

*Farming in Philadelphia:
Feasibility Analysis and Next Steps*

Executive Summary



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Prepared by:

Urban Partners

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Farming in Philadelphia: Feasibility Analysis and Next Steps is presented to the Pennsylvania Department of Community and Economic Development and the Commonwealth of Pennsylvania Commonwealth Financing Authority by the consultant team and the Institute for Innovations in Local Farming.

Contributors to this study include the Institute for Innovations in Local Farming and the Philadelphia Water Department. For further information or for copies of this study, please contact Roxanne Christensen, President of the Institute for Innovations in Local Farming at rchristensen@infocommercegroup.com and Nancy Weissman, Economic Development Director at the Philadelphia Water Department at nancy.weissman@phila.gov. Further information on Somerton Tanks Farm can be found at: www.somertontanksfarm.org.

Urban Partners served as consultant for this study with James E. Hartling as principal-in-charge (jhartling@urbanpartners.us).

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Executive Summary

The Institute for Innovations in Local Farming (IILF) received a grant from the Pennsylvania Department of Community & Economic Development to assess the feasibility of developing a network of commercial, chemical-free farms in Philadelphia. IILF retained Urban Partners to complete this feasibility study with much of the analysis based on experiences of the Somerton Tanks Demonstration Farm (STF) at the Philadelphia Water Department (PWD) Somerton Tanks site in Northeast Philadelphia—a joint effort of PWD and IILF since 2001. The IILF/PWD partnership aims to help cultivate a rebirth of commercial agriculture in Philadelphia through the efforts of dedicated, entrepreneurial urban farmers using specialized agricultural techniques to meet market demand. Based on the SPIN (Small Plot Intensive) growing approach pioneered by Wally Satzewich and Gail Vandersteen in Saskatoon, Saskatchewan, IILF's model of urban agriculture aims to support full-time occupational farmers on one-half to one-acre farms.

The Somerton Tanks Demonstration Farm Experience

STF had slightly more than ½ acre of growing space planted three to four times annually with 60 different vegetables. Another ¼ acre was used for pathways, parking, and farm structures (processing station, storage shed, portable toilet, and cooler). From a 2003 start-up, STF operated stably from 2004 to 2006 with a full-time wife-husband farmer team aided by part-time labor or a part-year assistant farmer. Aiming to achieve sales of \$50,000 in five years, STF grossed \$52,000 in its third year & \$68,000 in the fourth.



Products were sold to four market segments: four outdoor Farmers Markets (\$36,900 in 2006; 50% of total sales); Community Supported Agriculture (CSA) shares; Restaurant/Wholesale Outlets; and an on-site farmstand. The farmers' experience yielded these insights: (1) clustered farms would help reduce farmer isolation; (2) productivity increased annually and had not yet peaked; and (3) net income of \$55,000 (2007 dollars) would make the business sustainable and satisfying. In 2006, operating costs were \$69,800, including \$39,700 for the two farmers' wages and \$11,500 for the assistant farmer's labor.

Economic Feasibility of Commercial Farming in Philadelphia

Can a farm be a sustainable Philadelphia business? Are there candidate entrepreneurs interested in farming? Is there sufficient economic demand for the high-quality products of multiple farms to allow for expansion? Are there sufficient sites available for farms?

The answer, in short, is yes.

A farmer couple or other two-farmer group with the productivity from five years experience can produce \$120,000 annually. The resulting \$60,000 in net income places a two-farmer household above the Philadelphia median household income. \$120,000 in sales exceeds the STF experience (\$68,000 in 2006)

and is accomplished through increased farm and farmer productivity (\$20,000); expanded use of part-time labor (\$13,000); and extending the production area or season (\$19,000) through use of hoop houses, minimal additional acreage planted in low-labor crops, and adding highly valuable shoot production.

