Farm to School Regional Hubs

Pilot Program in British Columbia

Process and Implementation Evaluation

Dr. Hannah Wittman and Dr. Lisa Powell
Centre for Sustainable Food Systems
University of British Columbia

8/15/16

Executive Summary

Purpose of Evaluation

In 2014, Farm to School BC developed a Regional Hubs pilot program in the Vancouver, Kamloops and Capital Regions. Hubs are coordinated by local Animators and regional Steering Committees to facilitate regional networking, administer funding and support to schools and build regional leadership capacity for the development of food literacy and food security programming in schools. This evaluation assessed the process of implementing Regional Hubs and their progress toward meeting stakeholder goals, including:

1. Building and strengthening Farm to School programs in communities.
2. Increasing the number of schools involved in Farm to School initiatives.
3. Establishing networks and resource groups for providing support for establishing and maintaining Farm to School programs (connecting stakeholders).
4. Communicating about Farm to School initiatives to the general public.
5. Establishing a Regional Hub model that might be applied throughout British Columbia, and elsewhere in Canada, but remains flexible to meet the needs of different communities

Methodology

The evaluation team conducted fall (2015) and spring (2016) focus groups with Regional Hub Steering Committee members and Animators in Vancouver, the Capital Region, and Kamloops. We reviewed Farm to School BC reports and Hub planning documents; strategic plans from each Hub; and Animator reports. The evaluation team also participated in monthly conversations with Animators, attended Regional Hub events, and reviewed school grantee online storytelling reports.

Results

The Regional Hubs pilot program successfully established new Farm to School programs in 24 schools through grants, and provided support to at least 10 additional school programs. The Hubs have assembled and coordinated networks of public health and school district representatives, civil society organizations working on food systems issues and other stakeholders to support Farm to School programs in each region. The Hubs have increased awareness and capacity for growth in Farm to School activities in their regions by administering funding and support, collaborating with existing regional food systems networks, and creating new materials, including a video which has now been distributed across Canada. The Regional Hubs model is flexible to the needs of diverse regions, and the reporting structures for the Animators, schools, and evaluation have provided resources to facilitate the establishment of additional Regional Hubs across British Columbia and Canada.

Recommendations

1. Regional Hubs can further assist communities in identifying diverse forms of support for school programming, such as assistance in grant writing to other agencies; facilitated training sessions; and coordination among existing networks.
2. A lengthened funding cycle for the Animator position (e.g. 3-5 years) would enable more effective and long-term strategic planning and sustained program development.
3. Grant delivery cycles should follow school and growing seasons to enable timely program implementation in school contexts.
4. The involvement of additional stakeholder groups in Regional Hub activities, such as teachers, parents, and the farming community can facilitate further capacity building for Farm to School network development.

I. Farm to School BC: Introduction and Context for Evaluation

Established in 2007 and sponsored by the Public Health Association of British Columbia (PHABC), Farm to School BC (F2SBC) is a network that promotes, supports, and links Farm to School activity, policy and programs across the province.

Healthy, local and sustainable food on the plates and minds of all students in BC

F2SBC Vision

Working with communities and partners, Farm to School BC seeks to empower and support schools in building comprehensive Farm to School programs that support vibrant, sustainable, regional food systems, develop student food literacy and enhance school and community connectedness.

F2SBC Mission

To support this vision and mission, Farm to School BC outlines five primary goals:

1. Support the development of sustainable regional food systems in BC by bringing more healthy, local, and sustainable food into BC schools.
2. Promote healthy eating in BC schools by supporting the development of healthy school food environments.
3. Advance experiential hands-on learning opportunities related to food systems and the development of student food literacy in BC schools.
4. Enhance school and community connectedness in BC.
5. Develop promising Farm to School practice models that are sustainable, self-financing, eco-friendly and have the potential to be implemented elsewhere.

In the fall of 2014, Farm to School BC began a two year project entitled *Growing Farm to School in BC* to support development of new Farm to School programs across the province through the establishment of Farm to School Regional Hubs. Selection criteria for the locations of the Hubs included: sufficient population density to support 8 new programs; schools with a relatively high degree of vulnerability based on criteria determined in partnership with the Ministry of Education; existing regional network in the realm of food systems, health, school food, or a related area; existing energy and support for school food-related activities in the region. Each Hub (Metro Vancouver, the Capital Region, and Kamloops area) is coordinated by a part-time Regional Farm to School Animator and governed by a Steering Committee. The Hubs administered grants to schools in two cycles from 2014-2016; these represented 24 of 48 total grants distributed as part of the Growing Farm to School in BC initiative. The other 24 grants were awarded directly to individual schools distributed geographically across the province by Farm to School BC.

