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I. Overview of Recommendations

1) Create an online database of available land that brings together information from disparate sources, including ownership status, the land's suitability for gardening, zoning information, and information on existing infrastructure
2) Improve water access by
    a. Policies to help urban gardeners to utilize the existing infrastructure.
    b. Maintain plumbing infrastructure at sites where demolition is proposed.
    c. A water rate that is decoupled from a sewage rate, fairly priced given the economic and environmental benefits of urban farms.
3) Improve education and training by
    a. Expanding current programs for school students and adults and providing technical training and assistance.
    b. Educate teachers and school administrators about local food programming, which will help engage and interest local school children, who will in turn educate their families and communities about local food.
    c. Creating an online information database and clearinghouse.
4) Improve business viability through provision of start-up funds, marketing, and management training.

II. Description of Activities

During the Multistakeholder event held at the Weatherhead School of Management at Case Western Reserve University, the group selected four distinct areas for exploration. The group considered these areas to offer the most critical set of opportunities for growing the urban agriculture movement in Cleveland. The four topics were: Land Access, Water Access, Education & Training, and Business Viability. The group split into four groups to discuss each in turn, and an overview of their conclusions follows.

Land Access

Although the City of Cleveland is home to more than 3,300 acres of empty land, it is quite challenging for would-be urban gardeners and farmers to gain access. Many who try find that they must become experts at navigating the complex web of tax assessment data, zoning regulations, land bank information, and community development corporation data. This information is often out of date or incomplete, requiring on-site inspection.

One proposed means of acquiring land for agricultural purposes is Cleveland's Land Bank. Current municipal land banks are typically composed of vacant lots that require minimal maintenance. The first hurdle to be cleared is that purchases of land for commercial purposes, such as a market garden, under current land bank rules require an appraisal prior to sale. While the land has the potential to be acquired at a low cost depending on the circumstances, non-buildable lots are sold at a cost of $1.00 (plus recording costs), with buildable lots increasing in price depending on the proposed usage. Once the land is obtained, a second series of hurdles is tied to the land purchase application being approved by the Division of Neighborhood Development (DND). This process includes the notification of a number of city departments, the ward's council member, and adjacent landholders. Even if the DND approves the request, it is still subject to review by the city administration and the council member. Another barrier is the unwieldy, and potentially inaccurate,

database of available land in the city.

Recently passed legislation, however, has the potential to radically alter this situation. Many of the problems inherent to timely acquisition and effective management of foreclosed and abandoned properties vanish in the face of the new framework. Part of the challenge for urban agriculture practitioners will be steering the political will of the city in the direction of supporting their endeavors as a viable economic development activity that is as valuable as traditional commercial or residential development. Elevating the focus from the municipal to the county level may also increase the resources and land available for farming. It will take some time for the organizations contemplated by the new legislation to be formed, and for the necessary partnerships in both public and private sectors to be forged to enable the land bank to become an effective tool for the expansion of urban agriculture.

Proposed Action: Create an online database of available land that brings together information from disparate sources, including ownership status, the land's suitability for urban gardening, zoning information, and information on existing infrastructure (plumbing, etc.) Adding a simple rating system would help people to quickly identify suitable land, encouraging early start-ups.

The creation of this database under the auspices of the County Land Reutilization Corporation in Cuyahoga County would be extremely valuable, given their mandate, resources, and their positioning in the nexus of government, business, and NGO's.

Water Access

Water is quite literally the life blood of the urban gardening movement. Current gardeners use a dizzying array of creative systems in order to trap and use rainwater. While these systems are effective, they are not sufficient. Professional urban gardeners and farmers will need reliable and affordable access to city water lines to reach scale and maintain the viability of their crops.

Proposed Actions: Several actions were proposed in the Water Access group meeting.

1. Introduce new policies to help urban gardeners to utilize the existing infrastructure at the garden site, for instance, plumbing that is left after a house has been torn down.
2. Maintain plumbing infrastructure at sites where demolition is proposed.
3. Create a water rate that is decoupled from a sewage rate, and that fairly priced given the economic and environmental benefits of urban farms.
4. To build the case for items 1-3, it was decided that it would be necessary to
    a) Construct a financial model to predict potential net income, revenues, and costs for urban farms
    b) Determine the impact of water costs and storm water abatement relative to other costs
    c) See Sections IV & V: Business Analysis and Recommendations for details on (a) and (b).

Education & Training

In the Education & Training group, three areas of opportunity were discussed: Current Programs, Teacher Education, and the formation of a Central Database and Clearinghouse.

Proposed Actions: The group proposed action in each of the three areas.

1. Help current programs for school students and adults expand by connecting them with one another and providing technical training and assistance.
2. Educate teachers and school administrators about local food programming, to help engage and interest local school children. The children will also help educate their families and communities about local food in their community.
3. Create an online information database and clearinghouse to help interested community members connect with one another, learn about urban agriculture, and find assistance starting their own gardens and farms. This database could be attached to the Land Information database suggested above, and it could connect with the LocalFoodCleveland.org networking site.

Business Viability

The topic of business viability in urban agriculture clearly touches on each of the above three areas. Without affordable access to land, water, and training, no urban garden or farm would succeed. Other needs, however, must also be addressed, assuming the basics are in place. During the discussion of business viability, the topics related to scale and intensity of operation, as well as education and information access emerged repeatedly. These topics are closely related, as the needs of one side directly affect the necessary resource allocation of the other. Projects were proposed in three areas: Money, Marketing, and Management.

Proposed Actions:

1. Money – Create a pool of start-up funds for new urban gardens and farms. This could be an organized set of grants or loans dedicated to providing start-up funding for new gardens. Existing funding sources should be cataloged, publicized, and put to use. Currently, Cleveland's Gardens for Greenbacks program provides up to $3000 as a grant or loan to interested gardeners.
2. Marketing – A positive story of urban agriculture needs to be developed and disseminated widely throughout the community. This story should be an exemplar, to give people an understanding of the risks and challenges faced by an urban farmer, along with the benefits accrued to the farmer and the community at large. The development of a set of marketing tools could link in with LocalFoodCleveland.org, the Education efforts mentioned above, and could be a distribution vehicle for the findings of the business analysis below.
3. Management – This project would focus on the realities of urban agriculture as a small business. This could be in the form of an education curriculum covering creation of a management structure and analysis tools that would determine organizational needs, existing business potential, and criteria for future expansion.

