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POLICY BRIEF

Sustainable agriculture impacts in urban settings make the case for federal investments

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Summary

Urban agriculture has flourished in American cities under the care of communities, but its growing popularity faces a number of challenges related to scant funding, insecure land tenure, and environmental pollution. Both local and national policy in the U.S. have struggled to adequately address those challenges and meet the demand for fresh food, local production spaces, and resilient communities. In this policy brief, we explore an emerging apparatus to support urban agriculture in the U.S. Department of Agriculture: The Office of Urban Agriculture and Innovative Production. We describe the relationship between urban agriculture's many benefits and future funding, technical assistance, and data collection initiatives through this office. Specifically, we call for consistent, permanent funding that is not subject to the annual federal budget process, which could power more tailored technical assistance programs, reformed granting initiatives, and expanded data collection to inform future policy and

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practice. Urban agriculture has the potential to transform communities and the future of farming, and federal policy has the potential to provide important support for this transformation. The policies outlined here offer a roadmap for this support.

Keywords
urban agriculture, U.S. federal policy, USDA, Office of Urban Agriculture and Innovative Production, indoor farming, beginning farmers, climate resilience, community food systems, food security

Introduction

The accelerated growth of urban agriculture in the past few decades reveals it as a critical space for advancing local food sovereignty, urban business development, revitalization, and well-being in cities across the United States (Hardman & Larkham, 2014; Porter, 2018; U.S. Senate Committee on Agriculture, Nutrition, and Forestry, 2023). Often led by communities of color, urban agriculture has proven to be a resource for those farm communities historically marginalized and dispossessed of land and resources (Horst et al., 2017). Despite this, support for urban agriculture has largely been limited to local policy. In 2007, the American Planning Association argued that its members had missed a critical sector of urban spaces in urban farms and gardens, and it took until 2018 for the U.S. federal government to enact meaningful support for urban agriculture (American Planning Association, 2007; Pothukuchi & Kaufman, 2000; USDA, 2022).

This gap in federal support for urban agriculture has left the responsibility for documenting, supporting, and sharing urban agriculture largely in the hands of nonprofit organizations, academic researchers, community activists, and urban agriculturalists. Despite this, there is increasing evidence that production farms in urban settings, under the right circumstances, can reduce carbon emissions in the food sector, create jobs, empower workforce development, and support communities (Cohen et al., 2024; Hawes et al., 2024; Ilieva et al., 2022; Kafle et al., 2023). These diverse needs of urban communities have demanded increasing innovation in farming practices as urban farmers and gardeners grapple with soil health limitations, development pressures, land tenure uncertainty, restrictive local laws and regulations, and widespread ambivalence from federal policy stakeholders (Castillo et al., 2013; Whittinghill & Sarr, 2021).

This brief summarizes the current landscape of urban agriculture in the U.S. in practice and policy. The recommendations offered represent only the views of the authors and do not necessarily represent the views of this journal, the urban agriculturalists who share their stories here, or any funders associated with the authors.

Recent History of Federal Urban Agriculture Policy in the United States

The concept of growing food in urban areas is not a new one, and the definition of urban agriculture varies across contexts, but this brief is primarily focused on the cultivation and distribution of agricultural products in urban and suburban areas. This may include commercial or communal production and can be found in production farms; community gardens; rooftop farms; high tunnels; and hydroponic, aeroponic, and aquaponic facilities.

Despite this diversity of cultivation in urban areas, the U.S. Department of Agriculture (USDA) has not historically dedicated explicit resources to these growers. Congress, led by Senator Debbie Stabenow, sought to rectify this in the Agriculture Improvement Act of 2018 (also known as the 2018 farm bill), which established the Office of Urban Agriculture and Innovative Production (henceforth referred to as

the Office) to support the production of urban, indoor, and other innovative agricultural practices, especially those serving food-insecure communities (USDA, 2022). The Office is housed under the Natural Resources Conservation Service (NRCS) at USDA and offers a wide range of programming, grants, and cooperative agreements. While it was authorized in 2018, it did not receive funding until fiscal fear (FY) 2020, when it was funded at $5 million, well below its authorized level of $25 million[1] (National Sustainable Agriculture Coalition, 2023a).

