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## COMMUNITY ESSAY

# SPIN-Farming: advancing urban agriculture from pipe dream to populist movement

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### Author's Personal Statement:

I began advocating for urban agriculture in Philadelphia in 1998. What appealed to me is what draws many people to the cause: its social and environmental benefits are obvious and easy to understand. But it quickly became apparent that, compelling though they are, these benefits were not enough to motivate policy makers in a position to help urban agriculture succeed on any kind of scale. Instead, the economic benefits that many proponents had long acknowledged in theory, but few were able to demonstrate, had to be proven. SPIN-Farming is a very powerful tool for validating the economic viability of urban agriculture. However, while I had initially focused on solving some urban problems, it became clear that SPIN could also help to revive the farming profession, and this is where my professional background came into play. My working life has been spent helping entrepreneurs position, package, and promote their ideas and build them into successful businesses. In helping to develop SPIN, I applied that experience to farming. The big opportunities I see for SPIN-Farming are that it provides a farming concept that can be learned and practiced across all economic classes and geographical boundaries, and that it will foster engaged, rather than escapist, agriculture, whereby farmers return to cities and towns and rebuild local food systems that are human in scale and joyful in spirit.

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Though social idealists in the United States and elsewhere have advanced the philosophical and moral imperatives of urban agriculture for decades, this has not been enough to motivate government and urban agencies to accord it the status and support of other industries. These circumstances have relegated urban farming to an add-on to not-for-profit “feel good” projects and kept much of its potential untapped. Recently, however, a different case for urban agriculture is gaining ground, one based on more practical concerns (for an overview refer to Mougeot, 2005).

Foremost among these concerns is that vast tracts of farmland continue to be lost to development. As suburban encroachment erodes the rural way of life, agriculture is having to adapt. For the first time in history, a majority of the American population is living in urban or peri-urban areas. As the United States Department of Agriculture (2000) notes,

Urban agriculture is an alternative to what has been labeled conventional agriculture. However, it should not be considered solely an alternative means of producing food; it also is a viable adaptive function and response to urbanization. Urban agriculture is not so much an alternative to existing agricultural systems as it is an established branching of modern sustainable agricultural systems.

Second, more and more people want a direct connection to the food they eat. The reasons have become personal, not altruistic. Diet-related diseases, food-safety concerns, pollution created by transporting food great distances, water shortages, record heat waves, and extreme weather events are impinging directly on people's lives. And even when events do not have direct impacts, media coverage brings the damage very close to home and fosters a widespread awareness that today's most pressing problems are directly linked to the health of our food system. Increasingly, urban and suburban consumers want—and are willing to pay premium pricing for the opportunity—to know the face behind their food.

Third, growing numbers of policy makers are acknowledging the value of quality-of-life issues in attracting residents back to cities. Sustainability has gone beyond a buzzword and is now spurring specific plans for significant change in how cities function. Producing food for residents within municipal borders is a cornerstone of these plans. Some cities are considering, or have actually implemented, initiatives that require meeting a quota of their food needs through local food producers. This has very positive implications for commercial urban farming. The emerging consensus on climate change is also providing impetus to rebuild local and regional farming systems, and for supporting smaller, sustainable farms that are less energy intensive. People knowl-

edgeable about cities, together with people knowledgeable about agriculture, are now beginning to recognize that commercial urban farming needs to play a role in the contemporary food production system.

While individuals in a position to help establish urban agriculture on a meaningful scale are at last finding the will and justification to do so, there is also, now, a way. It is called SPIN-Farming and it is the first method (1) to marshal the entrepreneurial benefits of urban farming; (2) to turn the challenges posed by urbanization to the farmer's advantage; (3) to make farming compatible with high-density population; and (4) to remove the two biggest barriers to entry for first generation farmers—land and startup capital. Urban agriculture therefore enables many more people to enter the farming profession.

SPIN stands for *Small Plot Intensive*.<sup>1</sup> The system was developed and is practiced by a Canadian farmer named Wally Satzewich who farms 25 plots located in residential backyards throughout Saskatoon, Saskatchewan. Satzewich's farming career began traditionally. He and his wife, Gail Vandersteen, initially started farming on an acre-sized plot outside of Saskatoon twenty years ago. Thinking that expanding acreage was critical to their success, they bought some farmland adjacent to the South Saskatchewan River forty miles north of Saskatoon where they eventually grew vegetables on about twenty acres of irrigated land.

After six years farming their rural site, the couple noticed that they were growing high-value crops like spinach, salad mix, carrots, and radishes in their backyard plot in town and low-value crops like potatoes, peas, and beans on their acreage in the country. This recognition led Satzewich to realize other advantages to subacre (less than an acre) farming in town.

