



**Agricultural Urbanism and Municipal Supported Agriculture:
A New Food System Path for Sustainable Cities**

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General overview

Through ***Agricultural Urbanism*** there exists an opportunity for British Columbia to pursue unprecedented research, modeling, outreach programming and leading-edge development to address two of society's most pressing and linked challenges- urban and agricultural sustainability.

Agricultural Urbanism prescribes the full integration of the agri-food system within the planning, design, development and function of cities and vice-versa. *Agricultural Urbanism* is a mechanism to connect urbanites to their environment and to their agri-food system, reduce their dependence on an ecologically unsound and increasingly vulnerable global-scale agri-food system and create a significant regional economic sector.

The Institute for Sustainable Horticulture, Kwantlen Polytechnic University and our colleagues in the *Agricultural Urbanism Founders Group* are committed to advancing the concept and realization of *Agricultural Urbanism* with municipal and other stakeholders throughout southwestern British Columbia and across Canada. We are initiating a research, outreach and development program and identifying and cultivating critical municipal and private sector partnerships to model and actualize *Agricultural Urbanism*.

Municipalities have a pivotal role to play in laying the foundations for sustainable 21st century urban society. *Agricultural Urbanism* offers a stratagem for sound urban growth and retrofit that can support a highly productive, ultra-efficient agri-food system to contribute significantly to feeding the people of a city, reducing their ecological footprint and achieving urban sustainability.



Introduction

Questions of sustainability and security dominate discourse regarding post-industrial society and our agri-food system as an element thereof. It seems inevitable that the concept of sustainability, in all of its dimensions, will come to define and focus human enterprise in the 21st century. Concomitant and for the first time in history, the majority of the human population is urbanized. For Canada, as with other developed countries, fully seventy-five percent of our population reside and work in urban environs; a phenomenon largely representative of 20th century industrialization and economic globalization.

Increasingly we are coming to recognize the limitations and challenges this path has manifested, economically, socially and ecologically. As part and parcel of that recognition, we have also come to more fully recognize ourselves as ecological creatures; that we are subject to ecological principles and are fully dependent upon the ecosystem's health and function, as are all other organisms with which we share the earth. . We are fully part of, and subject to, the web of life.

Yet most are fairly unwitting of ecological principal and the ecological processes that affect every aspect of daily life. We are increasingly sequestered (in our cities) and insulated from ecological engagement and awareness.

More importantly, we are generally unaware of the ecological burden we impose upon earth's resources and systems despite the fact that we have come to appreciate that human activity profoundly influences the local, regional and global ecological functions, which human welfare, in all regards, is dependent upon. This increasingly emergent and delimiting revelation is manifest in our recognition of the concept of sustainability--providing for the needs of today without compromising future generations' ability to do the same-- and the absolute necessity to advance sustainable society. In this light the non-sustainability of our cities is fully and indisputably recognized.

One fundamental aspect of urban sustainability that is increasingly subject to examination is the agri-food system that supports our swelling urban populations. The impact of urbanization on, and its connection to, suburban, rural, and natural areas, relative to agri-food systems sustainability, needs to have central consideration in all planning.

Currently food has become little more than an urban sector throughput-- it comes in (in untold quantities and forms), and its waste products (which are many) go out. We have little or nothing to do with its production, processing or marketing. We have no substantive relationship with this omnipresent and universal aspect of our existence. Yet we know that the negative ecological and social implications of this system are many and great.

Thus, how we configure our food systems to contribute to more sustainable, livable urban centers poses several questions:

- How might urban, peri-urban and rural agriculture be tied directly into the ecological and social function and economic vitality of our cities?
- How can the urban agri-food system realize multiple function and sustainability objectives, contributing to lessening the urban ecological footprint?
- How can an urban-linked agri-food system contribute to the social fabric of our cities providing opportunity for productive, healthy human engagement and enterprise?