Since its first appropriation, the Office has acted quickly to implement the suite of its programs, with inaugural awards announced in 2020 (National Sustainable Agriculture Coalition, 2023c). Beyond direct program offerings, the Office also coordinates input opportunities for urban producers and stakeholders through the work of the Federal Urban Agriculture Advisory Committee and 27 urban county committees across the nation, 17 of which are paired with a USDA service center (USDA Farm Service Agency, 2023).

Since the Agriculture Improvement Act of 2018, there have been a number of barriers to full implementation of the Office and other activities. Although Congressional members and stakeholders have delivered repeated requests (National Sustainable Agriculture Coalition, 2024a), the Office has seen only modest growth in funding levels and was left out of initial appropriations bill proposals altogether in FY2024 (National Sustainable Agriculture Coalition, 2024a). Direct program offerings within the Office have remained nimble and responsive to community input and needs. However, there are still several barriers for urban and innovative producers who attempt to access services offered under the USDA's NRCS and Farm Service Agency (FSA).

Policy Considerations for Strengthening Support for Urban Agriculture in the United States

Even with limited funding, the Office of Urban Agriculture and Innovative Production has demonstrated initial success. Studies and stories from urban producers illustrate that as urban agriculture grows, so does the ability for job creation, workforce development, farmland retention, conservation, community food security and resilience, and production innovation to increase (Ackerman et al., 2014; Colson-Fearon & Versey, 2022; Orsini et al., 2020). Congress has an opportunity to expand upon this success by offering practical reforms to the Office and stabilizing funding.

The following are a few key policy considerations that would provide the necessary reforms and investments to leverage and expand existing efforts.

Job Creation

Diversified farm businesses are common in urban settings, with mixed crops and livestock, unique production methods, and diversified market channels (USDA Climate Hubs, n.d.). Not only does this diversification decrease financial and weather-related risks to businesses, but it also provides a range of job opportunities to grow the local economy (Dürr, 2016; Orsini et al., 2020).

The Office of Urban Agriculture and Innovative Production sought to invest in job creation early in its programming. Common Ground Producers and Growers, a mobile market in central Kansas, received one of the first seven awards from the Office in 2020. Donna Pearson McClish, founder and CEO of Common Ground, described the award as a "game-changer." Common Ground received the funding during the initial months of the COVID-19 pandemic, and it opened doors for it to expand its operation by serving new, expanded markets, working with additional farmers, and offering farm and

[1] The currency throughout this policy brief is in US$.

market jobs to community youth (USDA, 2024). This project demonstrates one of many ways that an urban agricultural production venture can meet many community needs.

Necessary Change

The Office of Urban Agriculture and Innovative Production has been significantly underfunded since its establishment, receiving an average of 30% of its authorized funding level (National Sustainable Agriculture Coalition, 2023a). Underfunding, coupled with significant demand for grants, has created a shortfall, and the Office funds less than 25% of eligible applications (National Sustainable Agriculture Coalition, 2024b). If offered consistent, permanent funding that is not subject to the annual federal budget process (i.e., "mandatory funding"), the Office could better serve program demand. At a minimum, there should be annual mandatory funding of $10 million with an authorization of appropriations at $50 million annually.

Workforce Development

Urban Agriculture and Innovative Production grants have an explicit purpose to provide mentoring, job training, and resources for underserved populations, including for adults, youth, and kindergarten through high school (K-12) settings. These projects often offer job training to food system workers, strengthen urban communities' abilities to fill open jobs, build skills along the food supply chain, and produce economic growth in lower-income communities (USDA, 2024).

For example, in Cincinnati, Ohio, Jackson Street Farms has evolved to offer a youth agricultural workforce development program, the Urban AgriAlliance (Jackson Street Farms, n.d.). Jackson Street Farms partners with its local county employment program to operate as a worksite, offering a 10-week program for youth aged 14 to 21. Director Celeste Treece says the program, now in its third year, responds to the needs of participating youth by offering multiple training tracks to meet kids where they are. These include topics on farming, composting, arboriculture, branding and packaging, and upcycling textiles to create workwear. Not all youth want to work directly on the farm, so the program exposes them to careers both directly in urban agriculture and ones adjacent to it, such as local Cooperative Extension offices and the Environmental Protection Agency. Program graduates are also offered the opportunity to maintain their employment on the farm. Jackson Street Farms embodies the type of agricultural venture that the Office of Urban Agriculture and Innovative Production is tasked to support. However, due to program demand and organizational structure complexities, it has never been awarded a grant from the Office.