In town, his irrigation system was the water faucet—he did not have to rely on fluctuating river levels. He and his wife comprised the work crew for his subacre plots; they did not have to depend on outside labor. The financials showed that, though the overhead costs of a subacre operation are a fraction of those for a large-scale conventional farm, their bottom lines were similar. It was at this point that Satzewich realized that a subacre farmer could earn significant income with a lot less stress and a lot less overhead and with much more certainty of success from year to year. Satzewich sold his farm in the country and his experiment in subacre city-based farming became the basis for the SPIN-Farming system.

What makes SPIN different from other “small scale” farming schemes is that it outlines a process for growing commercially on subacre land bases. Farmers need own little, if any, land. SPIN can be practiced on only 1,000 square feet, or it can be located on a half-acre of municipally-owned land, or it can be multi-sited on several residential backyards.

What also sets SPIN-Farming apart is that it requires minimal infrastructure and is therefore low capital intensive. Its major investments include commercial refrigeration capacity, a post-harvesting station, and a shed. Irrigation relies on the municipal water supply and the system consists of inexpensive garden hoses that can be purchased at most hardware or garden supply stores. The only mechanized equipment is a rototiller. Because of its subacre scale, labor requirements for a SPIN farm are minimal and can be readily obtained within a network of family, friends, or the local community.

In addition to its subacre and low capital-intensive orientation, what differentiates SPIN from other farming systems is that it ties crop production to specific revenue targets. Its revenue targeting formula is based on balancing production between high and low value crops, segmenting a farm into different levels of production intensity, and formulating market-driven planting plans. It also outlines specific workflow practices so that the farming operation can be managed like any other type of small business. So while other systems focus on growing techniques, SPIN outlines how to approach farming as a small business.

SPIN is also environmentally friendly. It is based on all-organic practices and its reliance on biological cooperation keeps operating overhead low. Most farm inputs are generated onsite and there is very little waste. In contrast to traditional large-scale agriculture's aim to produce predictable and uniform results from soils and plants, subacre farming unleashes a natural set of variables and is based on continual trial and error. SPIN farmers can be out constantly tending their plots and can be always vigilant to soil health and pest imbalance. Some of the main biological principles are: healthy soil produces healthy plants; natural resources such as water and biomass are meant to be conserved and recycled; and stable ecosystems are diverse. By respecting natural forces, SPIN demonstrates that the more sustainable a farm's agricultural practices, the more economically viable is its business.

The following points comprise the key concepts of the SPIN-Farming system:

- **Subacre land base**—SPIN transfers commercial farming techniques to subacre land bases. Farmers do not need to own much or any land to

<sup>1</sup> Further details about SPIN-Farming are available at <http://www.spinfarming.com>. See also, Ramsay (2007).

- start their operations, and operations can be single or multi-sited.
- **Structured work flow practices**—SPIN outlines a deliberate and disciplined day-by-day work routine so that the wide variety of farm tasks can be easily managed without any one task becoming overwhelming.
  - **High-road/Low-road**—SPIN distinguishes between different harvesting techniques. The high-road utilizes commercial refrigeration equipment; low-road harvesting does not.
  - **High-value crops**—SPIN devotes most of its land base to the production of high-value crops, defined as those that generate at least US\$100 per crop per bed.
  - **Relay cropping**—SPIN calls for the sequential growing of crops in a single bed.
    - **Intensive relays**—Three to four crops per bed per season are grown.
    - **Birelays**—Two crops per bed per season are grown.
    - **Single relay**—One crop per bed per season is grown.
  - **1-2-3 bed layout**—This term refers to the three different areas of a SPIN farm devoted to the different levels of production intensity.
  - **75/25 land allocation**—This principle dictates how much land is assigned to the different levels of production on a SPIN farm. The aim is to balance production between high-value and low-value crops to produce a steady revenue stream and to target revenue based on farm size.
  - **Farm layout**—SPIN provides guidelines for segmenting a land base into a series of beds separated by access alleys, which are small two-foot strips, just wide enough for a rototiller. An acre accommodates approximately 400 standard size beds, including the necessary paths and access alleys. SPIN can also be incorporated into more traditional approaches to land allocation.
  - **Standard size beds**—SPIN utilizes beds that are two feet wide by 25 feet long.
  - **Revenue targeting formula**—By growing high-value crops worth US\$100 per harvest per bed, and by practicing intensive relay cropping that produces at least three crops per bed per season, SPIN targets US\$300 in gross sales per bed per season. With 400 beds per acre, the maximum revenue potential is 400 beds x US\$300 per bed per season = US\$120,000 gross sales per acre. When farming is approached in terms of beds instead of acres, the result is a very precise idea of how much growing space can be utilized, and how that space can be managed to generate predictable and steady income.
  - **Organic-based**—SPIN relies on all-organic farming practices. There are minimal off-farm inputs and very little waste.
  - **Crop diversity**—A SPIN product line contains a much wider diversity of crops than most contemporary farming, with some SPIN farms producing over 100 different varieties and 50 different types of crops per season. However, SPIN also provides models that specialize in a particular crop.
  - **Season extension is optional**—SPIN does not rely on season extension to expand production; however season extension can be used to push SPIN yields and income significantly higher.
  - **Direct marketing**—SPIN bases crop selection on what local markets want. Being close to markets allows for constant product feedback and ensures a loyal and dependable customer base. “Grow what you sell, do not sell what you grow,” is the SPIN farmer’s mantra.
  - **Mix-and-match multiple unit pricing**—SPIN’s marketing approach is to pre-bag produce items and sell them at certain price tiers—for example, US\$3.00/unit or any two for US\$5.00.
  - **Commercial refrigeration capacity**—SPIN calls for commercial refrigeration capacity because cooling crops immediately after they are harvested retains their quality which supports premium pricing. Refrigeration also provides control over the harvest schedule and allows for a manageable workflow.
  - **Minimal mechanization and infrastructure**—SPIN’s most important and costly equipment is a rototiller and a walk-in cooler or upright produce cooler. All other SPIN implements and infrastructure can be sourced at local garden supply or hardware stores.
  - **“Home-based” work crew**—Supplemental labor requirements for a SPIN farm are minimal and can be readily obtained within a network of family, friends, and/or the local community.
  - **Use of existing water sources**—SPIN relies on local water service or wells for all of its irrigation needs.
  - **Low capital intensive**—SPIN farms have minimal infrastructure and minimal overhead to keep start-up and operating expenses manageable. The bottom line is little or no debt.
- The intricacies of the SPIN system go far beyond what is outlined above, but this itemized list gives an idea of how SPIN can produce significant revenue from subacre land bases. Compared to a large-scale operation, a subacre farm can produce the same, or even greater, income, with much less stress and over-