The primary objectives of the Regional Hubs program are:

1. Building and strengthening Farm to School programs in communities.
2. Increasing the number of schools involved in Farm to School initiatives.
3. Establishing networks and resource groups for providing support for establishing and maintaining Farm to School programs (connecting stakeholders).
4. Communicating about Farm to School initiatives to the general public.
5. Establishing a Regional Hub model that might be applied throughout British Columbia, and elsewhere in Canada, but remains flexible to meet the needs of different communities.

From Fall 2015 through Spring 2016, the Centre for Sustainable Food Systems at the University of British Columbia conducted a process and implementation evaluation of the Regional Hubs program.

The goals of the evaluation were:

- To provide assessment of the Regional Hubs' implementation and progress toward meeting goals for stakeholders (including funders)
- To provide information that Farm to School BC can use to further develop and improve Regional Hubs, including network development, communication systems, and other aspects of their programming efforts
- To assess how the Regional Hubs program has contributed to the vision, mission, and goals of Farm to School BC.

This evaluation is focused on the process of implementing the Hubs, rather than assessing the final outcomes of the Hubs from a baseline. We reviewed Farm to School BC reports, Hub strategic plans, and Animator reports; participated in conversations with Animators; attended Regional Hub events; and reviewed school grantee online storytelling reports. We conducted focus groups with Animators and Regional Hub Steering Committee members in late Fall 2015 and in Spring 2016 in Vancouver, the Capital Region, and Kamloops (see Appendix for list of focus group questions). Between the Fall and Spring, 23 individuals participated in focus groups, with 5 individuals participating in both sessions.

We begin by situating the BC Farm to School Regional Hubs program in the context of broader Farm to School program development in North America. We then provide an overview of Farm to School Regional Hubs in British Columbia and a progress report on the implementation of Hubs in each region. Our evaluation concludes by considering how the Regional Hubs are meeting the larger goals of Farm to School BC and with recommendations for the future of the Hubs.

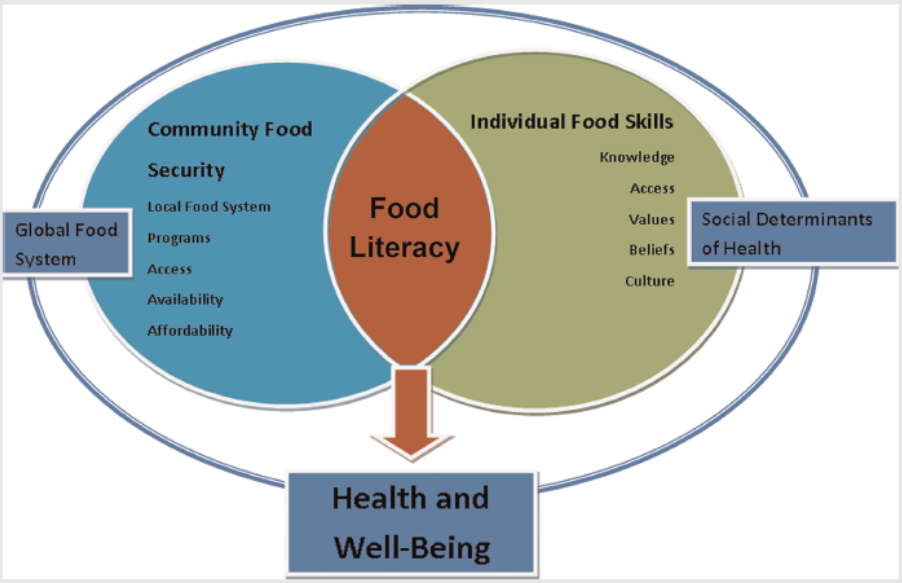
II. Farm to School and Regional Hubs in North America: A Review

Farm to School

Farm to school programs across North America take many forms, including procurement of locally-produced foods for school meals; school gardens; food skills development; harvest festivals and other celebrations; and field trips to farms. While there are limited analyses of Farm to School efforts in Canada (e.g. Rojas et al. 2011), a robust literature assessing the development, implementation, and success of these programs has developed in the U.S, where Farm to School initiatives have been active since the 1990s (e.g. Heiss et al. 2014; Matts et al. 2015). As of 2012, there were over 40,000 U.S. schools involved (USDA, n.d.). While there are multiple motivations for the initiation and expansion of farm to school programs, two are dominant: promoting positive health outcomes and contributing to sustainable local and regional food systems, including supporting local agricultural economies and fostering environmental sustainability.

