DIG

DURHAM INTEGRATED GROWERS FOR A SUSTAINABLE COMMUNITY

A Case Study

Autumn 2016

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All photos taken by the author at the Bowmanville Ecology Garden



Nourishing Communities







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The Social Economy of Food: Informal, under-recognized contributions to Community prosperity and resilience



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Executive Summary



Food is very, very important and community is very, very important, and when you get them together, I think it can build a lot of good results.

-Jasmine MacDuff

In order to explore the impacts of food initiatives working within the social economy and their informal economy activities, a case study of DIG (Durham Integrated Growers for a Sustainable Community) in Durham Region, Ontario was conducted. This organization works as a region-wide umbrella organization to represent urban agriculture projects and promote the practices and values of urban agriculture.

The material for this report was collected through interviews with the president of DIG, the coordinator of one of its member projects and one organization that has benefitted from regular delivery of produce from a member garden. In addition, it draws on documents and observations from: DIG's website, its member projects, its annual general meeting, an executive meeting and a meeting of the Durham Food Policy Council (of which DIG is a member). As a participatory action research initiative, this research involved a collaborative project with DIG and the Durham Food Policy Council that analysed municipal policy in Durham Region to assess its support for urban agriculture and food security. The findings from the policy research also informs this report. Much gratitude is extended to everyone who generously provided their time, insights and stories to this project.

This report provides an overview of DIG and explores the ways and extent to which it engages with vulnerable populations, the natural environment and local economies. Specifically, it considers the organization's ability to increase adaptive capacity, social capital, prosperity and innovation as well as bridging divides. The major themes to emerge from this investigation of DIG concern: the recognition of community expertise, the role of supportive and restrictive municipal policies, the benefits and pitfalls of relying on unpaid labour, a focus on fostering community, and the development of alternatives to dominant economic logics and practices.

Project Overview

About DIG

DIG (Durham Integrated Growers for a Sustainable Community) is a not-for-profit organization that was incorporated on August 23, 2013. It was founded subsequent to the dissolution of the Durham Region Community Garden Network, which was fostered by the Durham Region Health Department's former Durham Lives! Food Wellness working group. DIG's focus has extended beyond the support and connection of community gardens to all forms of urban agriculture across the region, as well as the promotion of food security and a sustainable food system. DIG's mandate and vision were shaped by local garden coordinators and others interested in urban agriculture who felt the need for an overarching organization that would represent their projects and advocate for them. While most of its member projects include community gardens, they also include other urban agriculture projects such as urban farms, orchards and pollinator gardens.

DIG is comprised of 1) a Board of Directors that forms the executive of the incorporation of Durham Integrated Growers for a Sustainable Community and 2) at least 28 associated independent community garden projects comprising approximately 800 plots. Paid memberships are available to individuals and groups. While DIG encourages projects across Durham to purchase memberships, it will provide support to any urban agriculture project in Durham that requests it. Projects tend to be most strongly connected with DIG early on, as they are being established.

To a great extent, member projects operate independently of DIG. Although project coordinators meet with their own members, they do not meet on any regular basis with DIG executive members, except at DIG's Annual General Meetings, Table Talks,² other workshops, and annual coordinators' in-services.

As can be seen through DIG's vision, mission, mandate and beliefs about food, the organization centres the local growing of food within the context of food security, community building and sustainability.

² Table Talks are public seminars held in restaurants or community centres. They cover a range of topics such as seed starting, seed saving, beekeeping, and local cheese making.



¹ Memberships categories include individuals (waged-\$15, unwaged-5\$), garden and food-related organizations- \$25, and corporate- \$100. DIG currently has approximately 38 paid members (9 are garden projects, 1 is a corporate member, and the rest are individual memberships from persons who see value in DIG's efforts or want to support the "You Grow Durham Fund.")



DIG puts its vision, mission, mandate and beliefs into practice through the following activities.

DIG's purpose is to support local community food production and food security by:

- · Sharing information, knowledge and skills
- Providing technical and developmental assistance
- Assisting with funding exploration and procurement
- Fostering potential partnerships and;
- Promoting and educating about sustainable production and access to local, healthy foods

(Durham Integrated Growers, 2016)

DIG works towards this purpose by generally supporting local urban agriculture projects and operating a number of programs, which include:

- Annual Garden Tours
- Table Talks, other workshops, and coordinator in-services
- You Grow Durham Fund (which provides some financial supports to new community gardens)
- Sharing Backyards (which bring together people who want to garden with people who have backyard space available to be gardened)
- Speaking engagements in the community



Geographical Context

DIG is located in Durham Region, which is immediately east of the City Most Toronto. of Durham's population is concentrated along the Highway 401 corridor in the Cities of Oshawa and Pickering, the Towns of Ajax and Whitby and the Municipality of Clarington. The remainder of the population resides in Durham's many smaller towns, villages and hamlets further north of Lake Ontario. Two levels municipal government govern this region: the Region of Durham and its 8 lower level municipalities (Ajax, Brock, Oshawa, Pickering, Scugog, Uxbridge, Whitby and Clarington). This combination of urban and rural areas and significant presence of agriculture in this region affect the ways that urban agriculture is defined and practiced here.



(Region of Durham, 2016a)

DIG's Approach to Supporting Projects

DIG's approach recognizes that community gardens need to be grounded in their own communities and neighbourhoods. By supporting gardens and helping them to develop in their own ways, it hopes to foster their ability to sustain themselves over the long term. For example, DIG uses its expertise to mentor groups in starting new gardens, but does not start them directly. In discussing this approach to fostering the resiliency of garden projects, DIG president, Mary Drummond, explains:

For us, it's about helping the gardens, giving them that encouragement needed to succeed but not doing everything for them. Because, if DIG did everything for them, it would take away the ownership of the project. It is necessary to struggle and make mistakes and not have everything that you want because the struggle to attain those things makes that project more precious to you...Whenever people talk to DIG, they think that we go out and start gardens but we're not starting gardens per se. We're very involved with garden start-up but communities, people, citizens are the ones starting projects that DIG supports.



With the growing popularity of urban agriculture projects, however, DIG has found a tendency for municipalities and individuals to prioritize the development of new organizations/projects, instead of drawing on the knowledge that has already been developed in communities. More than the investment in building new gardens, DIG sees the advantage in municipalities working with communities, exploring the needs they identify and supporting the initiatives that they have already begun or have an interest in beginning.