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Regarding the potential for substantive, sustainable Canadian urban and peri-urban agriculture and food systems there

are many questions but few answers and far fewer models. We, the Agricultural Urbanism Founders Group, believe this a paramount issue relative to advancing secure, productive and vital cities. We proffer the concept of **Agricultural Urbanism** as central and critical to the actualization of sustainable, livable human settlements that more fully invite the full expression of humanity, including the production and purveyance of food. We coin and use the term *Agricultural Urbanism*, in contrast to urban agriculture, to describe a comprehensive social, environmental and economic integration of an agri-food system, in all of its dimensions and manifestations, within the planning, governance and function of the city. It is an agri-food system component that contributes substantially to feeding an urban population while also contributing to its economic and social vitality. Moreover, *Agricultural Urbanism* implies a valued, evident and symbiotic relationship between urbanism and the agri-food system whereby our agri-food system supports sustainable urbanity and urbanity supports sustainable agriculture in an inextricably linked and seamless positive feedback loop

Agriculture, a new function for the urban sector in North America.

We envision municipalities playing the pivotal role to advance such an urban focused agri-food system

There are very few examples of extensive, urban-centered agri-food systems, and none which fully embrace and integrate food production with the goal of directly facilitating urban food security and sustainability through calculated planning, development and support of the agri-food system as an integral element of the urban environment, in North America. We see a tremendous opportunity to pursue unprecedented research, planning, design, development and outreach programming focused on two

of southwest British Columbia's most pressing (and linked) challenges--urban and agriculture sustainability. We envision municipalities playing the pivotal role and partnering with public and private sector entities to advance such an urban focused agri-food system initiative and in doing so municipalities can lead in a truly significant way, the actualization of vital, sustainable 21st century urban society.

There are many urgent societal, environmental and social factors which inform our thinking and that we believe *Agricultural Urbanism* can positively impact. They include:

- The human population is growing exponentially. Today our population is approximately 6.4 billion and is conservatively expected to be 9.5 billion by 2050- only 42 years or one generation away. The vast majority of that population growth will reside in the world's cities. In Canada only three percent of the population resides on farms and only 1.4% of the population is engaged in farming. In other words 97% of Canadians have limited or no meaningful connection to their agri-food system. Through the incorporation of agri-food systems and urban design, *Agricultural Urbanism* attempts to re-establish this important relationship with a focus on physically-integrated planning and design.
- Canada's farmers are aging. The mean age of British Columbia's farmers is approximately 60 years (as it is across North America). Knowledge is being lost and young persons are not encouraged to pursue this vital and honorable profession. We feel that *Agricultural Urbanism* holds promise of attracting a new generation to a vibrant agriculture, who are dedicated to contributing to sustainable society, and who will regard agriculture as a preferred profession and career path to do so.
- The increasingly globalized and consolidated agri-business sector expect 20% return on investment with the value of agriculture increasingly captured by those in the agri-food system other than farmers, (e.g., large scale suppliers, processors, distributors, marketers, wholesalers and retailers). The vast majority of these dollars leave our agricultural sector and communities, go straight to corporate headquarters, and contribute little or nothing to regional economies and social vitality. As such there is a significant economic sector to be developed in local regional agri-food systems integrated within the metropolis. What is

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more, the consolidated agri-food system increasingly relegates consumers, in terms of what and how they eat and in terms of what agriculture methodologies can be used, to the designs and interests of fewer and fewer multi-national companies. As a result we have begun to question the safety and security of our food and the wisdom of conferring our food future to cartel-like dictate. Food system sovereignty is emerging as a genuine concern. *Agricultural Urbanism* fosters the potential for a higher level of self-determination in our agri-food system(s).

- Inexpensive food has become the norm. In North America approximately 11% of disposable income is spent on food compared to + 20 % in Europe. Increasingly however, we recognize this has exacted other less obvious costs such as environmental degradation, loss of bio-diversity, loss of farms, farmland and farmers, and exploitation of labor and resources, as well as compromised health and nutrition, food safety and security. Thus the destructive ecological, social and economic consequences and limitations of the modern global agri-food system are becoming increasingly evident and problematic. Research indicates that a critical and growing number of consumers are now prepared to economically support an agri-food system that is environmentally sound, promotes a sustainable and secure food supply and contributes to building economically vital and socially coherent communities. *Agricultural Urbanism* fully embodies and seeks to advance these objectives.