Farm to School initiatives have the potential to combat obesity and other health issues by promoting healthy eating among children (Bontrager Yoder et al. 2014), both through the direct provision of healthy foods, and through the promotion of food literacy among school children and their families (Moss et al. 2013). School gardens, in particular, have been shown to be effective in increasing food literacy (Davis, Spaniola, and Somerset 2015). As shown in Figure 1, food literacy includes elements of both health promotion and sustainable food systems (Cullen et al. 2015). Food literacy encompasses the knowledge, skills, and practices that enable citizens to participate more effectively in the construction of a sustainable food system, including through food choices and waste management, as well as through participation in the development of food policy (Vidgen and Gallegos 2014).

Fig. 1 Food Literacy Framework for Action shows food literacy as the juncture where community food security and individual food skills intertwine. An individual may be strong in food skills but their community may not be food secure; or a community may be food secure but individuals have few food skills. For an individual or population to be food literate and to fully engage in their food system, an ecological approach is necessary, in that individual behaviours and skills cannot be separated from their environmental or social context. It is theorized that increasing food literacy will lead to increased health and well-being.



Source: Cullen et al (2015) p 144

Farm to School initiatives can provide expanded and more stable markets for local agricultural products, particularly those grown by small- and medium-scale farmers (Conner et al., 2008; Izumi et al., 2010). In addition to the environmental benefits involved in shortening supply chains and reducing the distance that food travels, Farm to School initiatives often seek to involve farms that employ environmentally sustainable agriculture practices (Conner et al., 2011; Vallianatos et al., 2004). A strong focus on institutional procurement in Farm to School programs in the United States is tied to the existence of a national school food program in the US. Such a universal school feeding program is not present at the national level in Canada or provincial level in British Columbia.

Joshi et al (2008) summarized a preliminary list of factors that contribute to the success of Farm to School programs in the United States. Success is broadly defined to include health outcomes and policy changes, institutional transformation, and landscape/environmental changes. These factors include: *leadership* of those working directly with the programs and of program champions; *partnerships* that include diverse stakeholders who support the program both from within and outside of school districts; and *creativity* in using financial, social, and physical assets.

Hubs

The concept of a "hub" is used widely throughout food systems literature. Some hubs function as aggregation and distribution centres for local food (e.g. the Vancouver Local Food Hub and FoodShare's Good Food Program in Toronto). Others serve as community centres with food preparation and processing facilities and educational programs (e.g. The Stop in Toronto) (Fridman and Lenters, 2013; Johnston and Baker, 2005; VLFH, 2015). A common thread in food hub development in Canada is the development of "connections and collaborative capacity" for building social capital and strong community bonds (Blay-Palmer et al., 2013).

Toronto's FoodShare, a charitable non-profit, is a useful case study of a hub organization facilitating local food initiatives related to food literacy, procurement, and nutrition. FoodShare works on several types of community food security issues and programs, school nutrition and Farm to School efforts are among its main areas of focus. FoodShare advocates for a federal universal child nutrition program, and conducts programs in four main areas: a School Nutrition program coordinates efforts to provide healthy food to students at school; a Bulk Produce Program for Schools and Community Groups delivers "locally grown and seasonal produce when available" on a weekly basis to the sites of school nutrition programs; the Good Food Café program "models a universal and healthy school cafeteria," with made from scratch meals served in schools; and the Field to Table Schools program focuses on experiential education, including student-run school market gardens and cooking classes. FoodShare's school nutrition program is supported by parent donations, private organizations, and funding from the City of Toronto and provincial government (FoodShare 2015).

Farm to School programs and food hubs across North America seek to build capacity and networks to support food literacy and sustainable food systems. While there are commonalities, such initiatives are necessarily adapted to the environments and needs of their locations. In the next section, we examine the Regional Hubs initiative in the BC context.