One tangible way that DIG supports community gardens is through the You Grow Durham fund which awards up to \$500 to one to two new garden projects each year to assist with start-up costs. Eventually, DIG plans to be able to support special projects in existing gardens as well. 25% of membership fees and periodic donations are dedicated to the You Grow Durham fund. In an example of generosity between gardens, the 2015 You Grow recipient garden later donated the amount of their grant back to the You Grow fund and, in doing so, provided funding for the 2016 recipient garden³.

DIG's approach also recognizes the need for flexibility. Because gardens can be affected by many variables such as weather, pests, regulations, and the capacity/commitment of their members, DIG has learned the value of not being too rigid in its plans or expectations.

I think an organization that's representing gardens and wanting to really listen and be what gardeners need has to be as fluid as gardeners are. You never know what's going to happen in a garden project. You just have to go with it and be ready to respond or reprioritize. ~ Mary Drummond

DIG's Resources

Material resources

DIG accomplishes all that it does with very few material resources. For instance, it has no facilities per se but the connections that some of its members have with churches have allowed DIG to use some of their facilities free of charge for workshops and meetings. In Cannington, DIG partners with a community member organization, the Nourish and Develop Foundation, that allows DIG to use space at the Community Food Hub for free for events such as their Table Talk seminars. In addition, DIG used to rent

³ The newest recipient is the Living Room, an arts non-profit whose work with art focuses to some extent with vulnerable population clients. The organization developed an art food garden at the back of their building.



facilities from Durham College for board meetings for a reduced fee. DIG is also partnering with the Whitby Library in 2017 to provide the "How to Start a Community Garden" workshop. While the library is providing the facilities, projector, registration and advertising, DIG will be teaching the workshop and will provide a manual per group.

Financially, DIG has survived on a shoestring budget, which it maintains through membership fees, the occasional fundraiser, donations and remaining funds transferred from its predecessor, the Durham Region Community Garden Network. It has been DIG's experience that the Region and local municipalities have not been in the position to provide any funding. Mary Drummond explains that municipal staff have made this clear at the beginning of some meetings she has attended.⁴ However, Regional staff have begun providing DIG some in-kind support through copying manuals, promoting events, and providing DIG a link on the Region website located under the Durham Region Roundtable on Climate Change. Charging program fees is not an option that DIG considers, fearing that this would undermine the entire goal of keeping member projects accessible. Social enterprise such as selling garden produce or value-added products may be an avenue of income generation for large scale garden projects but does not have municipal policy support in all cases across the Region. For example, although the Whitby Ajax Garden Project, an urban farm on private land, can sell produce, the sale of garden produce is generally prohibited for community gardens on municipal land.

Human Resources

Because funds for staffing can involve significant outlays of time for grant applications, competition with organizations for the same funds, and the need to shape the organization's work to fit grant parameters, DIG has chosen to rely almost solely on unpaid labour even with the challenges that this can bring. While a volunteer workforce reduces staffing costs and may bring to the organization an intentional workforce, it also leaves DIG vulnerable. Individuals' unpaid work may be interrupted or deprioritized in order to accommodate paid work or other obligations. However, volunteers' contributions of time may only be made possible by paid employment (their own or family members') elsewhere. Indeed, many garden participants have paid employment elsewhere. The composition of the collaborative's members and the extent to which they can commit necessarily reflects their ages, stages, life circumstances and schedules. The organization's reliance on unpaid labour can skew the make-up of

⁴ Interestingly, DIG has also experienced pressure from municipalities to open more garden beds in order to reduce community garden waitlists. Mary Drummond explains that trying to meet such demands can be overwhelming for DIG's volunteer-run projects.



projects' memberships or the extent of participant involvement (especially in garden leadership or committees) in favour of people who perhaps have greater time availability, such as retired people or those who work hours that allow for participation. Although statistics were not available, interviewees report a greater number of women⁵, families with young children and seniors participating in community gardens⁶. For an example of the demographic make-up of one garden project, see Snapshot Box (pp. 11-12) describing the Maple Tree Community Garden.⁷

Furthermore, those with the time, commitment and energy to volunteer may become central figures holding the organization together. This seems to be happening at DIG where a few people, such as the president and executive members, take on the bulk of the organizational labour. However, DIG is working to distribute the programming workload by encouraging greater involvement by member projects. This centralization of labour and knowledge can also leave the organization vulnerable, as well as placing undue onus on key figures. Having a paid researcher available to conduct the urban agriculture policy scan was seen by the organization as a unique opportunity to have a project completed that would otherwise be challenging, given DIG's limited human resources. The scan also has led DIG to consider the possible need to hire a staff person to work specifically on consultation around policy.

With no facilities or staffing costs, DIG incurs minimal basic overhead costs, allowing for other expenditures such as brochures, speakers, manuals, workshop material and the You Grow Durham fund which helps new gardens to become established. However, the organization would find additional funds to be helpful to expand the You Grow Durham fund for supporting existing projects, to further promote educational projects and events, to compensate DIG's web designer, to fund a staff person to have a presence in the gardens, and to cover expenses such as board insurance or liability insurance (at this point, groups such as churches or public libraries that partner with DIG for events cover insurance requirements).

Knowledge Resources

Perhaps DIG's greatest wealth lies in the knowledge and skills it has accumulated. These are evidenced in the experience of its members, its community garden and pest management manuals, and the urban agriculture policy scan. Such resources lend the

⁷ Certain gardens also attract gardeners from certain groups. For example, some gardens exist in low income neighbourhoods and draw many people who live on low incomes. The Whitby Ajax Garden Project is located further out of the town and therefore draws gardeners with access to vehicles.



⁵ Except at the Victory Garden Project in Oshawa where the men outnumber women among gardeners.

⁶ The significant proportion of seniors at community gardens may also reflect some combination of having a) smaller homes with less space to garden and b) traditional preserving skills.

organization greater legitimacy in its connections with policy makers, institutions, businesses, and the public. Over time and in connection with specific Regional staff, this legitimacy has earned DIG some support at the Regional level. For example, the Durham Region Roundtable on Climate Change has provided funding for a speaker for an educational event. DIG also receives in-kind support such as the copying of brochures and manuals, a website link, and the promotion of events. Although this form of support is endorsed by the Durham Economic Development department, it has been easier to access when stronger relationships exist with individual staff there. This means that such relationships must be built and rebuilt, especially as staff change.