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- There is significant opportunity to build a large and robust localized/ regionalized agri-food economic sector that directly benefits our communities, assuring that profits accrued circulate, with multiple economic effects, within the local economy. The potential for *Agricultural Urbanism* to contribute to economic vitality and sustainability of the agriculture sector on the whole and on our municipalities cannot be overstated.
- Most of the world's arable land is in production and Green Revolution industrialization and technological gains have been fully maximized. No technologies with similar potential to increase yields are forthcoming, not even transgenic cultivars. However technologies and methods to achieve highly-productive, human-scale food production do exist and *Agricultural Urbanism* will foster a variable scale agri-food system in which they can be effectively utilized.
- Global affluence is growing, resulting in a tightening between food supply and demand. Croplands are increasingly devoted to production of high value export and biofuel crops instead of regional food production thus exacerbating food insecurity in all urban areas, North and South. The answer, at least in part, lies in developing ultra-intensive, highly productive, localized, human scale, agri-food systems that reliably provide residents with safe, wholesome foods. *Agricultural Urbanism* proposes to be an integral part of such a system; one that can be facilitated in and around urban areas on lands of varying qualities, sizes and situations.

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- Per the dictate of economic efficiency, agriculture must compete with other land uses (parking lots, shopping centers, housing, etc.). Since 1971, in Canada, 12,000 square kilometers of cropland, half dependable agriculture land (class 1, 2 or 3), has been lost to urban sprawl. Globally, cropland has been reduced by 86 million hectares since the mid-1980s (two times Canada's total cropland). Despite British Columbia's Agricultural Land Reserve there is increasing economic pressure on agriculture lands. Throughout southwestern British Columbia agricultural land prices hover around \$100,000 per acre. No conventional agriculture enterprise can service such debt, and aspiring agriculturists are stymied. Urban growth is going to occur; we must accommodate growing populations. The question is, how will it occur? We believe that *Agricultural Urbanism* offers a stratagem for sound urban growth and retrofit. *Agricultural Urbanism* provides a framework that simultaneously supports a highly productive, ultra efficient agri-food system that significantly contributes to feeding the people of a city while reducing its ecological footprint. It also facilitates long term agri-food system stability and resiliency.

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- Research indicates that the nature of a community's agriculture sector profoundly influences its social and economic character. Communities dominated by smaller, family owned farms and agriculturally related business, compared to ones dominated by consolidated, transnational agribusiness, have been found to have overall higher standards of living, lower crime and poverty rates, more retail trade and independent businesses and more parks, schools, churches, newspapers and citizen involvement in democratic processes. *Agricultural Urbanism* seeks to recreate the community social fabric benefits conferred by independent agricultural businesses and agriculturalists.
- Adults live the values they are exposed to when growing up. If the achievement of economic, social and environmental sustainability is of paramount importance, as we say it is, then we must accept the challenge of teaching this to our children, through word and deed. *Agricultural Urbanism* will be an important vehicle through which the concepts and real world application of sustainability can be demonstrated to our young, becoming an integral, enriching aspect of their daily lives.
- Perhaps the most significant factor, and one substantially exacerbating the urgency of examining agri-food system sustainability and its relationship to the urbanized majority, is global, industrial agriculture's complete dependence on and excessive use of fossil fuels and the prospect of peak oil. The most optimistic estimates (U.S. Geologic Survey) call for world peak oil production in 2037 while other experts calculate that it will occur around 2010). Regardless, with no low cost energy alternative to oil available in the foreseeable future many predict a fairly near-term end to the global agri-food system, and call for reinvention of regionalized agri-food systems inclusive of production, processing, distribution, marketing, and sales. Undoubtedly, a well developed, localized, urban agri-food system will mitigate, to significant extents, the need for and use of excessive energy in the production, processing, distribution and sales of foods and other agricultural products.
- The BC Ministry of Agriculture and Lands recently released its much anticipated *British Columbia Agriculture Plan: Growing a Healthy Future for B.C. Families*. Prominent in the strategic plan is the creation of community-based local food-systems, addressing food security through diverse local production, environmental stewardship, climate change mitigation and bridging the urban/agriculture divide, all of which would be significant foci of a municipal food systems *Agricultural Urbanism* initiative.