III. How have the "Farm to School Regional Hubs" been implemented in British Columbia?

Conceptualizing Farm to School

Participants in the F2S Regional Hubs focus groups described a range of components and motivations for "Farm to School" based on their own backgrounds and prior work, including food literacy, local procurement, garden- and food-based curriculum development, school nutrition, and broader food system transformation. Many focus group participants expressed alignment between their regional experiences and the Farm to School BC framework. For others, "Farm to School is a fluid concept" which evolves over time and varies according to school contexts, experiences, needs and capacity. Most focus group participants associated the word "Farm" in "Farm to School" with hands-on experiences such as growing food and with fostering healthier lifestyle habits including eating fruits and vegetables and being active.

Farm to School BC developed three key component-goals to shape the Regional Hubs program. Based on program documents and assessment of the school-based activities supported by the Regional Hubs, for evaluation purposes we broadly operationalized the components as follows:

- Bringing healthy, local food into schools: sourcing food locally and/or from school gardens for school meals or events.
- Hands-on, experiential learning opportunities for students: ongoing and active engagement in food-related kinaesthetic activities such as school and community garden programs; composting; microgreens; meal preparation; food marketing and public engagement
- Fostering school-community connectedness: direct and ongoing involvement of community members in the planning and/or implementation of school-level programs; student engagement in community events and/or programs; developing relationships with local farmers through procurement contracts or events.

Farm to School Programs Created through Regional Hubs

To assess how these components were addressed in schools participating in the Regional Hubs, we analyzed online story-telling reports for 10 reporting schools and animator end of contract reports for each Regional Hub. **Table 1** lists schools that received grants in the first cycle (2014-2015), basic program descriptions of programs, and the component-goals they address.

Table 1: Farm to School Regional Hubs grantees from the first cycle (2014-2015) [1]

Region	School	Programs supported by F2S grants	Healthy local food in schools	Hands-on, experiential learning	School-community connectedness
V	David Thompson High School	School garden; Local produce preservation program; developing small market to sell garden produce;	✓	✓	✓
V	St. Francis of Assisi	School garden; food from local farmers procured for special event; integration of church community in garden activities	✓	✓	✓
V	Templeton Secondary School	School garden and garden-based curriculum; composting; after-school cooking program;	✓	✓	✓
V	Queen Elizabeth Annex	School garden with community volunteers; school composting; students prepare meals; mobile cooking kit; healthy eating program	✓	✓	✓
C	Rockheights Middle School	School garden in curriculum; community engagement with native plants in curriculum; school meals (weekly soup lunch)	✓	✓	✓
C	Royal Bay Secondary School	School garden; produce in food classes and for school meals; engagement with farms and university	✓	✓	✓
C	Esquimalt High School	School garden; culinary food skills program connects cafeteria meal preparation with community	✓	✓	✓
K	Barriere Elementary School	Plots in local community garden; partnered with community for lessons & summer plot care; prepared meals with garden produce	✓	✓	✓
K	Logan Lake Secondary School	School garden - produce utilized in school programming & donated to community; Healthy meals program prepared by food classes; microgreens program; school composting	✓	✓	✓
K	Clearwater Secondary School	School garden with community involvement; Foods class cooked produce for celebrations & meals;	✓	✓	✓
K	Skeetchestn Community School	School garden & greenhouse built with community; learning Secwepemc food traditions; locally-sourced traditional foods in school meals program	✓	✓	✓

[1] Many schools in the second grant cycle (2015-2016) are still completing planning or in very early stages of implementation, and are not included here.

Focus group participants noted that school stakeholders have included traditional Indigenous food and medicine practices in programs supported by the flexible framework of the Regional Hubs. For example, some schools focus their Farm to School grants on plants traditionally used by area Indigenous groups and on Indigenous food systems. One stakeholder pointed to further opportunities to consider "fish to school," perennial berry plants, or other culturally appropriate ways to fill the food systems connections that a particular school is looking for, and build on the capacities they have.

A broad food literacy focus with strong connections to local food systems initiatives have been included in the framework of Farm to School BC since its earliest days. Several long-term stakeholders in Farm to School efforts in British Columbia who participated in the evaluation viewed Farm to School as having shifted to a broader focus over the past decade, starting with initiatives centered on in-school salad bars, stocked when possible with locally-grown produce. The broader focus includes experiential food literacy education and strengthened connections between school programming and community-based food systems work. The absence of national and provincial school feeding programs means that many schools in the province are not equipped with facilities for cooking and serving meals and may only regularly provide catered food service for vulnerable students. This structural condition helps to explain why there is a fairly low emphasis on procurement for school meals for focus group participants/stakeholders.