Many of the proposed actions coming out of this meeting link with one another and could be fruitfully explored further through an extended follow-up meeting. This meeting should select a set of the above initiatives, and engage in a series of design discussions and rapid prototyping exercises.

III. Summary of Stakeholder Interviews

Stakeholder interviews occurred from November 2008 to February 2009. Our team interviewed 15 people, working in community development, city council, city water and sewer authorities, and local urban gardeners and farmers. The themes that emerged from these interviews included:

Urban farming as Community Development

Urban agriculture can be an engine for community development and enrichment. School partnerships and job training create understanding and respect for the environment. They teach real-world business skills and teamwork. Urban agriculture builds communities by bringing neighbors together to work the land, consume the food produced, and to care for the green spaces in their neighborhoods. They build community pride by empowering people to grow their own food, and provide healthy options for their families. Urban gardens could have the power to improve the health and well-being of the people in their neighborhoods. And finally, they attract suburbanites who can't grow on their own land into the city to take part in urban gardening.

Urban Agriculture as Economic Development

Northeast Ohio spends $8-$10 billion on food. If the amount sourced locally was increased by 5 percent, it would keep approximately $400 million in the local economy. It is estimated that dollars spent on local food rotate between 9 and 21 times throughout the local economy. Many urban gardening programs also create jobs and provide skills training in agriculture and small business management, empowering residents to expand their skills and find employment. Finally, urban farming is an alternative use of Cleveland's vacant land, returning it to productive use and generating revenue for the local economy.

Urban Agriculture as Environmental Rehabilitation

Urban gardening and farming contribute to the reduction of impermeable ground, improving storm water drainage, and decreasing the "heat island" effect. Over time, urban gardens and farms can reclaim damaged soil, rehabilitating parcels of land that have been polluted and damaged by years of industrial occupation. The gardens also provide means of recycling organic waste by using animal waste and compost as fertilizer. By encouraging residents to eat local foods, the carbon footprint of the food consumed in Cleveland decreases, due to reduced transportation and emissions. Finally, urban gardens and green spaces provide additional habitats for local wildlife, helping to mitigate the effects of suburban sprawl.

Cleveland is ready!

Perhaps the most predominant theme from our interviews is that Cleveland is ready! There is widespread interest in the city to promote local food and urban farming. There is a lot of potential acreage that could be converted quickly, once regulatory and other barriers have been lifted. SustainLane's recognition of Cleveland as the number 2 city in Local Food is a shining point of pride for the city. Many believe that Cleveland is at tipping point, with the recent Chicken and Bees Legislation and the many other issues currently under examination, such as

- Water access, soil standards, land use policies
- Quantifying ecological benefits
- Zoning needs

IV. Business Analysis - A Financial Model for Urban Agriculture

One of the most common issues evoked during this project was the financial viability of urban agriculture. As such, it was necessary to construct, or at least begin the design of, a comprehensive financial model in order to determine the potential economic benefits of urban agriculture. The data for this model was obtained from both primary and secondary data sources, including in-person and telephone interviews, journal articles, and publicly available data accessed through the Internet. In order to conduct sensitivity analysis, low, medium, and case assumptions and calculations were completed for all components of the model.

It should be noted that while this model permits high-level analysis, identification of key issues, and design of broad recommendations, there are still key gaps in the data available for which general assumptions and estimates had to be made. These assumptions are noted below. Nevertheless, this model will provide the City of Cleveland and urban agriculture stakeholders with the beginning of a method for evaluating the financial viability and sustainability of urban agriculture from the perspective of farmers, consumers, and the City of Cleveland. In some cases, completing this model will require speaking to the appropriate content experts in relevant fields. However, in other cases, obtaining the necessary data may require a controlled pilot project.

Land Area

To align this financial model with the data available from a controlled experiment conducted in Philadelphia (Urban Partners. Farming in Philadelphia: Feasibility Analysis and Next Steps. December, 2007), the plot of land is assumed to be 0.5 acres. Given that 1 acre equals 43,560 square feet, this plot of land is equivalent to 21,780 square feet, with sides of 148 feet and a perimeter of 590 feet. Assuming that 75% of the total land was used for growing crops (with the remainder used for offices, shelters, farm stands, equipment, processing, and other related activities), the total land available for production was 16,335 square feet. This information was utilized in all subsequent calculations.

Land Costs

Given recent legislation, it was only possible to estimate the cost of purchasing or leasing land according to the schedule below. Then, the start-up and annual costs of purchasing or leasing land was calculated. However, these estimates need to be validated by the City of Cleveland and the Cuyahoga Country Land Bank Program. Based on interview data, potential land costs appear to be highly variable, ranging from leasing land for $1 per year to purchasing land at fair market value and paying associated property taxes.

Estimated land costs are provided in Appendix 2, Table 1. In the medium case, a down payment / deposit was estimated to be $2,000 with a monthly payment / rent of $200. Therefore, start-up land costs are equal to $2,000 and annual land costs are equal to $2,400

Water Costs

The City of Cleveland Division of Water bills its customers based on the volume of water used per quarter in thousands of cubic feet (MCFs) (http://www.clevelandwater.com/2007_rate_info/index.html). Therefore, it was necessary to determine the total volume of water needed per quarter. According to several secondary data sources (http://www.backyardstyle.com/watering-guide.php), a garden requires 2 inches of water per

week. Assuming 4 weeks per month and 3 months per quarter, an urban garden would require 24 inches of water per quarter over the entire growing area of 16,335 square feet, which results in total water usage of 32.67 MCF per quarter.

Then, the year was divided into 4 quarters based on the ability to grow fruits and vegetable during those seasons. It was assumed that during summer a 0.5-acre garden would require 32.67 MCFs (as described above), while during spring and fall the same garden would require 24.50 MCFs (75% of summer), and during winter the garden would require only 8.17 MCFs (25% of summer). In addition, the average precipitation for each season in Cleveland was obtained from The Weather Channel (http://www.weather.com) and subsequently converted to the volume of precipitation in MCFs over the entire growing area of 16,335 square feet. Using this information, it was possible to calculate the amount of water needed and used during each season and over the entire year.

Next, potential water rates were obtained from the City of Cleveland Division of Water, including the standard water rate charged to all Cleveland customers as well as the Summer Sprout Program designed for the use of sprinkler systems in the summer months (flat fee of $68 per month, or $204 per quarter). Using these water rates and the water use estimated above, it was possible to determine the annual water costs over the entire year.