The Durham Region Food Charter adds to DIG's knowledge resources. It is endorsed by the Region and included in its Official Plan, but not yet endorsed by any of the lower tier municipalities. This Regional endorsement provides DIG some solid backing with which to discuss the local food system and approaches to it.

DIG Member Project Snapshot – Maple Tree Community Garden, Cannington

Project Overview and Resources: The 5-year-old Maple Tree community garden forms part of a parcel of about 20 acres of land owned through the Nourish and Develop Foundation. The garden is member-run, coordinated by Nourish and Develop, and operates out of the Community Food Hub (which houses a commercial kitchen, dining hall and food pantry). Although the garden itself relies on the unpaid labour of its gardeners, Maple Tree is fortunate to have a coordinator who is paid through Nourish and Develop. These resources of privately owned land, paid staff, and hub facilities lend this garden more stability than many others in the Region.

The garden contains an orchard and about 34 plots cultivated by 50 member gardeners, about three quarters of whom have participated since the garden's inception. The garden coordinator estimates that about 40% of the members are couples, 50% single women and about 10-15% single men. There are few children participating at the garden at this point although there have been more in the past. Most of the gardeners are middle-aged people who have come from the city or already had a history of gardening. Consistent with the community itself, the racial make-up of the garden membership is almost exclusively White.

Building Adaptive Capacity and Increasing Prosperity: It seems that Maple Tree provides some 'cushioning' for food security and a means of income generation for a number of its members, especially those living on low incomes. The garden's coordinator estimates that, of 15 members, 2 sell produce that they grow, 8 use the garden to supplement their income through lower grocery bills, 3 use plots to contribute produce to local institutions and 1 member tries to sustain himself entirely from his garden plot. It helps that members at this garden on private land are permitted to sell their produce. There is a \$20 membership fee requested of those who can pay it. It has been found at Maple Tree that gardeners who pay even a small membership fee are more likely to persevere in maintaining their garden plots.

From an ecological perspective, the garden coordinator reports that the community garden members are very conscious of wanting to use organic/sustainable practices (e.g. organic seeds/seedlings, avoidance of pesticides, water management) but that "organics" do not carry the same cultural capital in this community as they might in urban centres that are more distanced from the challenges of farming.

Bridging Divides and Increasing Social Capital: The garden appears to foster bonds between people and across difference. It includes a nursery plot, which provides food and education to the daycare at the neighbouring school. It also provides produce to the local Community Health Centre and food pantry. Produce from the garden is integrated into other programs that are run out of the Community Food Hub. The hub brings together 4 agencies and a multitude of programs. Plans are also being formed at Maple Tree to build a sensory garden for children with special needs from the school and community. Teachers have been gathering funds and volunteers for it.

Challenges: The garden coordinator, Caser Caneo, explains that, in this rural farming community, the idea of community gardening has been met with some ambivalence. For some residents, it can seem redundant to have community gardens when so many local residents already have land and/or farming skills. This rationale, however, may overlook the broad range of possible benefits of community gardening, including those that result in social, educational, public health, food security, ecological and economic development impacts (Santo, Palmer and Kim 2016).

Building Adaptive Capacity

Decreasing dependence on the cash economy, increasing food security and generating income

In many ways DIG and its member projects work outside the cash economy. There is minimal purchase or sale of goods/services and they rely almost entirely on unpaid labour. While some purchases (e.g. tools, lumber for garden boxes, soil) may be unavoidable, the garden projects that I encountered showed a significant use of recycled household and industrial materials, which were redeployed as garden borders, trellises, irrigation systems, etc. In addition, interviewees state that the social environment of such gardens lends itself to the sharing and exchange, not only of knowledge, but also material goods such as seeds, tools, produce, and recipes. It is also common for gardeners to share preserves and excess produce from their plots with friends and neighbours. Project members also share confidences and listening ears, which may help to contribute to members' sense of social inclusion and mental health.

Although firm numbers are not available, participation in community gardens may have some modest impact on household income and food security. DIG encourages plots of a sufficient size (5 x 25 feet or 4 x 30 feet) to enable gardeners to grow enough food to preserve or freeze for later. This allows the gardeners to supplement their household food with fresh, local produce and, in doing so, reduce their grocery bills (especially in the summer and autumn), which may enhance their food security. Mary Drummond tells the story of a single mother who considered her community garden to be her "lifeline" because of the extent to which it could help her stretch her budget. Because DIG is committed to the autonomy of its projects, keeping comprehensive and consistent statistics on their collective impact can constitute a significant challenge for the organization. However, finding ways to ascertain such impacts (e.g. the number of people fed through their projects, the amount of grocery money saved through members' participation, the volume of food produced, the number of people a garden adds to members' identified friendships) may provide the organization with greater understanding of its impacts as well as greater legitimacy and influence.

In addition to supporting gardeners' food needs, community gardens often donate produce to people who may need it (such as PSP members and those using certain community services such as food banks, shelters, and other organizations).8 Here again, the food from community gardens may help provide some financial 'cushioning' for funds required for groceries, as well as increasing access to locally grown, fresh (often harvested within 24 hours) produce.

⁸ While DIG may provide support and advice around such endeavours, ultimately it leaves it up to the projects to determine how they will relate with their communities. This is another example of the priority that DIG places on projects' self-determination.



Community prosperity and resilience

Informal, under-recognized contributions to

This is true especially for people who may live on low incomes and cannot always afford such produce. DIG has found, however, that contributions of produce to local food banks are encouraged by municipalities and lauded by media. This can place additional demands on unpaid gardening work and eclipse the other benefits of community gardens.



Along with DIG's attempt to promote economic accessibility, there also seems to be an understanding of the benefits of personal contribution. For example, gardeners at the Cannington garden are encouraged to pay at least something for their plots. It had been found there, as well as in other gardens, that those with some investment are more likely to persevere with their garden plots throughout the season. Similarly, those who attend free community meals at Cannington's community hub have the option to make a donation for their meals. In another example, the PSP program provides parents the option to make financial donations for their produce boxes and other free supplies that PSP offers. These programs have discovered that people are more engaged when they make an investment and that the option for some degree of reciprocity is important.