Necessary Change

Beyond securing mandatory funding for the Office of Urban Agriculture and Innovative Production to fund more projects like Jackson Street Farms, Congress could enable additional changes to provide more workforce development opportunities in agriculture. For example, the existing Urban, Indoor, and Emerging Agriculture program (https://www.nifa.usda.gov/grants/programs/urban-indoor-emerging-agriculture) is well suited to fund the development of specialized innovative agriculture curricula, professional credentialing, and workforce development programs in technical, community, and four-year colleges.

Maintaining Farmland

The 2022 Census of Agriculture documents the ongoing pressure of consolidation and development on farmland (USDA NASS, 2024). As many urban growers operate as nonprofits or on land with leasing

agreements that prohibit profit-generation, they feel the costs of farmland retention even more in competitive urban land markets (Kafle et al., 2022). While no formal studies have looked at the instability of urban farmland tenure specifically, there are numerous examples of urban growers facing shortened leases or sudden sales (Rosen & Ruhf, 2018). This makes it all the more remarkable that urban agriculture has continued to expand (Cohen & Wijsman, 2014).

A growing body of evidence indicates that this repeated cycle of land loss and redevelopment not only robs communities of vital resources and food production (up to 15–20% of food globally, according to Payen et al., 2022), it may also cause carbon emissions on urban food growing sites to skyrocket unnecessarily (Hawes et al., 2024). Although many urban farmers deploy climate-friendly practices to mitigate carbon emissions, most of the carbon footprint of urban agriculture sites is invested during the construction of the site, in the form of food-growing infrastructure (Dubbeling et al., 2019). If sites are forcibly displaced on a regular basis, then carbon investments in this infrastructure cannot be amortized across many years of food production. This makes secure land tenure not just a community resilience and food justice issue, but also a requirement for effective climate change mitigation. Activities supported by the Office can include research and development of strategies and municipal-level policies that can support secure land tenure for farms and gardens, while also supporting investment in surrounding neighborhoods.

For example, American Farmland Trust (AFT) received an Urban Agriculture and Innovative Production grant for 2021–2023 (USDA Press, 2022). This project built on its existing *Farms Under Threat* research by looking at urban agriculture in Oneida County, New York. Through a series of surveys and stakeholder conversations, and a county-level policy analysis, AFT sought to assess the potential demand for and supply of farmland and recommend local policy strategies that would support local food system development.

The results of a survey deployed as part of the project revealed that despite robust interest in farming in the urban metro area, most individuals cited water access, zoning codes, and regulations as primary barriers to them securing additional land. To address this gap in local policy, AFT collaborated with the Pace University Haub School of Law to complete a policy assessment and craft recommendations for the state, county, and municipal level, eventually producing *Growing the Landscape for Urban Agriculture in Oneida County, New York* (AFT, 2023). The result is a tool replicable in other settings, and AFT is hopeful of implementing the assessment across a wide number of locations in the future.

Necessary Change

Land access for agriculture and cultivation is a hyperlocalized issue, and support for agricultural producers should reflect unique local considerations. USDA could address this by utilizing local resources at USDA Service Centers. If funded, staff at Farm Service Agency offices would be trained on how to support growers in navigating local zoning requirements to access land in the surrounding service area. Conservation specialists would support those producers in pursuing federal resources to protect the land.

Community Food Security and Resilience

Urban agriculture goes beyond increasing food security for communities; it can also enhance a city's self-sufficiency and resilience against potential disruptions in food supply chains, which is especially important for disinvested communities (Barthel & Isendahl, 2013; Siegner et al., 2018). For example, localized, cooperative food systems played important roles in the face of the COVID-19 pandemic, providing

rapid responses to urgent needs while the global supply chain struggled to adapt to the new circumstances (Jones et al., 2022; Schoen et al., 2021; Taylor et al., 2022). During the pandemic, many local food producers, distributors, and organizations gained recognition as they filled this gap in food supply by investing in cooperatives, farmer networks, and organizational partnerships (University of Kentucky et al., 2021).

In Detroit, Michigan, the Black local food movement demonstrates how urban agriculture is forming new systems and institutions of liberation and autonomy that promote community food security in marginalized communities (White, 2017). Organizations like Detroit Black Community Food Sovereignty Network,[2] Freedom Growers,[3] Oakland Avenue Urban Farm,[4] Georgia Street Community Collective,[5] Detroit Black Farmer Land Fund Grow-op,[6] and many more have laid the foundation for community members and land stewards to organize around ideas of environmental justice, food sovereignty, and land equity.