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In light of the above and other eminent considerations, *Agricultural Urbanism* represents a way of thinking about, as well as a framework to conceptualize, design, develop and support a sustainable urban agri-food system.

Agri-food systems and sustainable society.

Food and agriculture are universal common denominators- all must eat. Our inherent relationship to agriculture and food as well as our common agriculture ancestries provide a direct and comprehensible conduit and context to inform and educate people about ecosystems, ecology and sustainability. New agri-food systems can reshape thinking about our relationship(s) to the natural world and each other. As such we believe *Agricultural Urbanism* can serve as a catalyst for change, and a vehicle by and around which sustainable communities can be developed. We also believe

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Agricultural Urbanism holds promise of giving rise to a new, 21st century agrarianism; one appropriate for our time and place but very much reflective of time-tested agrarian society values and perceptions, including awareness of human ecology, place and community. Community, in all of its dimensions and manifestations, we contend, must be the foundation of sustainable urbanity.

Agricultural Urbanism offers a planning, policy, and design framework that combines sustainable community ideas, urban design strategies and the sophisticated practice of urban agriculture and sustainable agri-food system development. It prescribes a systems approach to planning and designing for development integrated with agriculture. Through innovative planning and design strategies it seeks to contribute to a robust, diverse and adaptive agri-food system.

The cornerstone of implementing *Agricultural Urbanism* is creating an urban environment that values, encourages, activates and sustains agriculture enterprise through integration of people, the places where they live and work, and their food. It invites agriculture back into our settlement areas, taking into consideration the plethora of agri-food system activities and contributions that might be desirable and viable for the breadth of spaces and environments, from natural areas to urban cores.

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While to date “urban agriculture” in North America generally represents a pragmatic approach to addressing food security issues as well as being somewhat of a social-political movement, it has primarily focused on utilizing small city spaces for food gardening. The planning professions have responded generally and at most, by including community gardens in policy and design. The preponderance of the agriculture sector has largely dismissed

its potential. *Agricultural Urbanism*, on the other hand, considers the full spectrum of ecosystems and spaces linked to food and agriculture, namely, urban, suburban, rural, and natural areas, their inter-connectedness, and the opportunities to support a sustainable, ecologically sound agri-food system they and their relationships to one another represent. *Agricultural Urbanism* planning and development is not only about the growing of food goods, but is inclusive of the full range of agri-food systems elements including processing, transport, distribution, consumption and waste handling/ utilization. It will be an important complement to our present agriculture sector.

In other words, *Agricultural Urbanism* represents a comprehensive, ecologically based, systems approach to agri-food system planning and implementation designed to meaningfully advance human enterprise sustainability.

Given the above arguments, it seems reasonable and prudent to surmise that food security, the availability of sufficient, nutritious, wholesome foods, will become a preeminent concern of growing populations and urban centers such as those in southwestern British Columbia. At some level the business of providing means to produce, process, distribute and purvey food and agriculture products will become a municipal concern much like roads, policing and important community enhancements such as libraries and recreation facilities. Agriculture in urban settings will become much more than a quaint amenity, and far transcend community allotment garden plots in importance to the city and its residents. Similarly, the revitalization of the small farm and family-based agriculture (linked to urban agriculture) in our rural areas will no longer be a romantic notion, but will represent a vital and recognized element of urban existence and sustainability. Citizens will prioritize tax dollars to create, protect and expand their municipally-based agri-food system infrastructure for the health and well being of themselves and their community. They will recognize that a secure and sustainable agri- food system within and for their municipality will better ensure its economic and social stability and support the promise of sustainability.

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Consider the municipality that does not plan for its citizens in the face of rising food prices – when 20% of their income will be required for food – double what is required now (and already the case in Europe). Envision a large population with limited access to affordable wholesome food. Will these citizens be able to pay taxes or support other aspects of urbanity? Will they be able to participate in and contribute to civil society?

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Then consider a city which has engaged in planning for a viable urban agri-food system for its citizen's food security, one that is developing a municipally-focused and supported agri-food system, calculatedly and well before the availability and cost of wholesome, safe foods achieves crisis proportion. That municipality will have the respect and gratitude of its citizenry and it will be able to continue on its path to sustainability.