Water use and cost estimates are provided in Appendix 2, Tables 2 and 3. In the medium case, it was assumed that 63.50 MCF of water were needed for one year (17.83 MCF in the spring, 25.12 MCF in the summer, 17.77 MCF in the fall, and 2.78 MCF in the winter). Given water rates of $8.69 for the first MCF and $18.59 for additional MCF, the annual water costs are equal to $1,161.49.

Sewer Costs

The Northeast Ohio Regional Sewer District (http://www.neorsd.org/rates.php) bills its customers based on the volume of water used in thousands of cubic feet (MCFs). Therefore, the water use and precipitation calculations described above are relevant here as well. Then, broad assumptions were made regarding the contribution of a garden to storm water abatement and the potential application of credit in return for that abatement.

Estimated water use, storm water abatement, and sewer costs are provided in Appendix 2, Table 4. In the medium case, it was assumed that 63.50 MCF of water would be used and 35.13 MCF of storm water would be abated in one year by an urban garden. Given sewer rates of $24.95 per MCF of water used, the annual sewer costs are equal to $1,145.97.

Labor Costs

Labor requirements were obtained from a controlled experiment conducted in Philadelphia, in which a 0.5-acre urban gardener property was successfully managed by 2 full-time employees (FTEs) for the entire year, plus 1 FTE for half of the year. Based on this experience, it was assumed that 2.5 FTEs are required for a 0.5-acre plot of land. However, due to significant variations in labor requirements resulting from seasonality, the use of automated equipment, and the type of fruits and vegetables being produced, it is difficult to estimate the hours per week and weeks per year for each FTE. Therefore, it was assumed that each FTE works 40 hours per week for 40 weeks per year (1,600 hours per year) at a wage that is at least equal to the federal minimum wage.

Estimated labor requirements and labor costs are provided in Appendix 2, Table 5. In the medium case, given 2.50 FTEs earning a wage of $9.75 per hour, and working 40 hours per week for 40 weeks per year, annual labor costs are equal to $39,000.

Start-Up Costs

Start-up cost estimates were obtained from both primary and secondary resources. For the medium case, the estimated cost for demolition and grading as well as soil preparation was provided by the Ohio State University extension; the estimated water installation costs were provided by the City of Cleveland Division of Water; and all other costs were provided by the Philadelphia controlled experiment. Meanwhile, the low and high case estimates were assumed to be 75% and 125% of the medium case, respectively.

Estimated start-up costs are provided in Appendix 2, Table 6. In the medium case, total start-up costs are equal to $58,920. The total start-up costs were amortized over 10 years, thereby leading to annual costs of start-up expenses equal to $5,892 in the medium case. It is assumed that farmers will finance start-up costs using a 10-year, low-interest loan.

Because the circumstances surrounding a given urban garden can be highly variable, these start-up costs can be adjusted in the model to reflect different situations. For example, the property may begin as a single family home, a parking lot, or simply a vacant plot of land – in all of these cases, the amount of demolition, grading, and soil preparation necessary to prepare the land for gardening will be determined on a case by case basis, with significant variation between each case. It is also important to note those items that make the most significant contribution to overall start-up expenses – specifically all items representing more than 5% of start-up expenses. These items include demolition and grading (16.97%), fencing (16.97%), contingency for unexpected costs (16.67%), office / storage space (11.88%), soil preparation (6.79%), and a storage cooler (5.94%). As such, any efforts to reduce the level of start-up costs should focus on these items.

Other Costs

Other cost estimates for the medium case were obtained from the Philadelphia controlled experiment, with the low and high case estimates assumed to be 75% and 125% of the medium case, respectively. Estimated other costs are provided in Appendix 2, Table 7. In the medium case, annual other costs are equal to $20,200.

Like start-up costs, these costs can be adjusted in the model depending on the specific situation being examined. In addition, items representing more than 5% of other expenses include vehicle insurance (26.73%), vehicle lease or loan payments (14.85%), growing supplies and irrigation (14.36%), equipment purchase and repair (8.91%), and vehicle operation and repair (7.92%). As such, any efforts to reduce the level of other costs should focus on these items.

Total Costs

The end results of the calculations performed above were used to determine the initial annual costs and compound annual growth rates (CAGR) for an urban garden.

Table 1. Total Annual Costs and Growth Rates

Total Annual Costs				
Item	**Low Case**	**Medium Case**	**High Case**	**Share**
Land Costs	$ 12.00	$ 2,400.00	$ 6,600.00	3.44%
Water Costs	$ 589.00	$ 1,161.49	$ 2,201.54	1.66%
Sewer Costs	$ (205.32)	$ 1,145.97	$ 3,337.65	1.64%
Labor Cost	$ 14,848.00	$ 39,000.00	$ 84,672.00	55.87%
Amortized Start-Up Costs	$ 4,202.70	$ 5,892.00	$ 7,802.50	8.44%
Other Costs	$ 15,150.00	$ 20,200.00	$ 25,250.00	28.94%
Total Cost	**$ 34,596.38**	**$ 69,799.47**	**$ 129,863.69**	**100.00%**
Cost CAGR (Years 1-5)	7.96%	10.61%	13.26%	
Cost CAGR (Years 6-10)	1.99%	2.65%	3.32%	

Table 2. Total Annual Costs in Selected Years

Total Cost				
Year	**1**	**5**	**10**	**Total (10 Years)**
Low Case	$ 34,596.38	$ 46,995.16	$ 51,859.87	$ 452,172.33
Medium Case	$ 69,799.47	$ 104,482.66	$ 119,095.88	$ 996,833.67
High Case	$ 129,863.69	$ 213,722.39	$ 251,585.81	$ 2,025,699.74

Based on these results, it is clear that the most significant costs for an urban garden are labor costs (55.87%) and other costs (28.94%), with amortized start-up costs (8.44%) also greater than 5% of total costs. Meanwhile, the land (3.44%), water (1.66%), and sewer (1.64%) costs are negligible in comparison. Therefore, efforts to improve the financial and operating performance of urban gardens should clearly be focused on reducing labor and other costs without decreasing overall production in order to contribute the greatest impact on the bottom line.

