

*Tribute to Jac Smit*



**On the past and the future of the urban agriculture movement: Reflections in tribute to Jac Smit**

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**JS** In the second half of the 19<sup>th</sup> century and early 20<sup>th</sup> century, a number of reformers responded to the horrific conditions of life in the expanding industrial cities of Europe and North America by calling for the transformation of modern cities through a rationalized system for producing built environments that can accommodate growing populations while improving living conditions. As Carolyn Steel has rightly pointed out, food has long shaped our cities (Steel, 2008), and food did hold a central place in the theories of many of the key early thinkers about cities and land.<sup>1</sup> These theories were intimately connected to

urban reforms through a range of progressive but paternalistic urban design interventions that consciously sought to weave the green shade and restfulness of the countryside into city parks, street tree plantings, urban allotment gardens, and green river and canal banks. On a darker note, the healthy relaxation touted by garden enthusiasts also served to shift the burden of sustenance away from industrialists and fair-wage policies and onto the shoulders of urbanizing families, especially the women in them (cf. Bellows, 2004). But on balance, garden spaces in densely populated cities and factory settlements offered valuable nourishment and quiet retreats from the chaos of work and cycles of economic instability and war.

Despite this long history of thought and practice about the place of food in the city, urban areas stopped commonly being seen as spaces of food production — and, more generally, the intimate

<sup>a</sup> Anni and Joe benefited from the excellent technical and organizational support proffered by Gabriela Alcaraz V., ABD, Agricultural Economics, University of Hohenheim.

*Note: Consult the list of acronyms on page 22 for any unfamiliar to you throughout these reflections. A consolidated reference list appears on page 23.*

<sup>1</sup> Just to cite some key theorists who gave a central place to the food system in their thinking about urban settlements: Henry George, von Thünen, Ebenezer Howard, Patrick Geddes, Frank Lloyd Wright.

*Photo: Jac Smit giving a presentation on urban agriculture in 2002 at the Woodrow Wilson International Center for Scholars in Washington, DC. A photo of a Del-Mar-VA (Delaware-Maryland-Virginia area) greenhouse is in the background. Photo by David Hawxhurst, WWICS.*

relationship between food and cities became increasingly and thoroughly disconnected over the course of the 20<sup>th</sup> century.<sup>2</sup> This social, psychological, and physically designed separation is one of the ill-fated aspects of what is sometimes referred to as “the urban century.”

Yet here we are today, in a world where the industrialized and globalized system of food production that provided essential underpinnings of this past century’s momentous transformations is under increasing attack for being socially unjust, environmentally unsustainable, economically precarious, nutritionally ravaging, energetically wasteful, and more. The critique has been buttressed by the concurrent evolution of community- and local-scale food-system alternatives. In the course of a few short years, the relationship between food and cities is newly maturing after decades in the shadows, with urban agriculture acting as a pivotal lynchpin in the development. In a word, urban agriculture is “hot.” It is visible again. To comprehend this reemergence, one must understand the role that Jac Smit played in it.

Jac Smit was born in 1929 in London and emigrated three years later with his parents to the United States. According to the biography encapsulated in nine audio segments on his website ([www.jacsmit.com](http://www.jacsmit.com)), he started gardening in the third grade; this engagement with the potential of soil and plants sparked an interest that carried through to a junior college degree in ornamental horticulture and graduate studies at Harvard University (masters in city and regional planning in 1961). Jac was an optimist, an activist,<sup>3</sup> and a self-

starter. He worked on several continents developing city and regional plans that promoted the research and practice of urban food and fuel production. His curiosity and vision pursued the ramifications of urban agriculture on planning for social, financial, and environmental systems and infrastructures, in and near cities, including job creation, food production and nutrition enhancement, gray- and wastewater recycling, urban composting, air cooling and cleaning, and the presence of a framework of green zones. He found the applications relevant, as he says, from Zimbabwe

to Santa Barbara, ground level to raised beds, and from greenhouses and hydroponic systems to rooftops and skyscrapers.

Jac started to reflect on urban agriculture in the context of graduate papers he was writing in graduate school. In the mid-1960s, he went on to work as a planner on the Chicago Regional Plan, introducing

green productive wedges between development corridors. Following this experience, he worked for two decades as a planning consultant in a wide range of countries, among others, for the Ford Foundation, the United Nations, and the governments of Norway and Japan. Through work in Calcutta, Karachi, Bangladesh, the Suez Canal zone, Tanzania, the Sinai desert, Baghdad, and elsewhere, he was able to include the promotion of urban and peri-urban agriculture into plans for new development areas, in refugee resettlement, in postwar reconstruction, and in large-scale metropolitan plans.

In 1991, the United Nations Development Programme (UNDP) awarded Jac Smit a contract that asked him to assess what is known and practiced in urban agriculture, a field that was barely known at the time. With the help of Joe Nasr, a young doc-

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(<http://www.plannersnetwork.org>), and the World Future Society (<http://www.wfs.org>).

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**Jac critiqued the concept of a rural-urban “divide” ...to him, this should be replaced with the concept of diverse human habitats represented by a continuum of food production capacities.**

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<sup>2</sup> Of course, there are some exceptions to this general rule, the most notable one being the brief rediscovery during the Second World War.

<sup>3</sup> Jac Smit was a long-term member of Planners Network, an international coalition of progressive planners

toral researcher at the University of Pennsylvania at the time, he undertook an extensive desktop survey and a set of field visits (ultimately taking Jac to 16 countries on three continents). This initial contract allowed him to focus exclusively on urban agriculture for several years — a focus he maintained for the remainder of his professional career. To foster attention to this new and growing area, Jac, together with Joe, founded the information and consulting organization, The Urban Agriculture Network (TUAN) in 1992, and remained its president until Joe took over the role in 2009.

Among the multiple ways in which he advocated for the importance of urban agriculture (making plans, public speaking, advising researchers, discussing with decision makers...), Jac's most significant contribution to popularizing the topic may have been his work as an author. His first published article on the subject dates back to 1980 (Smit, 1980) — prehistoric times in terms of the urban agriculture movement. In 1992, he co-authored with Joe Nasr an article based on the early results from the UNDP-sponsored study (Smit & Nasr, 1992/1999), which was frequently cited by others starting to join the urban agriculture movement. This article provided the groundwork for the 1996 UNDP publication he co-authored with Annu Ratta and Joe Nasr, *Urban Agriculture: Food, Jobs, and Sustainable Cities* (Smit, Ratta & Nasr, 1996). This book, for which Jac is best known internationally, helped to build recognition of and support for urban agriculture as a broad-based, multifaceted set of activities, ultimately anchoring it inexorably in the discourse on sustainability. The second, expanded edition of this book, written in 2000–01 but never published, is due to be released online at the end of 2010.<sup>4</sup>

The 1996 publication coincided with the 2<sup>nd</sup> United Nations Conference on Human Settlements in Istanbul in the same year. Cities were grappling

with the growing global phenomenon of rural outmigration and the crushing waves of resettlement on their old and insufficient infrastructure systems. Jac introduced to that event a vision of an urban agriculture made up of container gardens, of community tool sharing, of flexible access to undeveloped public and private space — a vision relevant to a wide range of stakeholders, from individuals to civil society organizations, entrepreneurs, and public-sector planners.