The wisdom of planning for local food security will be clear.

What will it take? Certainly, more than a passive attempt to conserve farmland, though that is prerequisite. It will take active government involvement to ensure that *Agricultural Urbanism* is adopted and promoted in policy and action. A successful *Agricultural Urbanism*-based plan will make certain that citizens are trained to engage in all aspects of the urban agri-food system in the most efficient ways and without degrading the resource base (soil, water, air) or otherwise compromising aspects of livable cities. Further, it is paramount that appropriate lands in the right places are preserved, serviced and dedicated to food production of the types necessary for the wellbeing of its citizens.

Such an agri-food system will not happen spontaneously and should not happen piecemeal – it must be planned and concertedly developed. Municipalities will be the central players for *Agricultural Urbanism* is, by definition, a municipal level social and economic endeavor.

Why a municipal-university-private sector partnership?

Municipalities will require critical partnerships, such as the one proposed here to bring wide-ranging expertise and achieve broad support among a diversity of stakeholders. Models will need to be developed, tested, implemented and shared. Though manifestations of *Agricultural Urbanism* will all have commonality, it is important to note that its qualities will always reflect the unique character, needs and resources (natural and other) of each municipality.

The Institute for Sustainable Horticulture (ISH) of Kwantlen Polytechnic University and our colleagues in the Agricultural Urbanism Founders Group are unequivocally dedicated to advancing the concept and realization of *Agricultural Urbanism* with municipal and other partners throughout the southwestern British Columbia and across Canada. Many municipal, private sector, non-governmental organizations and private citizens, having become aware of our programmatic focus and expertise, have approached the ISH and its colleagues of the Agricultural Urbanism Founders Group to collaboratively pursue conceptualization and development of *Agricultural Urbanism* models appropriate for their local resources and situations. We are working to develop an appropriate and comprehensive research program. Likewise, we are working to develop an appropriate and comprehensive education and outreach program. And most importantly we are identifying and cultivating critical municipal and private sector partnerships.

To most expediently advance *Agricultural Urbanism*, municipal governments must lead the way and understand their lynchpin role. They must also engage a breadth of public and private sector stakeholders to build interdisciplinary planning, design, development, and implementation capacities. Such a public/municipal/private partnership, focused on the creation of sustainable, urban agri-food systems, is, if not unprecedented, rare indeed. However, it would be a powerful, galvanizing force for building an urban-focused agri-food system that directly and substantively contributes to the vitality and livability of our urban communities.

Higher education too has an important part to play in the advancement of *Agricultural Urbanism*. For better or worse, university research, education and outreach can be largely credited with the transformation of agriculture to its modern consolidated, industrialized, fossil fuel-intensive and unsustainable form. Therefore universities must play a critical role in

agriculture's post-industrial transformation to an ecologically based, sustainable and community-focused system. They will be most effective doing so in full partnership with government at all levels, but most notably and importantly municipalities, for the simple reason that *Agricultural Urbanism* will occur within and on behalf of municipalities and their citizenry. Kwantlen Polytechnic University and British Columbia municipalities will partner with other stakeholders and experts including planners, developers, architects, agriculturists, citizen groups, and entrepreneurs, to endeavor to advance *Agricultural Urbanism* pursuant to urban sustainability. Such collaboration would likely include the following elements:

Research: To address problems and challenges faced specifically by urban agriculturists and residents, research should not be limited to crop production or conducted in isolated disciplinary focus. Instead, investigators must strive to address the breadth of challenges and issues (ecological, agricultural, social, and economic) in their work, and thus research projects will often call for interdisciplinary investigatory teams. All research should be applied in nature and be directly applicable to the regional urban and urban-rural interface agriculture sector/ issues.

Practicing agriculturists, students and community members, as well as academic experts outside of Kwantlen Polytechnic University, will partner in research projects when possible and appropriate. Production-focused research will occur on localized research sites side-by-side with outreach and instruction. In many instances, research may extend to business enterprises and multiple communities and be regionalized in addition to municipally-focused. Societal research will occur within communities and at interface points with production, marketing and other economic activities. Environmental research, involving all three partner types, will focus on community/ municipal ecological health as part of local ecosystems and larger bioregions.