Total Revenue

Revenue estimates were obtained from two secondary resources. The medium case estimate was provided by the Philadelphia controlled experiment, while the low and high case estimated was provided by a private gardening website (http://www.mcgoodwin.net/pages/ppatch.html). The Philadelphia controlled experiment provided the following data:

1. Actual revenue for years 1 through 3 of $38,800, $52,700, and $68,000, respectively;
2. Projected revenue for year 5 of $120,000; and
3. Distribution of revenue between farmers markets (40.38%), community supported agriculture (CSA) shares (43.39%), wholesaler / restaurant sales (12.48%), and an on-site farm stand (3.76%).

From the total revenues in years 1-3, a compound annual growth rate (CAGR) for years 1-5 of 32.38% was calculated. Then, it was assumed that the CAGR for years 6-10 would be 8.10% (or 25% of the CAGR from years 1-5). The complete data for the Philadelphia experiences is provided in Appendix 2.

Meanwhile, the urban gardening website provided data from an operational urban garden for 80 types of fruits / vegetables, including the following:

1. Pounds produced per square foot of garden for each type of fruit / vegetable
2. Cost per pound for each type of fruit / vegetable; and
3. Revenue per square foot for each type of fruit / vegetable.

Using this data, it was possible to extrapolate the total revenue that could be produced for each type of fruit / vegetable in a 0.5-acre garden. The average total revenue across all types of fruit / vegetables was $77,387. This data was sorted by revenue-generating potential and divided into two groups at the median, and the median value of each group was determined. Based on this analysis, the low and high case estimates were $29,403 and $99,644, respectively. For the low case, the CAGR was assumed to be 24.29% for years 1-5 and 6.07% for years 6-10 (or 75% of the CAGR for the medium case). For the high case, the CAGR was assumed to be 40.48% for years 1-5 and 10.12% for years 6-10 (or 125% of the CAGR for the medium case). The complete data for the private urban gardening website is provided in Appendix 3.

Table 3. Estimated Revenue

Revenue	**Low Case**	**Medium Case**	**High Case**
Revenue / Acre @ Year 1	$ 58,806.00	$ 77,600.00	$ 199,287.00
Revenue CAGR (Years 1-5)	24.29%	32.38%	40.48%
Revenue CAGR (Years 6-10)	6.07%	8.10%	10.12%

Table 4. Total Annual Revenue in Selected Years

Revenue				
Year	**1**	**5**	**10**	**Total (10 Years)**
Low Case	$ 29,403.00	$ 70,164.64	$ 94,216.23	$ 658,132.62
Medium Case	$ 38,800.00	$ 119,175.26	$ 175,889.11	$ 1,124,572.79
High Case	$ 99,643.50	$ 388,080.26	$ 628,432.12	$ 3,715,902.00

From these results, there are two secondary data sources that confirm the revenue-generating potential of urban gardens. While revenue is relatively modest in the first year, there appears to be a significant learning curve during the first five years, in which farmers are able to learn and apply methods for optimizing their production. Then, in the second five years, through the addition of novel practices and technology used to maximize yields, increase the number of cultivars per year, and lengthen the growing season, it is possible to experience sustained revenue growth.

Profit Margin

Using the total cost and total revenue calculations described above, it was then possible to determine the expected annual profit and each year as well as the cumulative profit over 10 years.

Table 5. Total Annual Profit in Selected Years

Profit Year	1	5	10	Total
Total Revenue - Medium Case	$ 38,800.00	$ 119,175.26	$ 175,889.11	$ 1,124,572.79
Total Cost - Medium Case	$ 69,799.47	$ 104,482.66	$ 119,095.88	$ 996,833.67
Profit	$ (30,999.47)	$ 14,692.60	$ 56,793.23	$ 127,739.12
Profit Margin	-44.41%	14.06%	47.69%	12.81%

Based on these findings, while an urban garden initially begins operations in the red for the first 4 years, it will be in the black by year 5, and by year 10, it could achieve profit margins of nearly 50%. In addition, the cumulative profit over 10 years of operations is 12.8%. Based on the data from the Philadelphia controlled experiment, it was observed that the expected CAGR for revenue was significantly greater than the expected CAGR for costs. Therefore, in addition to reducing costs, any urban agriculture programs should focus on initiatives that help farmers maximize production and increase revenue given available resources, thereby helping them achieve break-even status sooner (as well as a more positive profit margin in years 1-4).

V. Business Analysis Recommendations

Based on the financial model and outcomes thereof, it is possible to make several recommendations to improve the economic viability and sustainability of urban agriculture.

Improving and Using the Model

As previously noted, there are several components of this model that require better data estimates, including the following:

- The costs of purchasing and/or leasing land;
- The amount of water necessary;
- The definition of policies regarding water and sewer rates;
- The potential storm water abatement;
- The amount of labor necessary;
- The start-up costs of infrastructure and equipment;
- The annual costs of equipment and operations; and
- The potential revenue that can be generated from an urban garden.

As such, this model has been designed to provide the user with the ability to adjust assumptions and estimates where appropriate. While it is not ready to provide a final answer, it is capable of serving as the foundation for future analyses, in which the inputs for the model must be validated and modified as deemed necessary in order to conduct sensitivity analyses and tailor the model to fit the specific circumstances under consideration.

In some cases, this data may be available from academic resources, individuals with specific content expertise, or case studies in other locations. However, in situations in which it is not possible to obtain accurate data (or where multiple data sources are in conflict with one another), the best solution would be to conduct a controlled experiment by creating a garden or helping

existing urban garden collect data from their own operations. Furthermore, designing and conducting a controlled experiment would allow all of the assumptions in the model to be populated with data from a single situation that would be more representative of the potential outcomes of urban agriculture in Cleveland, thereby providing improved validity and reliability.

Focus on the Big Issues

This model is also capable of allowing the user to search for and identify key issues and opportunities to design programs that will provide the greatest benefit to urban agriculture. As noted above, certain items contribute disproportionately to the overall costs associated with operating an urban garden, including the following:

- Labor;
- Demolition and grading;
- Soil preparation;
- Fencing;
- Office and storage structures and equipment; and
- Vehicle costs.

Therefore, creating programs aimed at reducing these specific costs will make the most significant difference to the bottom line of an urban garden.

Examples of initiatives aimed at addressing these issues include the following programs:

- Educational and volunteer programs that engage urban youth and result in both positive learning experiences, physical activity, improved diet, and labor contributions;
- Targeting parcels of land that require the least amount of work to make them suitable for urban agriculture;
- Composting and yard waste recycling programs to provide low cost fertilizer and top soil for urban gardens;
- Consolidated infrastructure for multiple urban gardens in a community as well as policies that promote the clustering of urban gardens in specific areas to permit sharing of infrastructure; and
- Vehicle rental and sharing programs.