Projected Income & Expense: Urban Commercial Farm at Optimal Operation

	Annual Operations For Two Full-Time Farmers (2007 Prices)	
Revenue:		
Farm Market Revenues	\$72,000	
CSA Shares/Restaurant/Wholesaler Sales	\$48,000	
Total Revenues		\$120,000
Operating Expenses:		
Supplies, Irrigation & Utilities	\$13,500	
Vehicle Lease, Insurance & Operations	\$13,000	
Equipment Amortization, Purchase & Repair	\$9,100	
Farmer's Market Fees & Marketing	\$5,700	
Employee Labor	\$18,700	
Total Non-Farmer Expenses		\$60,000
Net Farmer Income (Including Health Insurance)		\$60,000

Assuming the gradual introduction of farm businesses within Philadelphia, there is sufficient interest among serious farming candidates to find ten successful entrepreneur-farmer couples or other two-farmer groups in the next six years. The current level of local chemical-free farming has only begun to scratch the surface of economic demand for these high-quality products. \$500,000 in production from four new farms by 2010 would only capture 5% of this demand; ten new farms introduced by 2013 would capture less than 11% of this potential. There appears to be sufficient interest by governments and non-profit organizations which own larger vacant parcels in Philadelphia to provide a stream of farm sites over a period of several years. Accessing these opportunities in the public sector will require a policy priority for farming to use portions of long-term open space and for disposition of publicly-assembled properties.

Economic & Fiscal Benefits of Commercial Farming in Philadelphia

The development of a Philadelphia agricultural economy will have major economic and fiscal benefits for the City and the Commonwealth. Ten Philadelphia farms with \$120,000 in annual sales each by 2013 will have a **total annual direct and indirect economic impact of \$2.466 million** and will support **46 full-time equivalent positions, including 42 located within Philadelphia and 39 held by City residents**. Ten new farms will **generate \$145,000 in annual tax revenues** (measured in 2007 dollars)—\$89,700 for the City and \$55,200 for the State.

Summary of Annual Tax Benefits Generated by Ten Farms in Philadelphia

	For City of Philadelphia	For State of Pennsylvania	Total City & State
Taxes on Wages & Salaries	\$21,500	\$19,500	\$41,000
Sales Taxes	\$4,100	\$23,700	\$27,800
Business Taxes	\$44,800	\$12,000	\$56,800
Real Estate & Use Taxes Paid On Business Property	\$19,300		\$19,300
Total Annual Tax Benefits	\$89,700	\$55,200	\$144,900

Capital Investment Needed to Encourage Commercial Farming

IILF's total costs at STF were \$48,900 for utilities, fencing, site preparation, equipment and production structures. The STF experience suggests that additional investment in more effective all-weather shelters and a permanent bathroom are warranted. The costs of preparing new farms that meet these standards are estimated at \$81,000 for a single farm. Greater efficiency can be achieved with costs estimated at \$135,000 for a cluster of four farms through lower fencing costs and shared restroom facilities. Farm equipment and required production structures are estimated at \$15,200 per farm. Individual farmers may also choose to add hoop houses for extended season farming and office/storage structures.

The most effective model for further farm development assumes a two-phase program. First, public agencies or non-profits would be responsible for identifying approximately \$135,000 for infrastructure improvements to create a cluster of four small farms. Second, individual farmers would each finance \$15,000 to \$34,000 of equipment. When this cluster is fully occupied, a second cluster of six farm sites would be developed at a somewhat higher total preparation cost of \$165,000 in 2007 dollars.

Four-Farm Infrastructure & Equipment Financing Model

	Public/Non-Profit Investment	Cluster of Four Farms:	
		Total Farmers Responsibility	Per Farmer Responsibility
Site Preparation	\$135,000		
Farm Equipment & Required Production Structures		\$60,800	\$15,200
Optional Production Structures		\$76,000	\$19,000
Total Investment (4 Farms)	\$135,000	\$136,800	\$34,200

Furthering the Agricultural Economy in Philadelphia

The analysis above demonstrates the feasibility of encouraging the development of a network of farms in Philadelphia and that the most effective way to kick-start this potential is with a focus on clustering several farms in one location. Key steps in advancing this agenda include:

- Developing a **policy commitment to commercial, chemical-free farming** in Philadelphia;
- **Identifying a site** for a first cluster of four farms;
- Identifying an **organization to manage** the legal and physical interests in the site;
- Securing **funds for site preparation** and other land-related activities;
- Identifying a **lender to provide financing for individual farmers**;
- Retaining the **involvement of IILF** as a promoter and as a technical assistance source; and
- When the first cluster is nearing full occupancy, **developing a second cluster for six farms**.

With initial organizing of a stakeholders/advisory committee in 2008, the goal is to have several commercial farms clustered in a first Farm Business Incubator/Farm Park with full occupancy by four farms by 2010 and a second Farm Business Incubator fully occupied with six farms by 2013. After that date, additional farms may follow.

Copies of the complete study can be obtained by contacting Roxanne Christensen, President of the Institute for Innovations in Local Farming at rchristensen@infocommercegroup.com.