While most of the work of DIG member projects involves garden cultivation and maintenance, there are also those who share their expertise (e.g. by mentoring or providing presentations) or are involved in coordination, facilitation, promotions, newsletter development and/or event planning. For example, Jasmine MacDuff, the coordinator of PSP—who is a strong supporter of one of the gardens, and who previously organized garden donations to PSP—speaks about her relationship with the garden:

JM- I've gotten to know a lot of the people out there [at the garden]... So I have different relationships

MM- You've got roots in the garden [laughs]

JM- Ya. But I have zero interest in gardening. ... For me, it's actually – it's work, it's really hard work

In contrast to this reflection, the DIG experience suggests that people often want to be (or think they can be) involved only through gardening (and not for example, in administrative, visioning or planning capacities). In general, gardeners prefer to garden, and community members who do not garden often do not see that their other skills are also needed to enhance projects.

Building Knowledge and Expertise

Some of DIG's initiatives to share knowledge and skills with its members and the general public include:

- "How to Start a Community Garden" workshops (three so far with another one planned)
- An educational annual garden tour that showcases various projects across the region. (During the 2016 tour, some Durham College students created a video that DIG will use at future meetings. One of these students has also expressed interest in joining the DIG board.)
- The development, with a Durham College instructor, of a guide to common pests (about 17 distributed)
- The development, by a member project gardener, of a community garden manual adapted from the Toronto Community Garden Network (at least 40 distributed)
- The development of a manual for starting children's community gardens
- The use of Twitter, Facebook, an e-mail list and newsletters⁹
- Increasingly sharing information through DIG's website

⁹ At the time of the Annual General meeting in 2016, there were 37 Twitter followers, 117 Facebook likes and 238 current email subscribers (Durham Integrated Growers, 2016).



- Table Talk seminars¹⁰ (Oshawa 30-40 people/month in 2013; Cannington- about 10 people/month; expanding to include Ajax and North Oshawa locations)
- Development of the scan of municipal policies pertaining to urban agriculture
- Speaking engagements (about 10 since DIG's inception but these are becoming more frequent)
- Developing partnerships to help expand educational opportunities

DIG is currently discussing the possibility of sharing its knowledge about urban agriculture by participating in a speaker's event (designed like a TED talk) at Durham College. Such an endeavour may help to strengthen DIG's connection with that institution.

A cross-pollination of skills and knowledge also occurs among project members as they share what they know about growing, harvesting and preparing food but also, according to the Maple Tree garden coordinator, about the nature of the food system itself. Although much of this transfer happens organically, it is also sometimes facilitated by the projects. For example, at one point the Whitby Ajax Garden Project had regular Saturday morning coffee times when gardeners could convene and chat. It also hosts an open house, which includes seminars and a market, twice a year. Another project hosts two members' potlucks each summer, while still another has had stone benches made at its garden to facilitate informal social connections.

Despite the large pool of knowledge that has developed through the collected years of DIG members' experience, Mary Drummond shares that there is still a reluctance on the part of institutions to turn to DIG and other community members in the know, and to compensate them for providing such knowledge. DIG has found that municipalities have often looked to their own staff or "experts" outside Durham for knowledge on urban agriculture instead of looking to the expertise of individuals and groups in Durham communities. Still, DIG's experience has been that, at the municipal government level, there is a need for staff to become more aware about issues regarding urban agriculture, and to know where to find the information. For example, the urban agriculture policy scan process¹¹ revealed that information about polices affecting urban

¹¹ Part of the intention of the urban agriculture policy scan with DIG and the Durham Food Policy Council was to help add to DIG's knowledge base and legitimacy (in the community, with municipalities and with DFPC) and, in so doing, help strengthen its position as knowledgeable about the issues.



¹⁰ Table Talks were held monthly in Oshawa, from January to May during the first year, but the closing of the host restaurant has put these workshops on hold. At this point, DIG is conferring with 2 member gardens in Whitby and Ajax about hosting future Table Talks. In Cannington, where a DIG member facility exists, Table Talks are held every month and draw about 10 people each time. This demonstrates DIG's reliance on borrowed facilities.

agriculture was not easily accessible in some Durham municipalities. It was often housed in various departments and required staff to consult with each other to find it.

I think the urban agriculture scan gives us what we wanted it to give us from the beginning. It gives DIG legitimacy. It seems that citizen-driven groups have to prove themselves to be heard. ~ Mary Drummond

One example of the need for DIG to prove itself is the effort that has been required on its part to be invited to the planning process for Durham College's Food and Farming program, and to be permitted to make presentations to the Region's Health and Social Services Committee and Roundtable on Climate Change.

Greater knowledge may also help DIG to be better able to advocate for the gardens and encourage municipalities to place a greater priority on urban agriculture. The strengthening of the reputation of DIG as a credible, important source of expertise along with stronger connections across the region could also help DIG in attracting more funds. This is something DIG has not needed to do to survive, but will need in order to increase its level of sophistication. The recognition of community knowledge and skills is also important for maintaining civic engagement. Indeed, the interviews indicate that community members are more likely to stay involved when they feel heard, validated and supported.

Those who benefit from produce donations from DIG's member projects also gain knowledge: about the garden itself and food production processes. For example, Jasmine MacDuff explains that the Parents Supporting Parents group has been provided a tour (including a barbeque, craft activities, and the chance to pick up produce on-site for their food boxes) of the Whitby Community Garden Project, which allowed PSP members to see where the food box produce came from and how it was produced.

Providing Ecological Benefits

In addition to focusing on the well-being of people and communities, DIG also works towards the sustainability of the food system. Through manuals, workshops and community talks, it helps community members and gardeners learn practices that are ecologically supportive.