Identifying Benefits for All Stakeholders

While this model focuses on the financial outcomes of urban agriculture from the perspective of the farmer, it is also necessary to consider the outcomes for all stakeholders in the urban agriculture supply chain, including the City of Cleveland, the City of Cleveland Division of Water, the Northeast Ohio Regional Sewer District, the Cuyahoga Country Land Bank, and the suppliers of equipment and infrastructure to be used at urban gardens. All of these stakeholders have excess capacity that could be used to meet the needs of urban gardens and generate incremental revenue. Therefore, rather than looking at a single urban garden, the model should be expanded to estimate the potential economic impact on the aforementioned stakeholders resulting from the following activities of urban gardens:

- Purchasing or leasing vacant land and paying property taxes;
- Paying water and sewer bills and abating stormwater;
- Purchasing equipment and infrastructure from various supplies; and
- Providing jobs that bring people into the city and contribute to both employer and income tax payments.

Once these potential benefits are quantified, it will be possible to design policies that both promote the development and expansion of urban agriculture as well as generate positive economic benefits for the above stakeholders.

Focusing on Increasing Revenue Early

Based on the outcomes of the Philadelphia controlled experiment and the data provided by the urban gardening website, revenue from an urban garden initially begins well below the necessary costs. However, according to the model, it is possible to drive a significant increase in revenue during years 1-5, with the possibility of breaking even in year 5 and achieving a profit margin of approximately 50% by year 10. In the Philadelphia experiment, it was discovered that there is a substantial learning curve for beginning farmers to overcome. Not only must they develop knowledge of and skills for performing the most basic operations, but over time they also learn how to implement novel methods and technologies to maximize yields, increase the number of rounds of crops grown per year, and lengthen the growing season.

Therefore, rather than focusing solely on reducing costs, it may be possible to achieve comparable, if not better, results by helping farmers increase revenue during the first few years of their gardening experience. Specifically, the creation and development of educational and mentoring programs for the purpose of disseminating urban agriculture best practices to beginning farmers would go a long way in helping them to move up the learning curve at a faster pace and break-even at a much earlier point in time. In addition, the invention and implementation of novel methods and technologies could help urban farmers realize comparable returns to their rural counterparts that have traditionally been achieved through economies of scale.

Taking Advantage of Unlimited Demand

One major assumption of this model is unlimited demand, or that all produce from urban gardens can be sold at fair market value. As long as this assumption holds true, a major component of risk has been effectively eliminated from the business case. While the model suggests that it may take up to 5 years for an urban garden to ramp up operations before generating a positive return, if a garden can produce enough, it will eventually cover its costs. Furthermore, because the model does not suggest that urban agriculture is economically unfeasible, it is worthwhile to continue to explore potential business models, policies, and programs that will facilitate the development of urban agriculture.

VI. Sustaining Momentum

To sustain the momentum of the initiatives proposed in this report, it is key to create a forum through which the stakeholders can maintain contact with one another. In addition, development of the financial model will be continued with the help of Fran DiDonato from the City of Cleveland Office of Sustainability and Morgan Taggert from the Ohio State University Extension. Specific tasks to be completed include the following:

- Improving the accuracy of assumptions and data input into the model with the help of the Ohio State University Extension and local urban agriculture experts (in fact, new data regarding water use and costs was recently received from the OSU extension on the date this report was finalized);
- Creating options to specify certain circumstances (i.e. amount of land preparation required, type of water access, implementation of water conservation strategies, use of benchmark

policies from other cities, etc.); and
- Expanding the model from analyzing a single garden to examine the potential economic impact on the City of Cleveland.

When the model is completed, it will be possible to use the output from the model to create and design specific policies and programs that will promote urban agriculture. Then, these policies and programs can be simulated in the model to examine their potential effects at the level of a single garden as well as the entire city. In the end, the model will ultimately be brought to the city government to provide evidence of the potential economic benefits of urban agriculture as well as support for specific policy and funding proposals. These proposals will provide additional impetus for the development and expansion of urban gardening in Cleveland as the stakeholders work on the specific projects and initiatives identified above. Finally, the model will provide robust evidence demonstrating the financial outcomes attainable through urban agriculture - by validating the business case, it will be easier for people to evaluate whether urban agriculture is a hobby or occupation that they may have an interest in pursuing and the benefits thereof.

VII. Appendices

Appendix 1. Stakeholder Meeting Attendees

Jennifer Scofield	Theresa Schwartz
Greg Balbierz	Matt Martin
Morgan Taggart	Lilah Zautner
Dr. Parwinder Grewal	Airielle Banaszak
Kevin Power	Brad Masi
Jim O'Hare	Abe Bruckman
John McCumber	Matt Russell
Linda Mayer-Mack	Michael Palcisco
Jeffrey Sugalski	Carl Skalak
Peter McDermott	Robert Shields
Darwin Kelsey	Joe Jones
Marcelina Sladewska	Brad Charles Melzer

Appendix 2. Financial Model

Table 1. Estimated Land Costs

Purchase / Lease	**Low Case**	**Medium Case**	**High Case**
Down Payment / Deposit	$ 100.00	$ 2,000.00	$ 5,000.00
Monthly Payment / Rent	$ 1.00	$ 200.00	$ 500.00
Property Tax	$ -	$ -	$ 50.00
Start-Up Land Costs	$ 100.00	$ 2,000.00	$ 5,000.00
Annual Land Costs	$ 12.00	$ 2,400.00	$ 6,600.00

Table 2. Estimated Water Use (MCFs)

	Factor	**Water Needed**	**Precipitation**	**Low Case**	**Medium Case**	**High Case**
Quarter	*A*	*B = 32.67 * A*	*C*	*D = B – C*	*E = B – 0.5C*	*F = B*
Spring (Mar - May)	0.75	24.50	13.35	11.15	17.83	24.50
Summer (Jun - Aug)	1.00	32.67	15.11	17.56	25.12	32.67
Fall (Sep - Nov)	0.75	24.50	13.46	11.04	17.77	24.50
Winter (Dec - Feb)	0.25	8.17	10.77	-	2.78	8.17
Year		89.84	52.69	39.75	63.50	89.84