Anni Bellows heard of Jac Smit and the “Habitat II” Conference in Istanbul while conducting field research in 1996 on the Polish garden or *dzialki* allotment system. On her return to Rutgers University, she traveled to Washington, DC, to meet Jac and to visit the TUAN headquarters, located in a beautiful old home in the residential section of Mount Pleasant. Jac was delighted that doctoral research on an urban food production system had been sanctioned, and he encouraged her to publish the results.<sup>5</sup> He was always trying to expand knowledge and acceptance of urban agriculture through diverse forms of media and communication. Ten years later, he collaborated with Anni and Katherine Brown, together with the support of the Community Food Security Coalition's Urban Agriculture Committee, to write a review of research on the *Health Benefits of Urban Agriculture* (Bellows, Brown & Smit, 2005).

In 1997, Anni invited Jac to Rutgers, the State University of New Jersey, where he shocked some of the geography, nutrition, and agriculture faculty and students by figuratively striding through the advantages of city gardening plots and onward to the urban fringe, calling all of the highly populated state of New Jersey an urban agriculture zone. Jac was like a kid in a candy store, thinking about how new hydroponic, de-salinization, solar and other technologies could enhance profit-making green

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<sup>4</sup> The second edition of *Urban Agriculture: Food, Jobs, and Sustainable Cities* by Jac Smit, Joe Nasr, and Annu Ratta, sponsored by UNDP, 2001 (unpublished), will be placed on the websites <http://www.jacsmit.com> and <http://www.metroagalliance.org>

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<sup>5</sup> Jac mentored a number of young urban agriculture researchers and activists over the years, whether by offering them opportunities for employment or internship at TUAN, or through advice and support. Building on this launch pad, several of these individuals have maintained a focus and even a career around urban agriculture.

businesses, at the same time that he embraced the enthusiasm of city gardeners resisting concrete to establish plant-a-row strategies for soup kitchens. He was always interested in bridging divides — including distinctions between high tech and low tech, and for-profit and for-livelihood,<sup>6</sup> approaches in the context of urban agriculture.

Similarly, Jac critiqued the concept of a rural-urban “divide” that defines where food can or should be produced. To him, this is a failed idea that should be replaced with the concept of diverse human habitats represented by a continuum of food production capacities located in more and less built spaces. He was thus delighted when asked by Andre Viljoen and Katrin Bohn to write the foreword to the 2005 book *CPULs — Continuous Productive Urban Landscapes* (Viljoen, 2005), which is proving influential in its own right. The book introduced the idea of CPULs, a concept that reimagines urban landscapes with spaces of food production weaving through the more and less built-up fabrics of urbanized areas. Reflecting after Jac’s passing, Andre and Katrin find that the two words in “urban agriculture,” as popularized by Jac, are “radical agents” that “provoke a powerful visual image” and offer “a certain helpful ambiguity ...that encompasses a lot.”<sup>7</sup>

<sup>6</sup> Jac Smit always opposed the use of the term “subsistence” as applied to urban agriculture, preferring concepts such as “livelihood” to convey the role that urban agriculture plays, especially for the poor. For the above-mentioned second edition of the *Urban Agriculture* book, he favored substituting “livelihood” for the “jobs” in the original title.

<sup>7</sup> “There are many different interpretations for what they [the words “urban agriculture”] actually mean. This openness alongside specific interpretations is healthy and inclusive, opening ways to speculate.” Personal communication, Andre Viljoen and Katrin Bohn with Joe Nasr, 7 September 2010.

In this “Denkmalschrift”<sup>8</sup> we celebrate the life and work of Jac Smit, who passed away on November 15, 2009. We have gathered here contributions from some of his colleagues who introduce his work in the Global North and South while reflecting on their own involvement in and around urban agriculture.

The authors are based in nongovernmental and United Nations organizations as well as academia. Their involvement in urban agriculture arises from grassroots empowerment to global antihunger efforts, and from knowledge sharing to capacity building. All of them knew Jac for years, during which time they witnessed the emergence of urban agriculture from a fringe curiosity to a global movement that has now captured the attention of high-level policy-makers

and ordinary citizens alike. Rather than a simple tribute to him, we asked these experts to reflect on this emergence through the lens of their interaction with Jac over the past few decades. Transcending the tribute to Jac, the collected stories serve as a collective oral history written by a half-dozen key actors in the movement itself.

Diana Lee-Smith, co-founder of the Mazingira Institute<sup>9</sup> (one of Africa’s most-established independent research and advocacy centers) and former sub-Saharan Africa coordinator for the UN’s Urban Harvest program for Africa,<sup>10</sup> opens the series of reflections. This is appropriate since it was in East Africa that concentrated research and extensive activism on behalf of urban agriculture first took place, dating back at least to the 1970s.

<sup>8</sup> This German term refers to a series of contributions written in the memory of a noted person to celebrate his or her accomplishments and reflect on how they were influenced by him or her.

<sup>9</sup> Mazingira Institute, <http://www.mazinst.org>

<sup>10</sup> See <http://www.uharvest.org>

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Not only was much research on urban agriculture taking place there when little had started elsewhere, but this research introduced a participatory approach before the same-named methodology was acceptable academic practice. Stakeholder-based research, and later activism, resulted in expanded public engagement with urban agriculture and that leveraged related policy changes. Jac was there to witness and support this pioneering work — back before there was something to call an urban agriculture movement.

Much of the serious research that Diana refers to — and took part in — was initially supported by one international funding agency: the Canadian International Development Research Centre (IDRC).<sup>11</sup> Luc Mougeot, instigator of the IDRC's commitment to urban agriculture and original coordinator of its Cities Feeding People program, offers his thoughts next. Luc provides an insight on the intense international collaborative initiatives that existed in what may be considered the “take-off phase” of the urban agriculture movement — *pre-Internet*. The IDRC played a critical role in funding individual research on urban agriculture. But beyond that, the IDRC supported Jac and others with opportunities for face-to-face interactions that facilitated the construction of information and communication networks in the age of snail mail and prohibitively expensive international phone calls. These meetings played a crucial role in the emergence and maturing of the urban agriculture movement.

While the processes of uniting diverse international engagements in urban agriculture began with direct interactions and posted envelopes, there is no question that the remarkable growth in interest in the past few years surged forward through the power of the Internet. No one is better equipped to reflect on this transition than Michael Levenston, creator of the City Farmer website<sup>12</sup> — the pioneering depository of information on the subject, for which Jac wrote a regular column until his death.