Across the province, models and priorities for school curricula are shifting to include more emphasis on experiential, inquiry-based, and project-based learning. Focus group participants see Farm to School as naturally fitting into these new curricular priorities, with a strategic link to food literacy objectives. For example, in Kamloops, School District 73 has adopted project-based learning as a key framework for its curriculum in the coming years. Focus group participants indicated that Farm to School programming will help fill the mandates of this curriculum, since initiatives such as school gardens can be incorporated into lessons across multiple subjects and students are involved in all stages of their creation (e.g. from researching appropriate species to plant to scaling up recipes for cooking harvested vegetables).

Who is Involved?

Across all regions, the Hubs have engaged with a diverse group of stakeholders, including public health officials, school officials, and community organizations. Stakeholder roles include Steering Committee participation, partnership and planning support for school-level programming or food sourcing, and policy development. Each Hub identified additional ways stakeholders could become involved, along with challenges to increasing representation and participation in the Hub. Based on focus group discussions and other sources of feedback, this section overviews perspectives of different groups of stakeholders on the Farm to School Regional Hubs.

Public Health

Public health officials are strongly represented in the Steering Committee leadership of the Farm to School Regional Hubs. Public health officials view the Hubs and the Animators as furthering food literacy and related health-promoting and health-supporting work. They view Farm to School work as key to building connections between the curriculum, school culture and healthy lifestyles, leading to positive impacts on schoolchildren, families and teachers. Public health officials working with the Hubs particularly noted that while they believe in the importance and potential of Farm to School work,

they typically have very little time to devote to it within their primary work responsibilities. For that reason, the public health participants stated that Animators and network of supporters formed by the Hubs have been essential to building Farm to School programs.

> *From a public health perspective, we have a very large focus around healthy schools, and looking at the whole school environment, and the context that kids learn. Food is a really important part of that. Kids need healthy food to learn and to be successful, so the food literacy piece of farm-to-school is really important."*
>
> Focus Group Participant

School districts

At least one participant representing a School District participated in each of the F2S Regional Hub Steering Committees. These included Healthy Schools Coordinators (Interior Health/Kamloops Region); District Coordinators for Healthy Schools (Capital Region); and a Sustainability Coordinator (Vancouver School District). Coordinators viewed the Regional Hubs as increasing capacity for interest and participation in Farm to School activities in their region, and for facilitating collaboration and knowledge-sharing among Schools in their district. These coordinators also noted that the Animators and the community contacts they engaged increased the available knowledge-base and capacity for training and answering questions related to gardening and other practical aspects of Farm to School program implementation.

For the VSB in particular, the Hub has been important to helping the Board understand the meaning and possibilities of Farm to School programming. The Hub built momentum for Farm to School activity and recognition from students and teachers, and has been an important source of knowledge-sharing and modeling. Farm to School BC-supported programs have contributed to ongoing explorations of local food procurement in Vancouver schools; the VSB representative noted that programs such as school gardens are "low hanging fruit" that can help build support for system-wide changes.

Teachers and students

The evaluation team received feedback from teachers through their end-of-year reports, presentations at Farm to School celebrations, and one-on-one conversations. Teachers expressed gratitude for the Farm to School BC grants they had received and for help from Animators in applying for additional funding. Several teachers indicated that they had used Farm to School BC grant-supported school gardens to support broader learning goals in their classes, and that they had observed increased enthusiasm among students for trying new fruits and vegetables and for growing and preparing food as a result of their Farm to School programs.

> *I love Farm to School because we make lots of salads and I really love eating them.*
>
> *I love Farm to School because we go to the garden to get Swiss chard and then we eat it.*
>
> Students involved in Farm to School Programs

Individual schools included quotes from students in their online storytelling, and students also shared their perspectives at the Vancouver Farm to School Networking event, the Kamloops Farm to School

Celebration, and during a school visit in the Capital Region. In these forums, students demonstrated enthusiasm for eating healthy vegetables they had grown in their school gardens, and for being part of the processes of growing and producing food. They also demonstrated increased interest and awareness of global food systems and the sources and production practices behind the foods they eat on a daily basis. Focus group participants expressed the desire to have student voices more directly incorporated into future reporting on and evaluation of Farm to School programming.

Additional Stakeholders

The voices of parents were largely absent from reporting and evaluation surrounding the Farm to School Regional Hubs unless they served an additional role, such as membership on a Hub Steering Committee (e.g. urban farmer, health official). Across all three regions, focus group participants noted the potential for more involvement from Parent Advisory Committees in the Regional Hubs. School administrators and non-teaching and non-nurse school staff, though they had interactions with the Hubs and the Farm to School programs in their schools, were not part of the formal evaluation process. Farmer representation to the Focus Groups included two urban farmers who were also involved in Farm to School in other ways (civil society organization, parent).