Table 3. Estimated Water Costs

Water Costs	**Low Case** *Summer Sprout Program*	**Medium Case** *75% of Standard Rate*	**High Case** *Standard Rate*
1st MCF	$ -	$ 8.69	$ 11.59
Additional MCFs	$ -	$ 18.59	$ 24.78
Flat Rate	$ 204.00	$ -	$ -
Service Charge	$ 7.00	$ 5.25	$ 7.00
Annual Water Cost	$ 589.00	$ 1,161.49	$ 2,201.54

Table 4. Estimated Sewer Costs

Sewer Costs	**Low Case** *50% of Low Income Rate*	**Medium Case** *Low Income Rate*	**High Case** *Standard Rate*
Cost / MCF	$ 12.48	$ 24.95	$ 37.15
Water Use (MCF)	39.75	63.50	89.84
Precipitation (MCF)	56.21	70.26	84.31
Storm water Abatement	1.00	0.50	-
Credit / MCF	(1.00)	(0.50)	-
Cost of Water Used	$ 495.86	$ 1,584.21	$ 3,337.65
Credit for Storm water Abatement	$ (701.18)	$ (438.24)	$ -
Annual Sewer Cost	**$ (205.32)**	**$ 1,145.97**	**$ 3,337.65**

Table 5. Estimated Labor Costs

Labor Cost	**Low Case** *80%*	**Medium Case** *100%*	**High Case** *120%*
FTEs	2.00	2.50	3.00
Wage ($ / hr)	$ 7.25	$ 9.75	$ 12.25
Hours / Week	32.00	40.00	48.00
Weeks / Year	32.00	40.00	48.00
Annual Labor Cost	**$ 14,848.00**	**$ 39,000.00**	**$ 84,672.00**

Table 6. Estimated Start-Up Costs

Start-Up Costs **Item**	**Low Case** *75%*	**Medium Case** *100%*	**High Case** *125%*	**Share**
Demolition and Grading	$ 7,500.00	$ 10,000.00	$ 12,500.00	16.97%
Soil Prep (Tilling, Compost, Fertilizer)	$ 3,000.00	$ 4,000.00	$ 5,000.00	6.79%
Land Down Payment / Deposit	$ 100.00	$ 2,000.00	$ 5,000.00	3.39%
Water Installation	$ 1,112.00	$ 2,500.00	$ 5,000.00	4.24%
Electric Hookups & Misc	$ 900.00	$ 1,200.00	$ 1,500.00	2.04%
Irrigation	$ 1,500.00	$ 2,000.00	$ 2,500.00	3.39%
Fencing	$ 7,500.00	$ 10,000.00	$ 12,500.00	16.97%
Storage Shed	$ 750.00	$ 1,000.00	$ 1,250.00	1.70%
Post Harvesting Processing Station	$ 900.00	$ 1,200.00	$ 1,500.00	2.04%
Storage Cooler	$ 2,625.00	$ 3,500.00	$ 4,375.00	5.94%
Rototiller	$ 1,125.00	$ 1,500.00	$ 1,875.00	2.55%
Farmstands	$ 900.00	$ 1,200.00	$ 1,500.00	2.04%
Hoop House	$ 1,500.00	$ 2,000.00	$ 2,500.00	3.39%
Office / Storage Structure	$ 5,250.00	$ 7,000.00	$ 8,750.00	11.88%
Contingency @ 20%	$ 7,365.00	$ 9,820.00	$ 12,275.00	16.67%
Total	**$ 42,027.00**	**$ 58,920.00**	**$ 78,025.00**	**100.00%**
Amortized 10-year Start-Up Costs	**$ 4,202.70**	**$ 5,892.00**	**$ 7,802.50**	**10.00%**

Table 7. Estimated Other Costs

Other Costs **Item**	**Low Case** *75%*	**Medium Case** *100%*	**High Case** *125%*	**Share**
Growing Supplies & Irrigation	$ 2,175.00	$ 2,900.00	$ 3,625.00	14.36%
Equipment Purchase & Repair	$ 1,350.00	$ 1,800.00	$ 2,250.00	8.91%
Vehicle Lease or Loan Payment	$ 2,250.00	$ 3,000.00	$ 3,750.00	14.85%
Vehicle Insurance	$ 4,050.00	$ 5,400.00	$ 6,750.00	26.73%
Vehicle Operation & Repair	$ 1,200.00	$ 1,600.00	$ 2,000.00	7.92%
Sales Supplies	$ 675.00	$ 900.00	$ 1,125.00	4.46%
Marketing	$ 675.00	$ 900.00	$ 1,125.00	4.46%
Farmer's Market Fees	$ 750.00	$ 1,000.00	$ 1,250.00	4.95%
Business Liability Insurance	$ 150.00	$ 200.00	$ 250.00	0.99%
Electricity, Phone, Bathroom	$ 1,875.00	$ 2,500.00	$ 3,125.00	12.38%
Annual Other Costs	**$ 15,150.00**	**$ 20,200.00**	**$ 25,250.00**	**100.00%**

Appendix 3. Data from the Philadelphia Controlled Experiment

Revenue Source	Year 1	Year 2	Year 3	Total	% of Revenue	CAGR	Most Likely Case
Farmers Markets	$15,700	$ 23,800	$ 24,900	$ 64,400	40.38%	25.94%	$ 35,000
Community Supported Agriculture Shares	$12,700	$ 19,600	$ 36,900	$ 69,200	43.39%	70.46%	$ 72,000
Wholesaler / Restaurant Sales	$7,600	$ 6,500	$ 5,800	$ 19,900	12.48%	-12.64%	$ 12,000
On-Site Farm stand	$ 2,800	$ 2,800	$ 400	$ 6,000	3.76%	-62.20%	$ 1,000
Total	**$ 38,800**	**$ 52,700**	**$ 68,000**	**$ 159,500**	**100.00%**	**32.38%**	**$ 120,000**