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<sup>11</sup> International Development Research Centre, <http://www.idrc.ca>

<sup>12</sup> See City Farmer News, <http://www.cityfarmer.info>

Mike provides us, in the third piece, with insights on how the Internet exponentially expanded communication, and with it, urban agriculture networks, outreach, awareness, and knowledge.

Peter Mann, director emeritus of the Global Movements program of WhyHunger (formerly World Hunger Year),<sup>13</sup> shares observations on other transitions in the urban agriculture movement. Initially, one of the principal drivers of interest in urban agriculture was the effort to counter hunger around the world, as self-provision came to be seen as one approach in strengthening the supply of food to the poorest members of society. Peter shows in the fourth piece of our series how city farming came to transcend this initial focus, moving toward broader goals of community food security. Building on a reflection of his interaction with Jac, Peter shows how urban food production continues to evolve in directions that bridge the rural-urban divide and ensure social justice.

Communication, internationalization, and activism have helped transfer working concepts for and experiences in urban agriculture globally. In the next piece, Katherine Brown, who has led the Southside Community Land Trust in Providence, Rhode Island,<sup>14</sup> to become one of the premier organizations focusing on urban food production in the U.S., shares her perspective on why “urban agriculture” is “oxymoron no more.” Based on her local experience working in the trenches, Katherine (who collaborated with Jac on the *Urban Agriculture Primer* and with Anni and Jac on the *Health Benefits of Urban Agriculture*) comes to the conclusion that the success of urban agriculture projects will remain limited as long as “their integration into the city’s fabric and power base” has not been ensured.

The final contribution is somewhat different from the others, offering Jac’s voice more directly. Its author, Jerome Kaufman, emeritus professor of


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<sup>13</sup> See WhyHunger, <http://www.whyhunger.org>; WhyHunger’s Global Movements Program, <http://www.whyhunger.org/programs/global-movements.html>

<sup>14</sup> See Southside Community Land Trust, <http://www.southsideclt.org>

urban and regional planning at the University of Wisconsin–Madison, certainly could have written a similarly reflective piece, having played a central role in the fast adoption of food-system planning into the American planning profession’s mandate.<sup>15</sup> Instead, Jerry chose to share Jac’s own thoughts on the *future* of urban agriculture, based on an interview Jerry had with him just a few months before Jac passed away. This offers a fitting end to our commemorative tribute, as Jac — despite his strong interest in the history of urban agriculture and care for its present conditions — was always looking forward to where the movement needs to go next.

Jac Smit propelled the urban agriculture movement forward through his visionary embrace of the

diversity and magnitude of projects and approaches initiated around the world, including his own. He understood that real change happens through a broad spectrum of concurrent and autonomous actions projecting us forward on a trajectory that no one person can plan, though he did believe that progressive planners, himself included, should instigate and support such a course. Jac’s objective was always to develop multifunctional urban food production strategies that could address food security, green open space, social needs, environmental enhancements, and more, and all at the same time — or as his 1996 book subtitle said, food, jobs and sustainability for cities. 

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<sup>15</sup> See, for example, the American Planning Association’s Food Interest Group (FIG), <http://www.planning.org/national-centers/health/food.htm>

## Relating research to action on urban agriculture — the East African experience

Diana Lee-Smith, Mazingira Institute, Nairobi

**JS** We first met Jac Smit in the 1980s when he came to visit the Mazingira office in Nairobi while we were working on our national survey of urban agriculture and he was in Tanzania; however, we had “met” much earlier. There was much networking in those early days, done without benefit of the Internet, but ideas and discussions about urban agriculture took place through Planners Network<sup>16</sup> and Settlements Information Network Africa (SINA),<sup>17</sup> using the postal system. Jac Smit linked up to Mazingira Institute in Kenya right at its start, having made contact earlier through the Planners Network in the mid-1970s.

In Africa, civic action on urban agriculture has often been preceded by research, but the process of effecting action has often been long and complicated. The earliest research on urban agriculture in Africa, such as that by Vennetier (1963) in Congo Brazzaville going back to the 1960s, and later by Sanyal (1985) in Zambia, failed to persuade either international organizations or national governments at the time that it ought to be part of their development planning. Urban agriculture was seen as a marginal activity of the urban poor — occasionally supported through community kitchen garden projects — rather than as something to be included in public decision-making. Jac campaigned tirelessly for urban agriculture to be

incorporated in development planning internationally as well as in the policy systems of a number of countries.

Researchers in Eastern Africa working on urban agriculture got a big boost when IDRC responded to their ideas. Program officers Aprodicio Laquian and Yue-Man Yeung, who were familiar with the subject from Asia (where they had undertaken some pioneering work) as well as other regions, supported the research of Daniel Maxwell in Uganda, Camillus Sawio in Tanzania, and the Mazingira Institute in Kenya. All three studies attempted to address policy issues and engage decision-makers locally as they worked, and the results were effectively disseminated when IDRC later published them in the book *Cities Feeding People* (Egziabher, Lee-Smith, Maxwell, Memon, Mougeot, & Sawio, 1994).

Jac, Annu Ratta, and Joe Nasr took the data to much wider attention when it was included in the book *Urban Agriculture: Food, Jobs and Sustainable Cities*, published in 1996. Jac did not leave it there, but, thanks to his influence internationally, helped persuade the Consultative Group on International Agricultural Research (CGIAR) to start a system-wide initiative on urban agriculture research, Urban Harvest, which ran for a decade. I was privileged to run its Africa Program in 2002–2005 and helped edit two recent books emerging from the research (Cole, Lee-Smith, & Nasinyama, 2008; Prain, Karanja, & Lee-Smith, 2010).

The efforts of Urban Harvest, Resource Centres on Urban Agriculture and Food Security (RUAF),

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<sup>16</sup> A U.S.-based international network of progressive planners that publishes *Progressive Planning*.

<http://www.plannersnetwork.org>

<sup>17</sup> This Kenya-based network has published a newsletter covering the region since 1981. <http://www.mazinst.org/sinahomepage.htm>

the Municipal Development Program, International Water Management Institute (IWMI) and other multinational programs and entities have resulted in the building of research-to-policy platforms. These institutions engage a wide range of actors applying research to policy and have been effective in bringing about needed civic action.

Informed by Sawio's research and the Sustainable Dar-es-Salaam Program's 1992–1993 UN-supported stakeholder consultation process, the Tanzanian government introduced legislation governing urban crop and livestock production and developed a strategic plan for urban agriculture. Together with the Urban Vegetable Promotion Project under the Ministry of Agriculture and Cooperatives, which included research initiatives, these measures led to an abundance of food produced in the city and improvement in urban farmers' incomes. The adoption of both national and local government policy measures on urban agriculture occurred two decades after Jac had worked in Tanzania and advocated for such measures.