Outreach/Development: Dissemination of research findings and technical information through publication (booklets, fact sheets, technical bulletins, websites, proceedings, journals, lay publications, etc.) will be an important function contributing to the development of *Agricultural Urbanism*. Technical expertise and direct technical support will be highly sought after by an emerging, expanding urban agri-food sector. Outreach efforts designed to cultivate broad public awareness, support and expertise should extend to the breadth of agri-food systems stakeholders such as the traditional agriculture sector and non-agriculture sectors, especially consumers, non-government agencies, government at all levels, business, planning and design professions, community organizations, schools and other public institutions, as they all will play a role in the success of urban and urban-rural interface agriculture. Outreach efforts must focus on building the critical networks and cultivating the requisite social capital for a vibrant urban and urban-rural interface agriculture sector.

Continuing education: Ongoing educational programming for those who are working in the urban and urban-rural interface agriculture sector as well as planners, designers, landscape architects, developers, and others, who are not seeking credentials, should occur in the form of seminars, workshops, conferences, non-credit classes, demonstrations and field days. In some instances, classes or class components developed and offered for credit may be simultaneously offered as continuing education on a non-graded/non-credit basis. Generally, continuing education programming will be based on indicated need and offered in collaboration with the municipality and other stakeholders. We are currently collaborating with the City of Richmond, B.C. and local non-governmental organizations to develop and implement such educational programming to support *Agricultural Urbanism* in the Richmond region.

Formal education: Academic, credential affording programs must be available to support the actualization and enhancement of municipal-focused agri-food systems. Curricula should comprise an appropriate complement of theoretical and experiential studies intended to impart and develop the knowledge, skills and attitudes requisite for success in a breadth of urban and urban-rural interface agriculture ventures and to develop the leadership to advance and socially integrate *Agricultural Urbanism*.

Curricula and classes should be predicated upon, and comprehensively incorporate, the philosophy and concepts of urban sustainability (economic, social and environmental). To the fullest extent possible stakeholder perspective and expertise, including that of municipalities, should be incorporated.

Land accessibility, tenure and the role of the municipality.

There are many who desire to engage in urban and peri-urban agriculture but have no access to land or sense of how to go about finding it. Likewise, many parcels, large and small, sit underutilized. A municipal partnership with community

groups could function to match smaller acreages within and in proximity to the city with aspiring urban agriculturists.

A mechanism to make land available to aspiring food producers that we have conceptualized and are promoting for exploration is **Municipal Supported Agriculture (MSA)**. Municipalities could make available, at cost effective rates, municipally-owned lands (of various sizes, shapes and locals) for agriculture enterprise. It might even be that municipalities procure lands to facilitate the development of an agri-food sector serving its citizenry, and in doing so foster increased food safety and security. The city could be the entity that connects would-be agriculturists with lands.

Other potential municipally-supported agri-food system development efforts include the provision of incubator farm plots. Small tracts, again municipally-owned, could be favorably leased to trainee producers so that they can gain critical crop-specific knowledge and experience before committing significant capital and other resources in the development of speculative agriculture enterprises. University expertise could support such skill/ knowledge acquisition. Similarly, an incubator kitchen for exploration into, or start-up production of value-added agriculture products could be a part of the overall municipal- university- private partnership. Those wanting to experiment with, or develop a processed value-added agricultural product could rent commercial processing/kitchen facilities for product development and business start-up, and have access to university expertise/ support.

To a similar end, it would be extremely valuable to establish a municipal micro-loan program to support start-up urban and interface agriculture entrepreneurs. Such a loan program could be effectively bolstered by university-facilitated farm and agri-business planning and management extension programming.

Economic and environmental benefits will accrue to the municipality that embraces *Agricultural Urbanism*. Good jobs will be created within the community, not only in primary food production, but also in such areas as value-added processing and products, restaurants featuring local food, and culinary arts training using local food. Long distance commuting of residents for transportation of food will be minimized and environmental accountability will be a neighborhood concern. The social fabric of the community that embraces *Agricultural Urbanism* will be strengthened and fortified, as communities in the past were enriched by their common enterprise of producing and providing food.