Ecological benefits can be seen at the garden level as well. Several of the projects speak on the DIG website to their general commitment to environmental stewardship. The urban agriculture policy scan, my own observations of some of the member gardens and discussions with DIG members indicated that projects variously incorporate plants supportive of pollinators, minimize the use of treated water by collecting rainwater,



enhance soil quality, compost on-site, and adhere to garden committee guidelines or municipal policies prohibiting the use of pesticides. A global urban agriculture network reports that urban agriculture can also provide ecological benefits such as greenspace creation, stormwater management, carbon dioxide capture, reduced transportation and packaging of food, and the reuse of organic and water waste (RUAF Foundation, n.d.).

Other contributions to the local economy

As discussed above, the formal direct contributions that DIG and its member projects make to their local economies through sales, purchases or employment are minimal. Member fees and some donations to the projects can be reinvested in local goods and services for the gardens, allowing them, in turn, to continue to support the growth and distribution of garden produce. However, perhaps the greater effect that DIG projects have on local economies regards the presentation of alternatives to dominant ideas about provisioning, labour and the exchange of goods12, services, knowledge and skills.

Relying heavily on unpaid labour, donations, bartering, reuse, self-reliance and collectivizing, DIG and its member projects challenge dominant values regarding private property, individualization, disposability and market solutions. Instead, they help to redefine resources outside of a commodity framework, promote the commons and reprioritize social interaction, collaboration and care. As discussed later on, this informal economy activity can help to bring people together across economic and other forms of difference. It can also provide access to fresh produce and cushioning to the grocery expenses of members, as interviewees pointed out. Although qualitative data is not available for the impact on the gardeners themselves, the approximately 800 plots across Durham would suggest an impact on the households of 700 to 800 participant gardeners in addition to all the people they share their produce with and the many garden volunteers. In one example, significant impact can be seen through the over 25,000 pounds of food grown in the last 3 years at the Whitby Ajax Garden Project and distributed to 14,000 people each year (Durham Integrated Growers, 2016).

In an example of alternative economic exchange, the Whitby Ajax Garden Project uses some of its produce to make value-added products, the sale of which helps to supplement the Project's budget and contribute to its sustainability. WAGP prepares these products in a certified kitchen at a church, and in exchange provides fresh produce for that church's food pantry. WAGP has also taught the church's volunteers how to make preserves, so that they can transfer this knowledge to their clients.

¹² According to Mary Drummond, the sharing of seeds, plants and knowledge also occurs at all community gardens.



Challenges to continuing to support urban agriculture

The ability of DIG and its member projects to continue to support urban agriculture is made more difficult by a number of factors such as funding, varying definitions of urban agriculture, the partitioning of various components of food systems, municipal policies, and a need for collaboration among projects.

Funding

Despite DIG's ability to function on few material resources, having sufficient funds to meet its goals constitutes a challenge for DIG. The organization relies primarily on donations, fundraising and membership fees. It partnered once with Durham College to submit a grant application (which was not approved) regarding a study on pest management. Otherwise, DIG has opted out of applying for grants for the time being. It has been observed at DIG that a tendency by funders to support more visible projects rather than recognizing the work and expertise of existing, often well-established, onthe-ground projects makes it difficult to attract funds. In addition, applying for funding grants can mean engaging in a climate of competition between organizations for the same funds with no guarantee of receiving funding. It can also be made difficult because of the work entailed in grant applications, the frequent requirement of charitable status (which DIG does not have) and the need for partners or lead organizations. Perhaps most challenging is the fact that these potential partners may have their own projects that need funding from the same source. Finally, specific funding restrictions, such as those prohibiting advocacy, also present a challenge to an organization that sees advocacy as central to its work.

At the member project level, community gardens that have philanthropic support and paid coordinators—as does Maple Tree in Cannington—tend to have more stability, even though there is no guarantee of their continued survival.

Snapshot-Parents Supporting Parents group

Parents Supporting Parents (PSP), a 4-year-old organization based in Ajax, is open to all parents in Durham Region. It focuses on building social, emotional, spiritual and physical community and support systems for parents. About 20 to 25 families (translating into about 50 to 60 people) gather each month for a family fun event. After a communal dinner, the children go to counsellor-led activities while the parents have adult time, which sometimes includes workshops or self-care activities.

For the past 3 years, PSP has connected with the Whitby Ajax Garden Project to receive fresh produce on a regular basis. Typically, about 10 to 15 PSP families have come together, each donating 10 to 20 dollars if possible to receive produce bi-weekly from the WAGN (delivered by a garden volunteer) from July until Thanksgiving. The food was dropped off at a local school, where parents selected what they needed from crates of produce.

The group's receipt of WAGP produce has been coordinated by one PSP member who is responsible for communications, sign-ups, donations and deliveries. This relationship between PSP and WAGP has relied entirely on volunteer work, as does the operation of WAGP.

This year PSP has ended its relationship with WAGP because of changes at the garden, the most significant of which is its change in leadership. Until this year WAGP had one person providing oversight, but now has a board of 4 people. Following this change, WAGP has a more constrained approach to working with PSP (shorter season, no delivery, different expectations re: donations and sign-up information). Lack of delivery in particular poses a significant barrier, because many PSP members do not drive. Because its members enjoy the produce, PSP is exploring alternate, retail possibilities for fresh produce provision. This turn of events may reflect the extent to which changes in governance structures as well as the philosophies and capacities of individuals in informal economy projects can affect their operations. These factors may speak to projects' fluidity and uniqueness on the one hand, but also their vulnerability to instability and limited potential on the other hand.

Perceptions of Urban Agriculture

One of DIG's challenges stems from pervasive definitions of urban agriculture that do not fit the Durham experience. It is important to DIG that the definition of urban agriculture used in Durham reflect the sizes, types (community gardens but also urban farms, rooftop gardens, beekeeping, backyard hens, etc.) and locations (cities, towns and peri-urban areas) of the projects that are developing in the Region. This broadening of a definition beyond one emphasizing smaller, urban-based, garden-centred projects can open the imagination of policy-makers and citizens in general, helping to grow social, policy and possibly financial support for such projects. As was found during the urban agriculture policy scan, what is not envisioned is not supported in policy.

In particular, the practice of urban agriculture in the more rural parts of the Region may not resemble more recognized models based in metropolitan centres. As an example of the difficulties this may cause, during the course of the urban agriculture policy scan, certain rural-based municipal staff suggested that urban agriculture (and therefore urban agriculture policy) is not something needed where agriculture is already prevalent. This stance can overlook the food security, community building and educational benefits of urban agriculture, and the needs of individuals living in those areas. Again, discrepancies in definitions of urban agriculture speak to a need to gather knowledge from what people are already doing on the ground in communities.