In Kampala, the capital of neighboring Uganda, it was local stakeholders who built an institution to guide policy on urban agriculture, specifically by linking research to action. The Kampala Urban Food Security, Agriculture and Livestock Coordinating Committee (KUFSAALCC) carried out research and mid-wifed new legislation on urban agriculture in 2006. The participation in the research of representatives of both local and national government, elected politicians among them, along with local NGOs and university departments, was influential in making the political leadership aware of urban farmers' concerns, as well as in getting the new laws passed. It was the first instance of public participation in law-making under Uganda's 1995 constitution.

A similar research-policy platform on urban agriculture was built about the same time in neighboring Kenya in very different circumstances. Despite its economic development, the interests of Kenya's urban poor, particularly in the capital, Nairobi, were neglected. There was extensive research on

urban agriculture in the country but virtually no policy support by the end of the 1990s. While international assistance helped initiatives in some local governments outside the capital, the local authorities in Nairobi and other towns remained hostile. After a change of government in 2003, the Nairobi and Environs Food Security, Agriculture and Livestock Forum (NEFSALF), aimed at bringing public, private and community stakeholders together, was convened by the Mazingira Institute in 2004 as a bottom-up initiative from civil society.

NEFSALF attracted many farmers, with nearly 700 members belonging to about 50 groups by 2008. The farmers formed a network with a gender-balanced executive committee and procedures, and set their priorities, which included skills training. Researchers attended because they wanted to disseminate their results to farmers, and the Ministries of Agriculture and Livestock also came, realizing that they could collaborate and use the Mazingira Institute as a base for running courses for the farmers. This had such an impact that Nairobi province was selected to launch the second phase of the National Agriculture and Livestock Extension Program (NALEP) in 2006. Meanwhile Urban Harvest helped the Kenyan government hold a stakeholder workshop on urban agriculture in 2004, and supported the Municipal Council of Nakuru — Kenya's fourth-largest town — in developing urban agriculture bylaws. Despite the reluctance of Nairobi City Council to engage with farmers in the capital, the central government continued moving forward. A preliminary draft of Kenya's Urban and Peri-urban Agriculture policy was being circulated in 2010. And finally, urban agriculture was also incorporated in the National Land Policy adopted in 2010.

To the end of his life, Jac Smit remained in contact and abreast of these efforts, affording endless moral support. The book *African Urban Harvest* (Prain et al., 2010) that documents them is dedicated to him.





## Thoughts on the emergence of urban agriculture as a global movement

Luc J. A. Mougeot, International Development Research Center

**JS** I first met Jac Smit at the headquarters of the UNDP in New York City (NYC) in 1992. Under the mentorship of Frank Hartvelt, then deputy director of the UNDP's Division for Science, Technology and Private Sector, and with support from the Urban Development Unit's Jonas Rabinovitch and Robertson Annu Ratta and planner Joe Nasr, had just completed the draft of a field survey on urban agriculture worldwide. By the time this report was completed, this consultancy had taken Jac's team at TUAN to cities in some 30 countries. As the manuscript made good use of results from research funded by the IDRC in the late 1980s in East Africa, the UNDP invited the IDRC to sit on the external panel that would review the manuscript. This was a time when we at the IDRC's Social Sciences Division were revisiting our urban programming under my responsibility. We had collaborated with UN programs on several urban issues in the past, and we saw this invitation as an opportunity to explore the potential for research on this growing activity to contribute to development in cities of the Global South.

Jac's work on urban agriculture was unprecedented. Never before had a study of such scope been undertaken on the subject by any agency, private or public. It documented, classified, assessed, and synthesized ground practice, then suggested concrete interventions for "policy and action".<sup>19</sup>

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<sup>18</sup> Rabinovitch was then senior urban environment advisor, and Work was then senior program advisor.

<sup>19</sup> The United Nations University's Food-Energy Nexus Programme (1983–1987), directed by Prof. Ignacy Sachs, produced some 27 reports of its own, surveying innovative ways at work in over 20 countries to improve the urban poor's

The book was also a feat. Given the informal nature of much of urban agriculture in most of the world, as well as incipient public records on this sector, the practical challenges faced by Jac's team were many. Peer review was severe and, in the midst of reduced Overseas Development Assistance by donor countries in the early 1990s, it would take four years for *Urban Agriculture: Food, Jobs and Sustainable Cities* to be published. To this day, not only the scale of the effort contained in this one book remains unsurpassed but, nearly 15 years later, its agenda remains largely germane today.

My meeting with Jac in NYC was the beginning of a long and most enriching professional relationship. Jac had an extensive network of contacts in East Africa, and the IDRC hired him as a consultant initially to join me on visits to Nairobi and Dar-es-Salaam, to help negotiate the joint funding of an action research on urban agriculture with UN Habitat.<sup>20</sup> This research was to inform a flagship project of UN Habitat's Sustainable Cities Program on environmental management in Dar-es-Salaam. The collaboration with UN Habitat led the IDRC to be invited and to feature its urban agriculture programming at the 2<sup>nd</sup> UN Conference on Human Settlements (commonly known as Habitat II) in Istanbul (1996). This first collaboration between the IDRC and UN Habitat on urban agriculture was the beginning of a series of projects on this topic, jointly funded by the two organizations over the next decade.

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access to energy and food. A majority of these reports addressed urban agriculture practices.

<sup>20</sup> UN Habitat: <http://www.unhabitat.org>

In 1994, the International Institute for the Environment and Development (IIED) was commissioned to organize Global Forum '94: Cities and Sustainable Development, a five-day conference in Manchester, UK, attended by officials from 50 cities around the world. Jac and I led a workshop for city officials where we polled participants on their perception of, and experience with, agricultural activities in their own city. We were surprised by the degree of acceptance and support that city officials expressed. This provided arguments for Jac and UNDP officials to put urban agriculture on the agenda of its International Colloquium of Mayors in 1994 in NYC. At that colloquium the assembly of mayors would issue a specific recommendation for all actors to support the creation of jobs through urban agriculture.

In early 1996, the IDRC commissioned TUAN to provide background research and facilitation for a meeting that the IDRC would convene in Ottawa. This was for interested development agencies (including the World Bank, the UN Food and Agriculture Organization (FAO), the UNDP, and the German and Dutch agencies for International Cooperation — GTZ and DGIS) to better coordinate support to urban agriculture in the Global South. Jac produced and presented a perspective on the development of the sector. And it was at that meeting that the DGIS and IDRC agreed to work together to fund what later would become the first (and still is the largest) worldwide network of Resource Centers for Urban Agriculture and Food Security (RUAF). The meeting also formalized a global Support Group on Urban Agriculture (SGUA). This was mostly composed of development agencies that wanted to keep in touch with one with another to take opportunities to complement each other's work in this new area.

TUAN became an associate of the RUAF network, and Jac played an important liaison role in the SGUA, whose leadership eventually would migrate from the IDRC to ETC International (Educational Training Consultancy International), the coordinating body of RUAF. Jac remained decidedly engaged in SGUA proceedings.