Out of the need for communal autonomy and resilience, Black communities have utilized strategies such as forming cooperatives, community land trusts, and other mechanisms for sharing power and resources reciprocally. Most importantly, this work has given Black people faced with divestment and systemic injustice a tangible opportunity to transform their circumstances into greater states of freedom, peace, and resilience.

The Detroit Black Farmer Land Fund Grow-op, a group of Black farmers, growers, and agrarians in Detroit, is a prime example of how far cooperatives of farmers can go in transforming urban foodscapes. shakara tyler shares that this group is striving toward "the beauty of Black food sovereignty" (s. tyler, personal communication, May 8, 2024). To do this, tyler says,

> We provide our community [with] healthy, clean food as a necessity to life while supporting living wages for Black farmers and the opportunity to be thriving farmers in a system not set up for us. We are making Black food sovereignty real through community ownership over our resources, mutual aid, and deep relationships (s. tyler, personal communication, May 8, 2024)

Detroit serves as a leader of urban agriculture around the world, and the leaders of the Detroit Black Farmer Land Fund Grow-op believe that Detroit's representation of Black agrarian cooperativism "will set the stage for what Black revival through land and food could look like… [by mentoring] new and aspiring growers and [donating] fresh produce to build the community power" (s. tyler, personal communication, May 8, 2024). The Grow-op is in its third season and has already doubled individual growers' incomes and generated more than $90,000 through sales in 2023.

Necessary Change

The Office of Urban Agriculture and Innovative Production is a limited funding source for urban growers and their networks, and the funding currently excludes farmer cooperatives. If Congress expanded the program eligibility, it would allow cooperatives access to upfront financial investments. This could lead to self-sustaining systems and economic autonomy for urban agricultural cooperatives (White, 2018).

[2] https://www.dbcfsn.org/
[3] https://feedomfreedom.wordpress.com/about/
[4] https://www.oaklandurbanfarm.org/
[5] https://www.georgiastreetcc.com/
[6] https://www.detroitblackfarmer.com/

Beyond Legislation

Newer programs, such as the Office of Urban Agriculture and Innovative Production, require changes in their statute to address issues associated with the original authorization of the program. However, there are several existing services within USDA that have the potential to promote the growth of agricultural cultivation in urban areas. Previous Congressional authority and existing regulations provide USDA with flexibility to tailor services to the evolving needs of the country's agricultural producers. The following are recommendations for existing programs and services that would improve program access for producers in urban areas.

Implementing Conservation in Urban Areas

The Office is tapped as the primary source for programs and services for urban and indoor agriculture; however, the Office has also been directed to collaborate across USDA agencies to better integrate products and services that serve the unique needs of underserved growers (USDA, n.d.-a). In light of the significance of urban agriculture to communities of color, the historic lack of resources from the USDA, and the persistent attempts to remove these communities' access to land, the Office is associated with new and emerging efforts to direct resources to Black farmers, farmers of color, and underserved communities (Collison, 2023; Milligan, 2016; Worthy, 2022).

Among the programs critical to underserved producers are the working lands conservation programs administered by the Natural Resources Conservation Service (USDA NRCS, n.d.-a). NRCS supports agricultural producers in identifying and implementing conservation solutions that protect water resources, promote soil health, and drive economic gains in communities. As extreme and unpredictable weather patterns increase in prevalence and elicit compound events with things like pollution in urban areas, farmer demand for conservation programs continues to expand (National Sustainable Agriculture Coalition, 2023b; Singh et al., 2023). NRCS working lands conservation programs are also among the very few USDA programs that offer direct financial and technical assistance to farmers for producing food in a more efficient and climate-friendly way. Across their four most popular programs, NRCS received requests for almost $3 billion in FY2023, more than three times the amount of funding available (USDA, 2023). The combined high demand and program barriers for urban and innovative producers warrant changes to increase program accessibility.