Seeing Food as Multidimensional

DIG has found that it can be a challenge to find a broad food systems approach among the local municipalities. For example, at the Regional level, urban agriculture is addressed within the Climate Change Local Action Plan. However, a sustainability lens' emphasis on food miles and risk management may exclude engagement with food in other areas such as health promotion, social inclusion or community building. Other departments that address some aspects of a food systems approach include Health, with its focus on nutrition and food safety (e.g. nutritional information, Nutritious Food Basket reporting, community food advisors, food premise inspection), Planning (land use, regional vision) and Economic Development (agriculture, agri-food). However, in DIG's experience, sometimes it is particularly valuable to make connections with individual municipal councillors who take a food systems approach, and can provide urban agriculture with a stronger backing than municipal staff from specific departments alone.

Fostering Collaboration

The development of a sense of collectivity that extends beyond the borders of individual projects remains a challenge for DIG. A scan of project websites showed connections happening primarily within the projects themselves and with their own



community members/organizations. Only a couple of project websites described a connection with DIG and only one was found to highlight a commitment to collaboration with other urban agriculture initiatives. While recognizing that gardeners tend to be focused on their own projects, and less interested in more administrative activities such as meetings, DIG works to develop connections between gardens, especially around mentoring, mutual aid and the pooling of resources. Opportunities for project members to learn about each other's projects include DIG's annual garden tour, its annual general meeting, and seminars such as Table Talks held throughout the year.

It's a challenge to bring projects and organizations together around a table to work for the common good, when they all have needs and concerns of their own-but it's a worthwhile challenge for the quality of life within the region. ~ Mary Drummond

Municipal Policy

Municipal policy, or the lack thereof, can also present challenges to local urban agriculture. Community gardens are referenced more in municipal policies than other forms of urban agriculture, but significant policy gaps still remain. Such gaps can leave urban agriculturalists unclear on the ways to initiate projects, and can leave existing projects vulnerable to the discretion of municipal staff members. For example, across Durham Region municipalities few or no policies exist regarding:

- the operation of community gardens on private land
- the use of edible landscapes on boulevards and front yards
- the use of rooftop gardens or greenhouses for food production

Existing policies, while providing clarity and support, can also institutionalize restrictions for community gardens in such areas as signs, lighting, schedules and water usage. Further, restrictions on the sale of produce from community gardens on public lands may inhibit projects' viability. Additionally, a lack of available zones allowing community gardens as a permissible use can serve to contain food production to rural/agricultural spaces. In some cases, the transitory nature of some permitted zones, such as those slated for future development, inhibits the ability of garden projects to set down roots in their communities. Regarding this last point, Mary Drummond has found in her experience that it takes most projects about five years to become fully established, and some projects have survived 10 to 20 years. DIG works to ensure the sustainability of the projects they mentor by, for example, ensuring they have a solid garden committee in place from the start. It is important that municipalities regard such community gardens as vital, long term, community projects.

¹³ The urban agriculture section of the Durham Food Policy Council Environmental Scan encourages the planning of continuous productive urban landscapes that meld into near urban and agricultural areas.



Challenges for DIG in continuing to support urban agriculture projects:

- tendency for community funders to support new projects rather than recognizing the work, effort and expertise on the ground of existing projects
- competition with other organizations for the same funds
- difficulty applying for funds because of: the work entailed in grant applications, the need for charitable status, the need for partners/lead organizations
- developing recognition of a definition of urban agriculture that fits the practices in Durham Region
- fostering credibility and legitimacy as a grassroots, citizen-led group
- the need to recognize food as multifaceted and part of a broad system
- establishing and maintaining relationships with/between member projects
- policies that restrict urban agriculture projects, or gaps in policy that leave decisions to municipal staff discretion

Increasing Prosperity

Addressing social inequalities for certain groups

DIG member projects help to address social inequalities in a variety of ways. Through a lack of restrictions on membership, they promote inclusivity of people across many lines of difference. They also help to level the field for people of varying income levels by offering donations of produce to marginalized groups as well as low and/or sliding membership fees. Each project decides on its own fees but many have low and/or sliding fees, especially in low-income communities. DIG has found that municipalities encourage sliding fee structures, but a certain amount of revenue from fees is still required in order for projects to operate. Also, by providing technical support to new and inexperienced garden initiators and community members, DIG fosters the inclusion of people of varying ages and experience levels.

Growing conditions and plant availability notwithstanding, community gardens also provide the opportunity to grow food connected to any cultural tradition. Although one garden in the north of the region reported a lack of racial-cultural diversity, especially a lack of non-White gardeners (which is reflective of that community), it was also reported that gardeners at the Whitby Ajax Garden Project further south in the region grow plants representing a variety of cultural traditions, and that newcomers to Canada can find and grow familiar plants at the garden and demonstrate their knowledge about them. Some such produce is donated to local food banks. DIG has also presented at a local public library to new immigrants with regards to growing food in Canada.

In addition, DIG and its projects foster connections with specific community groups who may be vulnerable. For instance, one community garden is working with local educators to develop a fully accessible sensory garden for children with special needs. The garden will be designed to allow children to experience all 5 senses while moving through it. Another project has a garden dedicated for seniors, as well as a Native medicines garden. An organization that provides services for people who are deaf consulted with DIG to develop a community garden as part of their health and literacy programming.

DIG Member Project Snapshot: The Whitby Ajax Garden Project

The Whitby Ajax Garden Project (WAGP), a 15 year old project and founding member of DIG, is an urban farm encompassing multiple urban agriculture projects. WAGP focuses on promoting community food security through connections with the public, and providing employability skills, fresh produce to people in need (directly or through agencies), education on ecological growing practices, and a sense of belonging and connection with nature. Operating entirely on unpaid labour, in 2013 WAGP was maintained by 120 volunteers. It distributes produce to about 14,000 people per year. WAGP has 53 member plots as well as 63 communal plots, used for donations to approximately 10 food banks and agencies. Membership in WAGP involves providing some volunteer hours in the communal plots. WAGP's long-standing tradition of Christian-based principles has been central to its focus on supporting marginalized people (WAGP synopsis Jan. 31, 2014; Durham Integrated Growers, 2016).