In the context of the United Nations General Assembly's Special Session on Implementing the Habitat Agenda (Istanbul+5) in NYC in early June 2001, and given the IDRC's and UN Habitat's interest in working more together on policy-oriented research, we organized at the UNDP headquarters a lunchtime brainstorming between Jac, Frank Hartvelt, myself, and regional officials of UN Habitat's Urban Management Programme. This lunchtime meeting gathered some 30 local government officials from cities around the globe. We polled them on their information needs for better

local policy on urban agriculture. Out of this exploration, the IDRC and UN Habitat would launch a series of multicity research projects between 2001 and 2004. These projects documented practices and tested innovations in urban physical planning, municipal regulations, and financing and credit vehicles for small urban producers.


From where I stood, Jac Smit's steadfast commitment and passion, as an advocate, an adviser, a catalyst, a liaison, or a facilitator, was felt, respected, and valued in many of the key moments that defined the rise of urban agriculture on the development agenda in the 1990s and early 2000s. Jac's greatest contribution just may have been to open our eyes to the scale and potential of urban agriculture, then let us deal with it in the best way we could, within our respective mandates, competences, and resources.

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It was unfortunate that Jac could not make it to the World Urban Forum in Vancouver in 2006, where so many of his expectations by then had flourished and others were blossoming. The last time I spoke to Jac, a couple of years ago, we were marveling at the advances over the last decade — advances in public awareness, in community support, in academic training and graduate research, in policy making and public programs, in technology development, and in private-sector business. I sensed that, in hindsight, he was gratified by the many changes. Over the course of a little more

than a decade, a collective initiative had crossed cultures and continents, scientific disciplines, and organizational mandates. Jac Smit had been a principal instigator and relentless promoter. Thanks to this initiative, which spanned research, technical assistance, information, and financing, what we know of urban agriculture (and agricultural urbanism) — what we have learned from Jac — now provides governments with an unprecedented opportunity to factor urban agriculture into better strategies for agricultural development in our now largely urban world. 

## Tribute to Jac Smit

### The Internet and urban agriculture

Michael Levenston, City Farmer Society

**JS** When we began our work in 1978 at City Farmer, an organization dedicated to teaching people how to grow food in the city, it was an exciting day when we saw the subject “urban agriculture” mentioned anywhere. We’d send away for the publication by “snail mail,” wait for it to return weeks later, and then proudly shelve it in our library. If an interested visitor wanted to see that paper, he’d visit our office, read it at a desk, and then Xerox a copy.

Today, if a graduate student finishes writing her thesis on urban agriculture, she can email it to me as a PDF or .doc file from thousands of miles away, and within minutes I can FTP it to my server and place a story and link to that 150-page document on our current website *City Farmer News*, where millions of people can read it immediately without leaving their desks or needing to put a stamp on an envelope.

New ideas travel that fast today, and this transformation of our communication system began in the early 1990s when the Internet emerged. I remember being at a meeting of Vancouver’s Apple computer club in 1993, looking at a computer screen as someone showed us the marvels of a text and graphically rich web page that some early pioneer had put online.

It wasn’t long before I begged the University of

British Columbia to let me have an Internet account so that we could put up our own website. City Farmer received support letters from professors in the faculties of Agriculture and Landscape Architecture. The university technology staff patiently taught me the basics of HTML coding because there were no books on the subject back then.

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**Jac was always eager to hear how many “hits” the City Farmer site received each month. He understood that the growing popularity of urban agriculture was related to the Internet’s reach.**

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In October 1994 we went live on the Internet with *Urban Agriculture Notes*.<sup>21</sup> I remember the massive job of putting Luc Mougeot’s *Urban Food Production: Evolution, Official Support and Significance* on the website. I used optical character recognition to scan the printed document and then

laboriously hand-coded the pages, linking them to a table of contents.


But the effort was always worth the trouble because of the growing audience around the world. I found it riveting to check my data logs every morning and see new countries appearing. For example, when Bolivia would appear it meant that someone in that country had Internet access and was reading about urban agriculture. I’d add that country to our home page in a uniquely colored font. As the country section grew, it began to look like a

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<sup>21</sup> <http://www.cityfarmer.org>. This site was superseded by <http://www.cityfarmer.info> in late 2007, but its archives are still maintained online.

delicious candy collection. My “stamp collection” grew to include the Solomon Islands, Maldives, Kyrgyzstan, Heard and McDonald Islands, and the Vatican City State; these were exciting and rare collectibles, and once we’d passed 200 states, I knew that urban agriculture had arrived.

Jac Smit was always eager to hear how many “hits” the City Farmer site received each month. Hits were an early measure of a site’s popularity. (That measure has been replaced today by “page views”

and “unique visitors.”) He understood that the growing popularity of urban agriculture was related to the Internet’s reach. We spoke about that subject often in our weekly phone chats between Washington and Vancouver. He thought enough about the immediacy of publishing on the Net to contribute weekly articles to our site, which were posted on a page titled “From The Desk of Jac Smit.” Jac embraced the 21<sup>st</sup> century and its useful technology and continued writing and planning future stories for us until his death at age 80. 

## Tribute to Jac Smit

### Urban agriculture: Linking the local and the global

Peter Mann, Global Movements Program, WhyHunger

Greenbelts around cities, farming at the city edge, backyard orchards, rooftop beehives, vegetable plots in community gardens, school-yard greenhouses, fish farms, municipal compost facilities, window box gardens, farm animals at public housing sites, restaurant-supported salad gardens — these are all examples of urban agriculture at work in our cities.<sup>22</sup>

**JS** Thus began the introduction to a Special Fall 1999/Winter 2000 Issue of the *Community Food Security News* on “Growing Food in Cities: Urban Agriculture in North America.”<sup>23</sup> The forms and scope of urban agriculture have only expanded in the decade since then as the local food movement has exploded, the economic crisis hit America’s inner cities, and urban farmers responded by turning vacant lands from “brownfields” into “greenfields.” In addition, the increasing health problems of inner city and rural populations have turned the attention of nutritionists, urban planners, and politicians to the issue of food deserts.

As co-editor of the newsletter with Kate Sullivan, this was the first time I collaborated with Jac Smit, who contributed an article entitled “The Roots of Urban Agriculture in North America.” I had met Jac years earlier in my international work when the

path-breaking book *Urban Agriculture: Food, Jobs and Sustainable Cities*, of which he was the lead author (Smit et al., 1996), opened the eyes of many of us at a UN conference to the incredible work of people growing food in and around cities throughout the world. I remember at that conference handing an extra copy of the book to Kathy Lawrence, at the time executive director of the organization Just Food, which we had recently launched in New York. I feel sure that *Urban Agriculture* was a catalyst for many local initiatives, including Just Food’s highly successful “City Farms” program.<sup>24</sup>

### Community Food Security and Anti-Hunger

Urban agriculture brought together in my work two worlds: community food security and anti-hunger/anti-poverty. Within the U.S, it was the Community Food Security Coalition (CFSC) that made a commitment to urban agriculture and brought its issues into public policy and federal agencies. In that early CFS newsletter, it was the words of inner-city community activists such as Karen Washington and Abu Talib that helped me see how urban gardening and farming can begin to transform poor communities.