Operating Expenses Item	Year 1	Year 2	Year 3	Total	% Expenses	CAGR	Most Likely Case
Growing Supplies & Irrigation	$ 2,900	$ 3,500	$ 5,100	$ 11,500	6.29%	32.61%	$ 7,800
Sales Supplies	$ 900	$ 1,700	$ 1,400	$ 4,000	2.19%	24.72%	$ 3,200
Vehicle Insurance	$ 5,400	$ 5,000	$ 4,300	$ 14,700	8.04%	-10.76%	$ 4,500
Vehicle Operation & Repair	$ 1,600	$ 3,000	$ 3,000	$ 7,600	4.16%	36.93%	$ 5,500
Equipment Purchase & Repair	$ 1,800	$ 2,900	$ 1,900	$ 6,600	3.61%	2.74%	$ 4,000
Marketing	$ 900	$ 200	$ 400	$ 1,500	0.82%	-33.33%	$ 800
Farmer's Market Fees	$ 1,000	$ 1,500	$ 2,300	$ 4,800	2.63%	51.66%	$ 4,500
Employee Labor - Part-Time	$ -	$ 10,200	$ 11,500	$ 21,700	11.87%	12.75%	$ 17,000
Business Liability Insurance	$ -	$ -	$ 200	$ 200	0.11%	0.00%	$ 400
Other	$ 600	$ -	$ -	$ 600	0.33%	-100.00%	$ -
Payroll Tax							$ 1,700
Water, Electricity, Bathroom, Phone							$ 2,500
Truck Lease or Loan Payment							$ 3,000
Amortization of Start-Up Investment							$ 5,100
Total Non-Farmer Expenses	$ 15,100	$ 28,000	$ 30,100	$ 73,200	40.04%	41.19%	$ 60,000
Net Farmers Wages	$ 32,400	$ 37,500	$ 39,700	$ 109,600	59.96%	10.69%	$ 60,000
Total Expenses	**$ 47,500**	**$ 65,500**	**$ 69,800**	**$ 182,800**	**100.00%**	**21.22%**	**$ 120,000**

Start-Up Infrastructure and Equipment **Item**	**Cost**
Fencing	$ 17,000
Water & Electric Hookups & Misc	$ 1,200
Irrigation	$ 2,000
Soil Prep (Tilling, Compost, Fertilizer)	$ 1,500
Storage Shed	$ 1,000
Post Harvesting Processing Station	$ 1,200
Cooler	$ 3,500
Rototiller	$ 1,500
Farmstands	$ 1,200
Hoop House	$ 2,000
Office / Storage Structure	$ 7,000
Contingency 20%	$ 7,820
Total	**$ 46,920**

Appendix 4. Data from the Private Urban Gardening Website

Urban Gardening Website Data **Vegetable**	*lb / sq ft*	*$ / lb*	*$ / sq ft*	*$ / acre*
Arugula-Roquette	2.0	$ 10.56	$ 20.92	$ 683,521.74
Greens, Salad Mix	3.9	$ 4.50	$ 17.55	$ 573,358.50
Lettuce, Summer	2.7	$ 6.00	$ 16.20	$ 529,254.00
Broccoli Raab/Rabe	4.8	$ 3.00	$ 14.40	$ 470,448.00
Cilantro	1.3	$ 10.40	$ 13.78	$ 450,192.60
Turnip	6.6	$ 2.00	$ 13.20	$ 431,244.00
Lettuce, Spring/Fall	1.5	$ 7.00	$ 10.50	$ 343,035.00
Chives	0.3	$ 36.64	$ 9.16	$ 299,257.20
Corn Salad	0.4	$ 21.28	$ 9.04	$ 295,467.48
Squash, Winter, Spaghetti	4.2	$ 2.00	$ 8.40	$ 274,428.00
Dill	0.3	$ 32.00	$ 8.00	$ 261,360.00
Squash, Summer, Patty Pan	4.0	$ 2.00	$ 8.00	$ 261,360.00
Tomatillo	2.0	$ 4.00	$ 8.00	$ 261,360.00
Squash, Summer, Zucchini, Italian	5.3	$ 1.50	$ 7.95	$ 259,726.50
Beet, Early Wonder Tail Top	3.0	$ 2.50	$ 7.50	$ 245,025.00
Lettuce, Winter	1.2	$ 6.00	$ 7.20	$ 235,224.00
Tomato, Cherry	2.6	$ 2.67	$ 6.94	$ 226,795.14
Basil, Italian Large Leaf	0.6	$ 12.00	$ 6.83	$ 222,972.75
Radish, Red	1.7	$ 3.66	$ 6.22	$ 203,272.74
Pumpkin	6.2	$ 1.00	$ 6.20	$ 202,554.00
Celery	1.9	$ 3.16	$ 6.00	$ 196,020.00
Squash, Winter, Buttercup	2.9	$ 2.00	$ 5.80	$ 189,486.00
Beet, Red Ace	2.3	$ 2.50	$ 5.75	$ 187,852.50

Urban Gardening Website Data **Vegetable**	*lb / sq ft*	*$ / lb*	*$ / sq ft*	*$ / acre*
Choi, Pak/Bok, Baby	1.9	$ 3.00	$ 5.70	$ 186,219.00
Kale	1.4	$ 4.00	$ 5.60	$ 182,952.00
Eggplant, Japanese	1.1	$ 5.00	$ 5.50	$ 179,685.00
Bean, Runner	1.8	$ 3.00	$ 5.40	$ 176,418.00
Basil, Cinnamon	0.3	$ 16.00	$ 5.30	$ 173,151.00
Beet, Golden Detroit	2.0	$ 2.50	$ 5.00	$ 163,350.00
Tomato, Large	2.5	$ 2.00	$ 5.00	$ 163,350.00
Brussels Sprouts	1.2	$ 4.00	$ 4.80	$ 156,816.00
Cucumber	3.2	$ 1.49	$ 4.77	$ 155,770.56
Peas, Snow	0.9	$ 5.00	$ 4.50	$ 147,015.00
Pepper, Jalapeno	0.9	$ 5.00	$ 4.50	$ 147,015.00
Bean, Snap Pole	1.4	$ 3.00	$ 4.20	$ 137,214.00
Squash, Summer, Zucchini, Jackpot	2.8	$ 1.50	$ 4.20	$ 137,214.00
Onion, Bunching	1.4	$ 2.88	$ 4.14	$ 135,253.80
Onion, Bulb, Cipollini	0.8	$ 5.00	$ 4.00	$ 130,680.00
Pepper, Miscellaneous	0.8	$ 5.00	$ 4.00	$ 130,680.00
Carrots, Nelson	3.6	$ 1.00	$ 3.60	$ 117,612.00
Lettuce, Radichetta	0.9	$ 4.00	$ 3.60	$ 117,612.00
Chard, Swiss	2.2	$ 1.49	$ 3.28	$ 107,092.26
Rhubarb	1.3	$ 2.50	$ 3.25	$ 106,177.50
Squash, Winter, Butternut	1.6	$ 2.00	$ 3.20	$ 104,544.00
Grass, Lemon	1.0	$ 3.00	$ 3.00	$ 98,010.00
Bean, Bush, Sonesta	0.9	$ 3.00	$ 2.70	$ 88,209.00
Potatoes	1.5	$ 1.80	$ 2.70	$ 88,209.00
Onion, Bulb	2.1	$ 1.25	$ 2.63	$ 85,758.75
Radish, White	1.3	$ 2.00	$ 2.60	$ 84,942.00
Cabbage, Chinese Napa	1.5	$ 1.70	$ 2.55	$ 83,308.50
Beet, Bull's Blood	1.0	$ 2.50	$ 2.50	$ 81,675.00
Peas, Pod	0.5	$ 5.00	$ 2.50	$ 81,675.00
Artichoke, Globe	0.6	$ 4.00	$ 2.40	$ 78,408.00
Choi, Pak/Bok, Joi	1.5	$ 1.50	$ 2.25	$ 73,507.50
Eggplant	0.9	$ 2.50	$ 2.25	$ 73,507.50
Squash, Winter, Delicata	0.7	$ 3.00	$ 2.10	$ 68,607.00
Asparagus Pea	0.1	$ 32.00	$ 2.00	$ 65,340.00
Bean, Bush, Cupidon	0.8	$ 2.50	$ 2.00	$ 65,340.00
Bean, Bush, Royal Burgandy	0.8	$ 2.50	$ 2.00	$ 65,340.00
Spinach	0.9	$ 2.00	$ 1.80	$ 58,806.00
Squash, Summer, Yellow	0.9	$ 2.00	$ 1.80	$ 58,806.00
Peas, English	0.6	$ 3.00	$ 1.80	$ 58,806.00
Pepper, Bell	0.6	$ 3.00	$ 1.80	$ 58,806.00
Leeks, Lancelot	0.7	$ 2.50	$ 1.75	$ 57,172.50
Garlic	0.2	$ 8.00	$ 1.60	$ 52,272.00
Beet, Lutz Green Leaf	0.6	$ 2.50	$ 1.50	$ 49,005.00