Bridging Divides

between the individual self and the collective group, this is one of the most challenging pieces and reflect the society where we live and the values it promotes.

~ Cesar Caneo with regard to DIG members

The work of DIG and its projects serves to bridge divides on a number of different levels. At the project level, people from diverse income levels/sources, ages, and cultural backgrounds come together to engage in similar activities. According to Mary Drummond, working alongside each other in the gardens helps members develop understanding, mutual aid and friendship across difference. DIG's work with food also spans a number of areas such as food access, skill development, knowledge sharing, and advocacy. It sees urban agriculture as a means of physical health and sustenance, mental health, social connection, self-reliance, ecological health and more generally as a contributor to a just and sustainable food system.

One of the main bridges that DIG forges lies between community gardeners and policy makers. DIG advocates to local municipalities on behalf of gardeners, and teaches gardeners about relevant municipal policies. This advocacy and education helps to build a policy landscape that is representative and supportive of local urban agriculture projects.

As described earlier, another bridge that DIG is trying to build—but which remains challenging—is that between the individual projects. The next section on social capital speaks more to the relationships that DIG cultivates.

Increasing Social Capital

Formation of New Relationships

The formation and maintenance of relationships requires time, commitment and persistence. DIG makes these investments a priority in the relationships it fosters among its own members, and with municipalities, businesses, post-secondary institutions, other organizations, and the Durham Food Policy Council.

Relationships are formed **among members of individual projects** through regular project meetings to make decisions about their projects, but also informally, through their interactions in the gardens where they share knowledge and skills. Such connections have also been fostered through the relationship some projects have with groups in the broader community. For example, a few PSP members, after receiving the produce from the Whitby Ajax Garden Project the first year, went on to join another community garden together.



As discussed earlier, DIG also works to strengthen the connections **between member projects**, fostering what the coordinator of PSP described as DIG bringing everyone under its umbrella into "an equal brainfield" (Jasmine MacDuff) through the sharing of knowledge.

DIG places much value on strengthening its relationships with the Region and its eight lower tier municipalities. The development of such relationships is key to open lines of communication, the recognition of grassroots expertise, the representation of community perspectives/concerns and the development of policies that support urban agriculture projects. It could be helpful to DIG for policy makers to promote a mindset whereby urban agriculture projects are integral to the infrastructure necessary for sustainability. The exchange of knowledge happens in several ways, including ongoing communication/updates with municipal sustainability coordinators, and consultations with municipal staff around policy. DIG's role in the region gained some legitimacy through the Regional endorsement of its vision and mission. It is now a goal for DIG to be endorsed by the eight remaining municipalities. Member projects themselves typically only engage with the municipalities around zoning or land availability questions, or when they need resources such as compost. This perhaps indicates a gap in connections between municipalities and work on-the-ground.

DIG has a few connections with local businesses. For instance, it has received discounts and garden tour prizes from local businesses, and has organized Table Talks with the support of local restaurants. Through the garden tour, DIG also helps to promote the businesses that donate. The development of more and stronger links between DIG and businesses can be challenging. For example, individual projects already sometimes have links with businesses in their own communities. This can make it inadvisable for representatives of DIG as an organization to approach the same businesses. DIG has found that it is easier for member projects to forge these connections in rural communities where people tend to know each other better.

DIG's connection with a Durham College instructor resulted in collaboration on a manual about pest management and an application shared with Durham College for grant funds (which was not approved). However, DIG would like more of a connection with Oshawa's University of Ontario Institute of Technology and Trent University Durham, and for DIG members to be recognized as knowledgeable and capable of teaching about aspects of urban agriculture at least at the college level.

A close relationship exists between DIG and the Durham Food Policy Council, both of which are chaired by the same person, Mary Drummond. Some separation in roles comes from the fact that DFPC stresses that members participate as individuals with knowledge and skills, rather than as representatives of their own organizations. While wearing both these hats can allow one person to have on-the-ground, policy and food



systems perspectives and to support both organizations as they become established, Mary acknowledges that eventually each organization will require the singular attention of one person.

Building Connections with Broader Networks/Change Efforts

DIG's goal of promoting sustainable food production and food security speaks to a broader vision of a just and sustainable food system, one that extends far beyond Durham Region. In pursuing this vision, DIG connects more broadly with:

- 1) Toronto Urban Growers (TUG). DIG has provided TUG with information for their GTA urban agriculture mapping project, and will continue to do so annually once the mechanism is in place to do so.
- 2) Ontario Community Garden Network hosted by Sustain Ontario.
- 3) Durham Region Rural Economic Development Department. DIG will be working with them to set up a feedback session for the urban agriculture policy scan.
- 4) Durham Region Roundtable on Climate Change, which has provided DIG a website link.
- 5) Durham Food Policy Council, which collaborated on the urban agriculture policy scan.
- 6) FLEdGE network/Centre for Sustainable Food Systems, which has sponsored the research for this report and the urban agriculture policy scan.
- 7) Food Secure Canada, of which Mary Drummond is a member.

Fostering Innovation/Entrepreneurship

DIG's economic model is in flux. While its legion of volunteers has been positively affecting healthy food access, social inclusion and environmental stewardship, the network's commitment to unpaid labour is not completely resolute. DIG agrees that having secure long term funding in Cannington provides the project with long term sustainability, and that having a paid researcher for the policy scan allowed a project to be completed that might not otherwise have been. Volunteer overwork, limited organizational stability and difficulty meeting more labour intensive organizational goals present challenges to the commitment to unpaid labour. Municipal pressures to add more garden plots and grow more food for charity increase the demands on volunteer work within the projects.

The range of acceptable avenues for staffing funds, however, is limited. DIG's current funding comes mostly from fundraising, donations, and the fees paid by member projects. The organization has been deterred by some of the challenges presented by applying for grants for staffing and it opposes program fees that could reduce

¹⁴ However, even this project required significant unpaid efforts from both DIG and the DFPC.



The Social Economy of Food:

Informal, under-recognized contributions to

Community prosperity and resilience

community member accessibility. At the project level, low and sliding scale membership fees that are in place in many projects to promote financial accessibility also place limits on funds. Having said this, the costs for projects to continue operating once established are low.