Gardeners from Harlem to the South Bronx, to Wyoming, to Kansas City, we know who we are. We are forces of nature. We are sowing seeds of life, we are giving life to people in our communities, and that transcends everything. What we have in common is that we’re trying

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<sup>22</sup> Introduction, special issue on “Growing Food in Cities: Urban Agriculture in North America.” *Community Food Security News*, Fall 1999/Winter 2000.

<sup>23</sup> This was one of many publications by the Urban Agriculture Committee of the Community Food Security Coalition at [www.foodsecurity.org/ua\\_home](http://www.foodsecurity.org/ua_home). Unfortunately, this special issue of *CFS News* is not available in the newsletter’s digital archives.

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<sup>24</sup> For more on Just Food’s City Farms program, go to <http://www.justfood.org/city-farms>

to at least provide fresh food to people who need it.<sup>25</sup>

Since then, community food security issues and anti-hunger work have increasingly converged in urban farming, farm-to-school programs, community supported agriculture, farmers' markets, and food banks working with local farmers. WhyHunger's Food Security Learning Center brings many examples of this convergence.<sup>26</sup> Hank Herrera, a leader in developing local food systems, noted that the urban agriculture movement "has experienced explosive growth in the past few years with so many new folks and new leadership. It is all wonderful and truly inspiring to witness these changes. But at a moment like this, let's pause briefly to remember with fondness the people who came before us, led the way, encouraged and respected us. Knowing Jac was a gift."<sup>27</sup>

On the international level, it was primarily Jac Smit who opened my eyes to the ongoing connections between the urban poor and urban farming. As an urban planner employed for decades by governments and international agencies to develop agriculture plans for cities as well as in zones of conflict and refugee camps, he had a vast knowledge of global urban agriculture initiatives which he shared easily and eloquently with others. My last interview with him was on rebuilding Iraq's food system after the second Gulf War. In that interview he blended

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<sup>25</sup> Karen Washington, special issue on "Growing Food in Cities: Urban Agriculture in North America." *Community Food Security News*, Fall 1999/Winter 2000, 10.

<sup>26</sup> The Food Security Learning Center's (<http://whyhunger.org/programs/fslc.html>) topic on community gardens will soon be joined by a forthcoming topic on urban farming.

<sup>27</sup> See "Remembering Jac Smit" at [www.whyhunger.org/programs/39-global-movements/864-latest-news-from-global-movements.html](http://www.whyhunger.org/programs/39-global-movements/864-latest-news-from-global-movements.html)

historical perspectives on agriculture in the Middle East with practical initiatives for rebuilding Iraq's food system. It is tragic that the post-war history of Iraq went in a very different direction.<sup>28</sup>

### **Rural and Urban Linkages**

One problem in resolving urban food issues is that the needs of urban and rural populations are often treated as separate or even competing issues, when

in reality they are inextricably linked. The same forces that are driving peasants off the land are spurring rising rates of food insecurity and diet-related health pandemics in cities throughout the world. Indeed, many of those joining the ranks of the urban poor and food insecure are those who once earned their livelihoods from the land. Urban food insecurity therefore cannot be addressed in isolation from the crisis in the

countryside. A far more viable approach is to maximize the food-producing capacity of cities through urban and peri-urban farms and gardens, while building "urban-rural linkages" in which cities are fed through sustainable farms in surrounding regions and, in turn, "the purchasing power of global cities and their institutions can be an engine for new investment in the rural sector."<sup>29</sup>

Jac's work will live on, not least in the renewed focus on urban-rural linkages. I feel that his insights will help us resolve problems we face today.



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<sup>28</sup> The interview is in WHY Speaks at <http://www.whyhunger.org/news-and-alerts/why-speaks/473.html>. During the 1980s, Jac led the development of a comprehensive plan for Greater Baghdad.

<sup>29</sup> This section is adapted from Christina Schiavoni's "Addressing Urban Food Insecurity" section in Eradicate Hunger's 2009 report, and from Thomas Forster (2009) "Regions Feeding Cities — Urban Rural Linkages for Food Security."

## Tribute to Jac Smit

### Urban agriculture: Oxymoron no more!

Katherine Brown, Southside Community Land Trust

**JS** Farms in the city still sounded like a contradiction only 10 years ago when several of us, including Jac Smit, compiled an urban agriculture “primer” for the Community Food Security Coalition’s Urban Agriculture Committee (2003). Hoping to inspire others with the changes that are possible when urban food systems thrive, we peppered the document with examples of wonderful pioneers in the movement. Among the model projects we included were The Homeless Garden Project in Santa Cruz; in and near Boston, The Food Project’s farming-based youth leadership programs; Heifer Project’s Chicago-based Cabrini Greens project; Nuestras Raices’s social entrepreneurs in Holyoke, Mass.; and Will Allen’s Growing Power in Milwaukee. The primer also offered recommendations for growing the movement.

These days urban agriculture is common vocabulary. This morning, for example, a quick Google search yielded more than 9 million results when I typed in urban agriculture. And not a month passes without my mother sending me a *New York Times* news clipping about someone in some city growing, selling, or eating farm-fresh food. The number of community, backyard, and school food gardens has grown exponentially. Providence, Rhode Island, where I live, established over 20 new community gardens over the past three years alone, jumping from 250 to 750 families eating home-grown food. Farmers’ markets, CSAs, and farm-to-institution initiatives over the past decade have translated into farm viability and a resurgence in the number of new, young farmers.

The main reason that urban agriculture has taken hold so powerfully is that it has demonstrated on the ground that its impacts are immediately positive, far-reaching, and relatively cost-effective — whether as a tool for improving community food security, remediating polluted soils, connecting people to nature, building community, fighting crime, providing meaningful livelihoods, or growing the next generation of leaders and entrepreneurs. We have also prospered immeasurably from the guidance of brilliant but down-to-earth visionaries like Jac. I am among many others who learned from Jac’s remarkable ability to synthesize theory, practical know-how, and foresight.

Jac, Annu Ratta, and Joe Nasr’s 1996 book *Urban Agriculture: Food, Jobs, and Sustainable Cities*, often referred to as “the bible of urban agriculture,” kindled a palpable change in my and others’ thinking about what urban agriculture was capable of accomplishing. Their book was published when I was about a year into founding City Sprouts, a half-acre food garden in Omaha, Nebraska, on the site of a drive-by shooting in a vacant lot. Reading about their complex systems approach to urban agriculture and learning from their detailed documentation, I “got it” that our little garden was a part of something very big — worldwide in fact. What we in Omaha, and those hundreds of millions of others elsewhere, are doing is no less than re-envisioning our urban and suburban landscapes in ways that are making real differences in urban residents’ quality of life.