head and much more certainty of success from year to year.

Who is starting to practice this new spin on growing food? Some have been educated in other professions, or have had other careers. Some have home or community-gardening experience, while others have never had dirt under their fingernails. Some come from traditional farm families, but most do not.

SPIN farmers are refugees from unsatisfying jobs. Or they are seeking to balance their mentally demanding computer-oriented work with some purposeful exercise. Some people pursue farming full-time, others part-time. Some adherents have more money than they know what to do with, while others have less than they need. What unites them all is an ability to view and practice farming in a new way.

People who take up SPIN farming have a sense of idealism/romanticism, embracing independence and a pioneering spirit that is tempered by a pragmatic capacity for consistent effort. They recognize that cities are impulsive, boisterous, spontaneous, and competitive, while agriculture is plodding, tranquil, deliberate, and deferential. And they are capable of envisioning a world where for one to be right, the other does not have to be wrong.

Whether SPIN farmers establish their farmsteads in the middle of urban jungles or sprawling suburbia, they are all uniting behind SPIN to advance engaged, rather than escapist, agriculture. They are returning to the cities and towns that have segregated food production beyond their borders and are re-introducing the practice of intelligent, dedicated craft- and soil-based farming. They are making food production visible and palatable and galvanizing their neighbors around an activity that delivers both economic and environmental benefits. And they are bringing the well-documented redemptive power of agriculture to their communities in a commercially viable manner.

Examples of SPIN-Farming in practice include:

- A woman at the University of Minnesota who has created a subacre campus farm, sends emails about produce availability to people on her customer list each week, and harvests and delivers exactly what is needed to fulfill orders.
- A food co-op in Oklahoma City that is organizing a cooperative of local SPIN-Farmers so that it has a steady and reliable supply.
- A writer in Norfolk, Virginia, who has converted her backyard to subacre production to supplement her income.
- A woman in Kewanee, Illinois, who specializes in salad mix and sells via an email list.
- A man in Napa Valley who is redeveloping a mobile home trailer park and is incorporating

SPIN-style farm plots into the individual residences.

- A woman who is redeveloping eight acres on a housing project in Milton, Florida, which sustained extensive hurricane damage, incorporates subacre SPIN-style farms to help residents generate income to offset the cost of their homes.
- A semiretired man in Zanesville, Ohio, who is farming a quarter-acre backyard and selling at the Muskingum County farmer's market.
- An urban farming organization in Buffalo, New York, that is using SPIN to convert 2.25 acres of vacant lots to a sustainable farming operation that will sell commercially as well as provide free distribution to low-income neighborhood residents.
- An immigrant senior center in Edmonton, Alberta, that is using SPIN to create an urban farming training program for immigrant seniors.

SPIN-Farming has more possible applications for individuals as well as developers, planners, and nongovernmental organizations. By recasting farming as a small business in a city or town, SPIN is providing people with a tool for redefining farming for the 21st century—subacre, low capital intensive, environmentally friendly, close to markets, entrepreneurially driven. This trend is helping to undo the image of urban farming as an activity of last resort for the downtrodden and the disadvantaged. It is redirecting aspiring farmers away from traditional agricultural products that lose money and toward products that meet the needs of urban and suburban customers. And it is helping to accelerate the progression of urban agriculture from an elitist pipe dream to a populist movement that cuts across geography, generations, incomes, and ideologies to provide common ground, quite literally, beneath everyone's feet.

## References

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