply chain transparency and deforestation-free agricultural trade policies reduce the environmental impact of commodity crops like soy, palm oil, and beef? How can agricultural waste streams be integrated into biofuel and bio-based material production to create a more circular economy? How do regionalized food systems compare to globalized supply chains in terms of emissions, resilience, and affordability? What role can regenerative agriculture play in reducing reliance on synthetic fertilizers and imported feedstocks?

Expected Outcomes

Grant money may be used from May 30, 2025 through June 30, 2026. At the end of the grant period or upon completion of the research, the grantee will prepare a deliverable as specified in their proposal based on grant-supported research.

The adaptable format of deliverables enables grantees to contemplate and align their research with outcomes and audiences of their choosing. Policy digests must adhere to our review process and guidelines. Final digests will be published in HTML and PDF formats. All peer-reviewed publications resulting from this research must include a Kleinman Center acknowledgement. We will link to these publications from our site.

Requirements

To apply, applicants must develop a two-page proposal that includes:

1. Problem Statement and Impact
2. Proposed Work and Method

3. Timeline
4. Requested Funds
5. Final Deliverable, Suggested Title, and Submission Date (deliverable could be a policy digest, comprehensive report, presentation, visual aids like infographics and write-ups, or other relevant related formats)
6. Identification of Target Audience (i.e. legislators, senate committees, government agencies, international organizations, farm communities, investors, public health organizations, ag tech investors, etc.)

Note: Ph.D. students must also include a note of support from their supervisor.

Deadline

Applications should be made [via this link](#) by Friday, May 30, 2025.

Eligibility

Each applicant can only submit one grant application. We will assess the first grant submission; subsequent submissions will not be assessed. Our grant program is open to Penn faculty, postdocs, and Ph.D. students and researchers in areas related to agriculture, climate policy, health, and technology.