Subsequent conversations with Jac, Joe, and others at CFSC annual meetings reinforced the under-



standing that to realize urban agriculture's potential for structural change and social justice requires more than simply good examples of urban agriculture projects on the ground. For the impact of these projects to endure and expand, we urgently need to ensure their integration into the city's fabric and power base.

The concept of an interconnected food system that shapes the contours of urban agriculture's development, and the explicit appeal to include policy change in the urban agriculture agenda, opened the field to professionals and practitioners who otherwise would not have found common ground with urban agriculture's original proponents, such as community gardeners and youth advocates. Consequently, urban agriculture has become a regular feature at conferences, drawing an ever-widening and interlocking community of professionals from planning, environmental and public health, nutrition, social work, architecture and landscape design, economic development, social justice, criminal justice, and a range of other academic and scientific fields.

Funders too are increasingly attracted to the significant track record set by the USDA's Community Food Project Program grants. These grants require grantees to ensure that their program innovations strengthen sustained collaborations between such food sectors as producers, consumers, composters, and market vendors, and link broadly with people working to transform their community's transportation, economic development, education, brownfield conversions, health care, or affordable housing.

In preparation for writing this tribute to Jac, I took a look at the recommended to-do list we published in our Urban Agriculture Primer, and felt Jac's affirmative thumbs-up with where we've come. For

instance, the urban agriculture movement lays claim to food policy councils and other coalitions that have incorporated urban agriculture into city and state land-use plans, including zoning changes and developers' set-back requirements that enable edible landscaping and other areas where food can be grown. More and more cities are adopting regulatory allowances for chickens and bees, and for establishing community gardens in public parks. And a few cities have mandated composting as part of solid-waste management, providing support for on-site composting facilities in urban agriculture projects, with related public education programs and advice.

The farm-to-school initiative has grown from 10 schools with local food purchasing agreements in 1997 to 2,000 in 2008, many of them in urban centers (Joshi & Azuma, 2009). Most cities now boast farmers' markets, bolstered by government and philanthropic partners' expansion of WIC Farmer's Market Nutrition Program, the Senior Farmer's Market Nutrition Program, and EBT (food stamps) to support purchases of healthy local food. Urban agriculture practitioners have also learned a lot about how to remediate polluted urban soils for

food production (Scheyer & Hipple, 2005). As a result of these and many other milestones, city people are raising and eating increasingly noteworthy amounts of food. However Jac's memory remains as a compelling and persistent nudge, keeping us all working toward what still needs to be done.

More of the above is needed of course...and some! But land also remains key to the future of urban agriculture. The recent financial collapse has lowered land values and created a window of


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opportunity to preserve farms on the urban fringe and convert idle and underused urban lands into production areas. *Usufruct* is a term I learned from Jac, meaning the legal right to use property that belongs to someone else. Its nimble application in these times requires urban agriculture proponents to evolve new land-tenure schemes such as urban land trusts, leases, and even eminent domain to secure long-term commitment for community gardens, entrepreneurial farms, and other urban agriculture ventures. Urban agriculture advocates also need to be thinking outside the box with government, banks, businesses, and investors to tailor financial loan packages, subsidies, and

business savvy to fit urban agriculture's needs for capital to support infrastructure improvements to support local food systems. Finally, it would not be true to Jac's vision if we were to forget the need to support aquaculture by cleaning up and providing access to public waterways for raising fish so urban families have greater access to a high-protein source of food.

The movement is fortunate to have benefited from Jac's lasting wisdom and his undaunted sense of possibility. May we continue to draw from his legacy to guide our best thinking and most courageous and politically strategic efforts. 

## On urban agriculture's future: Some remarks from Jac Smit

Jerry Kaufman, University of Wisconsin–Madison

**JS** Jac Smit was one of the founders of the urban agriculture movement; some even consider him to be the father of the movement. I first met Jac in Chicago when I worked for the American Society of Planning Officials (ASPO) in the 1960s. Jac worked at the time for the Northeastern Illinois Planning Commission (NIPC) and led the team, as project director, that developed the Chicago Region 2000 Year Plan.

Our paths did not cross again until 30 years later when I discovered that he had become a leader in the emerging urban agriculture movement. Jac's interest and expertise in urban agriculture were honed over the period after he left NIPC as he worked as a planning consultant who helped prepare city and regional plans in far-away places, from India and Pakistan, to Egypt and Iraq, to Tanzania — making sure to integrate urban agriculture as a consideration in all these plans. A relative newcomer to the food-planning arena myself in the late 1990s, I asked him to join me in 1999 to speak at the first-ever session on food-system planning at a conference of the American Planning Association (APA).<sup>30</sup>

I remained in communication with Jac in the subsequent decade, as urban agriculture and other parts of the food system were gradually accepted into the fold of the planning discipline as an area of increasing interest. It was thus fitting that I would seek to include Jac in a session that I organized in 2009 at the APA conference in Minneapolis on *Urban Agriculture's Future*.

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<sup>30</sup> APA had been formed in 1978 through the merger of ASPO and the American Institute of Planners.

The attendance at that panel was massive — estimated at several hundred people.<sup>31</sup> Unfortunately, Jac could not join us, as he was terminally ill at that point. However, he was pleased to have me share some of his views about the future of urban agriculture with the audience at this session. This contribution is thus based partly on my phone interview with Jac Smit prior to that conference.<sup>32</sup> I will focus here on some of his thinking about the prospects for urban agriculture. His thoughts about the future nest within what he was fond of saying are the principal “drivers” of change that explain the surge of interest and application of urban agriculture in the 21<sup>st</sup> century.

1. *Rapid urbanization.* Jac points to rapid urbanization outpacing even population growth in the world — “the world became over half urban in 2005.”
2. *The Internet.* The Internet has given great impetus to the increase of global access to vast stores of information. In 1995 urban agriculture was not listed at the world's largest repository of information, the Library of Congress. In 2008, 13 years later, Smit said he checked urban agriculture on Google and found 4 million entries.
3. *Technology.* The development of technology for urban agriculture includes bio-intensive

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<sup>31</sup> Other luminaries who took part in that session on April 27, 2009, were Will Allen, the founder of Growing Power (the organization whose board I chair), and Wayne Roberts, the longtime coordinator of the influential Toronto Food Policy Council.

<sup>32</sup> Unless referenced otherwise, all passages below quoting Jac Smit are from phone interviews by the author, April 2009.

production; hoop houses that are less costly than greenhouses; drip irrigation; hydroponic and aeroponic production; eco-sanitation, which safely reuses city wastewater and solid organic wastes; and agricultural production on roofs, water, and fences.