Through bylaws local governments already exact a development cost charge, from development projects, as a means to finance associated public infrastructure and services requirements associated with municipal growth. When the supporting elements of the agri-food system become an integral function of municipal government it seems reasonable that development cost charge structures could be modified and used to support the creation and stewardship of municipal agri-food system components such as those mentioned above.

Municipally-facilitated and based *Agricultural Urbanism* strategies such as those outlined above represent logical and requisite complements to British Columbia's unique and extraordinarily successful Agricultural Land Reserve legislation.

Municipalities will play an increasingly key role in stewardship of the public good and ensure that development of all kinds address the objectives of Agricultural Urbanism

In order to fully realize our capacity for regional agri-food systems and food security, more land is needed but this is not likely to be forthcoming from the Agricultural Land Reserve. Municipal supported agriculture has great potential to contribute substantially to our food sustainability goals and will become, in partnership with the Agricultural Land Reserve, part of a comprehensive sustainable agri-food system, supporting human settlement for future generations. In this context municipalities will play an increasingly key role in stewardship of the public good and,

through the municipal approvals processes, can ensure that development of all kinds, in accordance with local policy, address the objectives of *Agricultural Urbanism*; an agri-food system that supports urbanism, and urbanism that supports the agri-food system.

Summary, Conclusion and Recommendations.

Agricultural Urbanism espouses the full integration of agriculture and the food system within the planning, design, development and function of our communities. It is an agri-food system intended to connect urbanites, in real and meaningful ways, to their environment and a human enterprise undeniably crucial to their well-being. It is also a way of reducing vulnerability and dependence on an ecologically unsound and increasingly vulnerable global agri-food system. *Agricultural Urbanism* is a significant means to contribute to the advancement of sustainable urban communities (socially, economically and environmentally). In the final analysis, *Agricultural Urbanism* argues that the agri-food system should be an expected and inherent element of urban land use, planning and sustainable development and presents a framework for such.

Agricultural Urbanism is a significant means to contribute to the advancement of sustainable urban communities

The potential benefits of advancing *Agricultural Urbanism* in British Columbia municipalities include:

1. Contribution to sustainable urbanism through, stable, safe food supplies including ready access to high quality fresh fruits and vegetables.
2. Reduction of the ecological footprint of the agri-food system of a municipality through the minimization of processing, packaging, transportation, waste, and energy use.
3. Closed nutrient and resource cycles urban organic wastes can be composted and used in agriculture resulting in reduced pressure on landfills. Energy (e.g., methane from landfills) and water wastes (e.g., gray water) can be reclaimed and used for agriculture.
4. Enhancement of biodiversity through creation of habitat and refugia for various organisms.
5. Promotion, use and retention of regionally-adapted cultivars to protect genetic diversity.
6. Reconnection of citizenry to a vital human endeavor and agriculturists to urbanites.
7. Spawning a new, substantial economic sector with a range of elements which can contribute to stronger regionalized economies.
8. Provision of a vehicle to promote greater community awareness of, and knowledge about, the larger issue of sustainability. Food is the great common denominator.
9. Advancement of our understanding of sustainable mixed use communities. The agri-food system may be the very thing that new, sustainable communities can be built around.

We therefore recommend that the City of Surrey capitalize on its rich and diverse agricultural heritage, the agricultural knowledge inherent in its diverse citizenry and its access to lands and:

1. Embrace the concept of *Agricultural Urbanism* as an important aspect of urban sustainability.
2. Collaborate with our working group (see authors) to explore the potential and plan for Surrey's urban agri-food sector.
3. Seek to develop model policies, programs, constructs, organizations and enterprises that foster an extensive and comprehensive urban agriculture sector.
4. Join other Lower Mainland municipalities working with the Institute for Sustainable Horticulture and its partner

Agricultural Urbanism founders to advance a precedent-setting, region-wide, urban agri-food system comprising many individual municipal-focused and facilitated urban agri-food system models, each reflecting the character, needs and capacity of the particular municipality, while contributing to a collective, sustainable, regional agri-food system.

We welcome your feedback. kent.mullinix@kwantlen.ca