Urban Gardening Website Data **Vegetable**	*lb / sq ft*	*$ / lb*	*$ / sq ft*	*$ / acre*
Leeks	0.6	$ 2.50	$ 1.50	$ 49,005.00
Parsnips	0.5	$ 3.00	$ 1.50	$ 49,005.00
Parsley	0.3	$ 5.12	$ 1.31	$ 42,863.04
Greens, Mustard	0.5	$ 2.46	$ 1.23	$ 40,184.10
Squash, Winter, Acorn	0.6	$ 2.00	$ 1.20	$ 39,204.00
Squash, Winter, Hubbard	0.6	$ 2.00	$ 1.20	$ 39,204.00
Rutabaga	0.5	$ 2.00	$ 1.00	$ 32,670.00
Broccoli, Umpqua	0.4	$ 2.00	$ 0.80	$ 26,136.00
Cabbage, Savoy	0.8	$ 1.00	$ 0.80	$ 26,136.00
Kohlrabi	0.5	$ 1.50	$ 0.75	$ 24,502.50
Carrots, Bolero	0.7	$ 1.00	$ 0.70	$ 22,869.00
Broccoli, Chinese	0.3	$ 2.00	$ 0.60	$ 19,602.00
Cauliflower	0.3	$ 2.00	$ 0.60	$ 19,602.00
Cabbage, Pixie	0.5	$ 1.00	$ 0.50	$ 16,335.00
Average	**1.5**	**$ 4.73**	**$ 4.74**	**$ 154,773.31**
Median - Top Half	**1.9**	**$ 3.41**	**$ 6.10**	**$ 199,287.00**
Median - Bottom Half	**0.7**	**$ 2.48**	**$ 1.80**	**$ 58,806.00**

Appendix 5. Urban Agriculture in Other Communities

"To demonstrate how much food can be grown in a small space, a 2006 pilot project on a sub-acre lot on the outskirts of Philadelphia hauled in $67,000 from crops like salad greens and baby vegetables. In Milwaukee, a 1-acre (0.4 hectare) farm filled with greenhouses, tilapia tanks and poultry pens grossed more than $220,000."

Article "Inner-City Farms" by Lisa McLaughlin
Time Magazine, July 24, 2008
http://www.time.com/time/magazine/article/0,9171,1826271,00.html

Urban Farming

Mission:

"Urban Farming intends to eradicate hunger while increasing diversity, motivating youth and seniors and optimizing the production of unused land for good and alternative energy."

Urban Farming is a 501c3 that started in 2005 in Detroit with 3 gardens. As of 2008, they have the equivalent of 600 gardens in the US and around the world, feeding an estimated 50,000 people fresh produce. Headquartered in Detroit, they now have offices in Los Angeles and New York City, with St. Louis coming soon. Urban Farming shows the extremely rapid growth potential for urban agriculture. Their website is http://www.urbanfarming.org/.

Growing Power
Milwaukee, Wisconsin

Vision:

"Inspiring communities to build sustainable food systems that are equitable and ecologically sound,

creating a just world, one food-secure community at a time."

Growing Power started in 1993 with former NBA player Will Allen and a group of young teens. The teens needed work, and Will needed help. The group renovated some greenhouses on Will's farm to grow food for their communities. From this modest begining, Growing Power has become a leading idea and training center in sustainable farming. They provide education and training in greenhouse gardening, aquaponics systems, large-scale vermicompost and composting, anaerobic digestion, and food distribution. Growing Power has become a nationally known expert, hosting national workshops throughout the year at their headquarters in Milwaukee. They have training seminars for those interested in community/market gardeners and commercial urban farming. Their website is http://www.growingpower.org/

Will Allen, CEO of Growing Power, has received numerous awards, including the Ford Foundation's 2005 Leadership for a Changing World Award (http://www.fordfound.org/newsroom/communitydevelopment/156) and being named a 2008 MacArthur Fellow (http://www.macfound.org/site/c.lkLXJ8MQKrH/b.4537249/).

Your Backyard Farmer
Portland, Oregon
Founded in 2006, Your Backyard Farmer is a for-profit company that brings organic gardening to your home. For a fee, they will set up a garden in your backyard to grow organic produce for your family. At an additional cost, the company will come out weekly to tend the garden and harvest its ready produce for you. The concept has already spread to numerous other cities, including San Francisco, Boston, Washington DC, and others. This decentralized farm model shows the business potential for urban farming as a service within a community or neighborhood. Their website is http://www.yourbackyardfarmer.com/.