4. *Energy and climate benefits.* Jac often pointed out the need for increasing recognition of the beneficial impacts of urban agriculture on energy and climate, often pointing to data he collected over the years to make his point.

a. *Productivity:* The UN Food and Agriculture Organization reports that urban agriculture produces seven times as much per acre as rural agriculture worldwide. NASA has found that the urban area in the U.S. has ten times the potential productivity per acre as compared to space that is currently being farmed.<sup>33</sup>

b. *Energy costs:* Urban agriculture has lower energy demand per calorie of food produced than does rural agriculture because, claimed Smit, of its greater relative productivity, its closeness to markets, and its use of urban organic wastes as a major production input.

So, what about the future? In a piece Jac wrote about sustainable development, he presented his vision of urban agriculture in the future as follows:

Urban agriculture will make roofs, fences, walls, parking lots, roadsides and vacant lots and abandoned sites productive. It will connect lawns to produce fruits and vegetables. Street trees will bear fruit. Waterways will produce fish and vegetables. Steep slopes will be terraced and produce vegetables and vineyards, as well as provide pastures for sheep and goats.<sup>34</sup>

Far-fetched? Maybe, maybe not. In a recent issue of APA's *Planning* magazine (May 2009), Tim Beatley, professor of planning at the University of Virginia, wrote a prescient and informative piece titled *Sustainability 3.0: Building tomorrow's earth-friendly communities*. In it, Beatley contends that "the last

decade or so has seen a remarkable emergence of new commitments to sustainability, and that sustainability has emerged as a major new paradigm in planning" (Beatley, 2009).<sup>35</sup> Beatley's article is sprinkled with references to urban agriculture or surrogates for that term — e.g., rooftop gardens (450 of them in Chicago alone); "solid waste and wastewater (traditionally seen as negative outputs)

being re-envisioned as productive inputs to satisfy other urban needs, including food, energy, and clean water" (Ibid.); what he might have called local food autonomy in his description of Dongtan, China, a new ecological city near Shanghai, where most food are produced locally; and finally, new large-scale models of urban sustainability that represent "more holistic thinking and integrative design: thinking at once about energy, water, transportation, urban form, and even food production — and how they integrate" (Ibid.).

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of food along with other key  
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<sup>33</sup> <http://www.jacsmit.com/21century.html>

<sup>34</sup> <http://www.jacsmit.com/sustainableagri.html>

<sup>35</sup> Note that Smit, et al.'s 1996 book on urban agriculture worldwide prominently featured the words "sustainable cities" in its title. Jac was clearly ahead of the game.

This simultaneous consideration of food along with other key resources such as water and energy match Jac's strong focus, in his final years, on the link between food and climate change. He sets the table for this discussion by contending that "urban places cover between 2% and 3% of the world's surface, but are responsible for the majority of air and water pollution, carbon and other toxic emissions, global warming and climate change." He then goes on to make a strong claim: "There is no better tool known or available to fight climate change than urban agriculture."

Most intriguing, however, is Jac's notion that lawns (e.g., residential lawns, university, government and institutional lawns, office building lawns, golf course greens, and portions of schoolyards, parks, and amusement parks) have great potential to become a major force in the urban agriculture movement as settings for producing vast amounts of food. In a short, provocative article titled "Eat half your lawn,"<sup>36</sup> Jac waxes enthusiastically about lawns as food production centers.

He begins by citing work of NASA, which, he says, identified 23 million acres of lawn in 2007. Corn, at 7 million acres, is in second place as the most cultivated crop. Going on, he makes the following provocative contentions: "Lawns require more water, fertilizer and weed and insect treatment per acre than corn or any other major crop and...lawns are the single greatest polluter of our creeks, ponds, rivers, and lakes, and bays."<sup>37</sup>

He then asks the question: "What if half of every lawn was converted to food production?" He

points out, in response, that such a conversion "would reduce global warming and polluting factors of agriculture including shipping, storage, packaging, and waste." A key factor in doing this is that it would reduce the consumption per calorie of fossil fuels — so-called food miles. He goes on to say that our current global food system uses 7 to 14 fossil-fuel calories for every food calorie consumed at the dinner table.

He concludes with the following: "With the global food-energy-climate nexus crisis, this is a good time to ratchet up the agenda. 'Eat Half Your Lawn,' transforming 10 million acres (half the acreage of lawns) from mowed grass to other productive plants, lettuce to chestnuts. This goal may be a major element in our passing a healthy planet to our grandchildren."<sup>38</sup>

Clearly, Jac was a passionate believer in and advocate for urban agriculture. He saw its biggest impact on reducing global warming, but also on having significant reductions in water pollution and obesity. He was quite comfortable with the idea of urban agriculture as an important component of the new paradigm of sustainable communities. For him, "urban agriculture is not the total solution, but it is an indispensable major element in a plan and program to achieve an urban society that is carbon neutral and does not further destroy our planet."

The urban agriculture movement is indebted to Jac Smit for his trail-blazing leadership and accomplishments.

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<sup>36</sup> <http://www.jacsmit.com/archive/eatlawn.html>

<sup>37</sup> <http://dirt.asla.org/2007/07/10/nasa-goes-looking-for-us-lawnsfrom-space>

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<sup>38</sup> <http://www.jacsmit.com/archive/eatlawn.html>

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## List of Acronyms

APA	American Planning Association	NALEP	National Agriculture and Livestock Extension Program (Kenya)
ASPO	American Society of Planning Officials	NASA	National Aeronautics and Space Administration (U.S.A.)
CFSC	Community Food Security Coalition	NEFSALF	Nairobi and Environs Food Security, Agriculture and Livestock Forum (Kenya)
CGIAR	Consultative Group on International Agricultural Research	NGO	Nongovernmental organization
CSA	Community supported agriculture	NIPC	Northeastern Illinois Planning Commission
DGIS	Directorate General for International Cooperation (Netherlands)	NYC	New York City
EBT	Electronic Benefits Transfer (food stamps, U.S.A.)	PDF	Adobe Acrobat Portable Document Format
ETC International	Educational Training Consultancy International (Netherlands)	RUAF	Resource Centres on Urban Agriculture and Food Security
FAO	Food and Agriculture Organization	SGUA	Global Support Group on Urban Agriculture
FTP	File Transfer Protocol	SINA	Settlements Information Network Africa
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (Germany)	TUAN	The Urban Agriculture Network
HTML	HyperText Markup Language	UA	Urban Agriculture
IDRC	International Development Research Center (Canada)	UN	United Nations
IIED	International Institute for Environment and Development (UK)	UNDP	United Nations Development Programme
IWMI	International Water Management Institute	USDA	United States Department of Agriculture
KARI	Kenya Agricultural Research Institute	WIC	Women Infant and Children Program (U.S.A.)
KUFSALCC	Kampala Urban Food Security, Agriculture and Livestock Coordinating Committee (Uganda)		

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