NRCS programs support farmers in implementing a myriad of practices on their farms such as crop rotation, cover crops, planting buffers, and much more. While applications for these services are ranked by the environmental benefit of the practices, the amount of funding provided to the grower considers the cost of implementation by acreage (USDA NRCS, n.d.-b). This often disadvantages urban and small-scale growers, despite historical urban land use and pollution making access to soil and water conservation programs essential for urban farmers to better understand their growing environments and mitigate any potential risks (Lupolt et al., 2021; Ugarte & Taylor, 2020). While grants from the Office of Urban Agriculture and Innovative Production can fund organizations to support urban farmers in navigating these issues and accessing program resources, individual farmers are not eligible to receive grants directly from the Office to implement these practices on the farm, causing a disparity. This also makes NRCS program support even more important for urban farms to utilize climate-friendly agricultural practices, like composting food and yard waste into soil supplements, utilizing rainwater recovery for irrigation, and reusing construction materials that would otherwise be wasted (Hawes et al., 2024).

In order for urban farmers to participate in NRCS programs, they rely on local staff's familiarity with implementing conservation practices in a variety of innovative production techniques and scales

(Reynolds, 2011). Due to the USDA's short history of serving urban farms, NRCS staff do not often have the expertise or experience to effectively support urban cultivation. To address gaps in USDA's understanding of urban farming systems, it is important for NRCS to inventory commonly and successfully implemented conservation practices in urban areas and adequately train field staff on the planning and implementation of practices in these settings.

Necessary Change

The Office of Urban Agriculture and Innovative Production should evaluate the most commonly utilized and successfully funded conservation and management practices in urban and small-scale operations. These examples and their corresponding technical plans can be collected at the national level and distributed to local offices, further supporting field agents in understanding conservation practices for urban farming operations and innovative production methods. Field staff should be trained on these practices to support them in offering urban producers adequate technical assistance. In addition to addressing the availability of information, NRCS should evaluate the way in which applications are ranked for award consideration. In order to ensure equitable access to conservation programs for urban producers, NRCS should consider the compounding effect of environmental pollutants in urban areas that exacerbate the costs associated with production.

Implementing Innovative Production Data Collection Initiative

The best practices shared here have largely been documented by academics, community members, or nongovernmental partners working closely with existing urban farmers and gardeners. As a result, this is only a snapshot of the innovative and impactful practices of urban growers. Although urban agriculture continues to expand and plays an increasingly important role in communities and food systems, we will never understand the full extent without the implementation of more systematic data collection. An Urban Agriculture and Innovative Production Data Collection Initiative was mandated in the 2018 farm bill, yet implementation has lagged, and the breadth of urban farmers and their business impact remain unknown.

Necessary Change

In order to fully implement the data collection initiative under the USDA National Agricultural Statistics Service (NASS), Congress would need to fund the Urban Agriculture and Innovative Production Data Collection Initiative. To ensure that urban and small-scale farmers are adequately reached, NASS should pilot data collection strategies with known urban agriculture groups to identify the survey techniques that most effectively characterize innovation and best practice in urban settings. The initiative must be implemented in the 2027 Census of Agriculture, including near-term work with urban and innovative production organizations to explore mail and digital methods of making contact with a meaningful portion of urban agriculturalists by 2027.

Conclusion

As demonstrated through this brief, the urban and innovative agricultural production sector is growing and serving community economic, environmental, human health, and social needs. However, as a result of decades of disinvestment and limited coordination between national, state, and local authorities, much

remains unknown about the current state of urban agriculture and innovative production. There are a variety of changes that can be made legislatively and administratively for the federal government to better serve this sector. At a minimum, it must adequately fund, expand, and study urban agriculture and innovative production in the U.S. Based on research gathered by nonprofit organizations, academic researchers, and food producers themselves, we have summarized a series of four key next steps for enabling equitable and climate-friendly urban agricultural production:

1. In order to meet the demands that are consistently received, the Office of Urban Agriculture and Innovative Production needs to receive annual mandatory funding of $10 million, with appropriations up to $50 million.

2. Congress should work with community experts to identify appropriate legislative reforms to increase the provision of tailored technical assistance. Related legislative reforms should consider eligibility requirements, funding prioritization, and best practice scope for Office and other NRCS initiatives.

3. Given sufficient funding, the Office must be charged with pairing its granting programs with data collection, cataloging and sharing the innovative practices supported through the program.

4. The USDA National Agricultural Statistics Service must prioritize (and Congress must fund) data collection strategies that effectively capture urban and innovative production. Pilot testing must begin immediately in order to deploy these data collection strategies in the 2027 Census of Agriculture.

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