Rather than working entirely outside a cash economy, a possibility for larger projects might be to move towards more social entrepreneurship (only available on private land) that focuses on the selling of project-based produce and value-added products. While allowing greater distribution of the fruits of garden labour, social entrepreneurship could also bypass some of the pitfalls of grants or program fees. The biggest challenge with it, however, is a prohibitive policy landscape. Most notably, local municipal by-laws generally prohibit the sale of produce from community gardens on public land and the Regional Health Department regulates, through the Ontario Health Protection and Promotion Act, premises where food is prepared for sale. For example, in this second case, kitchen facilities can be prescribed that are outside the economic scope of many small producers. DIG's preferred strategy seems to be advocating for the relaxation and simplification of some of these policies.

DIG is working to promote relationships with and between projects, in part to help facilitate the pooling and sharing of resources. DIG already borrows member project facilities for events. It also hosts events like garden tours and presents Table Talks with garden project members and community partners, bringing individuals together across projects and the broader community. While collectivizing and sharing of resources seems to be common in the gardens themselves, it may also provide an innovative way of meeting the needs of the organization itself and its projects without requiring large funding grants.

Regarding the scope of DIG's work, it is proliferating rapidly, as are urban agriculture projects generally across Canada. It can be challenging to provide accurate and updated counts of community gardens in any one area partly because of this quick growth, but also because community gardens frequently evolve from the grassroots level and may therefore go 'under the radar.' However, DIG's approximately 28 associated member projects¹⁵ across a region of 633,130 people (Durham Region, 2016b) seem to reflect a similar gardens-per-capita ratio as the 20 community gardens in Niagara, a region of 449,098 (Greening Niagara, 2016). Both regions have a mix of urban centres and rural/agricultural ones. DIG also belongs to a number of networks that support urban agriculture initiatives (see p. 27).

¹⁵ This is in addition to smaller, private community gardens, school gardens and consulting with 2 to 3 groups each year who are trying to start gardens. It is also a jump in comparison to 2006, which saw only 4 member gardens (having lost 4 others in the previous 5 years), 2 under development and 6 groups requesting information on starting gardens (Earle, Drummond and Archer, 2006).



DIG's Next Steps

At present, DIG's goals include:

- coordinating a workshop for municipal staff to come together—across
 jurisdictions and departments—to share the urban agriculture policy scan
 findings and discuss policies affecting urban agriculture. Although member
 projects will be made aware of the workshop, DIG's annual general meeting or a
 separate meeting with the project coordinators may provide better opportunities
 to discuss these findings with DIG project members.
- continuing to work towards the endorsement of DIG by all 8 lower tier municipalities
- promoting collaboration between member projects
- providing opportunities for garden coordinators to gather
- expansion of community education activities, such as workshops, Table Talks, "How to start a garden" seminars, and project coordinator in-services

Conclusion

The ability of DIG to provide various means of support, education and advocacy to urban agriculturalists across Durham Region is impressive, especially given its modest material resources. DIG's approximately 28 projects across the Region provide access to healthy local food to between 700 to 800 participant gardeners, their households and all those they share their produce with, as well as to garden volunteers. In addition, many projects donate a portion of their produce. The food from some projects, like Whitby Ajax Garden Project, reaches thousands of people. Across the DIG network, connections are fostered between gardeners, with community groups and institutions, and across forms of difference. This helps to address social inequality and promote social capital. The opportunities that DIG provides for citizens to participate within their communities at varying levels can be valuable to quality of life for residents and help to grow community, especially as municipal budgets dwindle or are redirected.

DIG's commitment to the exchange of knowledge at the project, municipal, and public levels helps to promote urban agriculture and the social, ecological and economic benefits that come with it. DIG's wealth of knowledge, while put to good use within the organization, is under-recognized outside of it. A stronger recognition by municipal government, academic institutions, businesses and the general public of its urban agriculture expertise could provide the connections and resources to bolster DIG's ability to continue and expand its work contributing to food security and healthy communities through urban agriculture.

Almost all that DIG has accomplished has been through the reliance on unpaid labour. It has shown what the dedication, perseverance, and hard work of like-minded individuals and communities can make possible. While the organization has remained viable, this approach also presents risks of overwork, organizational instability and difficulty reaching new goals.

From an economic perspective, DIG's model is multidimensional and shifting. It includes fundraising, donations and member fees. The organization is weighing other options for funding, re-evaluating its commitment to exclusively unpaid labour and considering the value of collectivizing resources.

DIG's decisions have traditionally been driven by principles of accessibility, project autonomy, growing projects that are sustainable on the long term, and a commitment to growing community and a sustainable food system through urban agriculture. It seems that these same principles will shape its path forward.



References

Community. Retrieved from: http://www.durhamdigs.ca/
(n.d.) DIG Durham Integrated Growers: Growing Food and Community. [Brochure]
Durham Region. (2016a). <i>Maps: The eight municipalities in a map of Durham Region</i> . Retrieved from: http://www.durham.ca/default.asp?nr=/corpoverview/mapsregion.htm
(2016b). Overview of Durham Region. Retrieved from: https://www.durham.ca/default.asp?nr=/corpoverview/overview.htm&setFooter=/includes/corpFooter.inc

- Earle, B., Drummond, M., and Archer, O. (2016). Snapshot of Food Security in the Region of Durham November 2006.
- Greening Niagara. (2016). *Community Gardens*. Retrieved from: http://www.greeningniagara.ca/community_gardens
- Niagara Region. (2016). *About Niagara Region*. Retrieved from: http://niagararegion.ca/about-niagara/default.aspx?footer=1
- RUAF Foundation. (n.d.) *Urban agriculture: What and why?* Retrieved from: http://www.ruaf.org/urban-agriculture-what-and-why
- Santo, R., Palmer, A., Kim, B. (May, 2016). Vacant Lots to Vibrant Plots: A Review of the Benefits and Limitations of Urban Agriculture. John Hopkins Center for a Livable Future. Retrieved from: http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-a-livable-future/_pdf/research/clf_reports/urban-ag-literature-review.pdf

Whitby Ajax Garden Project. (January 31, 2014). Synopsis.