IV. How do the Hubs develop capacity for growth in Farm to School activities?

Animator role

Focus group participants in all three regions repeatedly emphasized the importance of the Animator role to Hub operations and to Hubs meeting their goals. They noted that having the Animator as a dedicated source of support for Farm to School efforts helped to increase the willingness of schools to participate. This role also met the needs of diverse types of schools with different levels of prior involvement in Farm to School work and different capacities for completing funding applications and connecting with outside resources. They credited the Animators with being able to bring together both different community stakeholders to coordinate efforts and different schools to share information and resources. Across the Hubs, focus group participants noted how Animators had played a crucial role in increasing awareness of Farm to School issues and initiatives among policy makers, both in local government and school districts. Public health and school officials particularly noted how the Animators provide essential capacity for implementing Farm to School programs, as they and others working with health authorities and schools (e.g. public health nurses, teachers) are already "stretched thin" in their roles and have little time available to add administrative duties related to Farm to School.

> *Often schools are their own system and sometimes they don't communicate outside of themselves, so somebody who can piece together different people and to bridge some of those gaps is really important. And [the Animator] has dedicated time to do it. The schools, the community members are all pieces, but you need someone leading the way, and that's been effective so far.*
>
> Focus group participant

> *I think was really key to have that person [the Animator] dedicated to supporting those schools, and having the ability to coordinate, and be a liaison. I don't think we would have been able to even get as close to meeting those goals without that person there.*
>
> Focus group participant

Communication

Regional Hubs communications occur at two levels: first, among the network of those individuals and schools already involved in each Hub, and second, with the broader community of potential stakeholders. While the Vancouver Hub had existing communication strategies in place from prior working relationships between Hub participants, communications in the Capital and Kamloops Hubs were largely handled by the individual Animators through most of the Hub pilot period. The Animators were the key nodes in their Hub networks, communicating with others on an individual, often face-to-face basis. They were also repositories of much of the knowledge about the knowledge about Hubs operations, with key steering committee members also holding some of this information, especially in Kamloops. These Hubs are now in the process of developing more decentralized strategies and knowledge repositories to help increase the resiliency of Hub operations and communications.

Communications strategies are emerging in each of the Hubs to reflect the needs of and resources available in the regions. With the VSFN, the Vancouver Region has produced a short video and a printed, glossy Farm to School guide, both of which have been and continue to be distributed widely. The Capital and Kamloops Regions have largely embedded their communications with the broader communities in existing websites (e.g. Kamloops Food Policy Council) and mailing lists (e.g. CR-FAIR and existing Healthy Schools Newsletter). The Capital Region is also hosting regular Farm to School Roundtable events. These communications efforts contribute to building support for Farm to School efforts in each region.

The Farm to School celebration and networking events held in each region were valuable tools for increasing the visibility of the Regional Hubs, for engaging new stakeholders, and for increasing engagement among existing stakeholders. The celebration event in the Kamloops region was particularly notable, as it provided the opportunity for new involvement by several groups in an environment which demonstrated the greater scope and impact of Farm to School activities, and included participation from numerous students and teachers. The event will likely lead to more sustained participation in Regional Hub activities and Farm to School programs, due to successful communication of the potential of Farm to School and the excitement of teachers and students in response.

Challenges for regional hubs long-term planning

Focus group participants from the Vancouver and Kamloops Hubs expressed difficulty with the short-term funding cycles for the Regional Hubs programs and the Animator position because most models for Farm to School programs, including school gardens, take more than one to two years to develop and become fully operational. They noted that it is also difficult carry out long-term strategic planning based on short term funding cycles.

While participants in the Capital Region Hub noted that the Hub would have difficulty continuing to move Farm to School work forward without the continued support of an Animator, they did not explicitly express concern about the timing of the Regional Hubs funding cycles. This may be because the Capital Hub has been embedded in CR-FAIR, which is a longstanding community organization where Farm to School is part of a larger strategy for food literacy and sustainable food system development. The sense of permanence surrounding CR-FAIR may enable more long-term planning for farm to school, even when funding timelines are uncertain.

We can't really plan for very much, because we know it's going to end, so we have to do really really short-term projects sometimes, and so it just feels like it limits us.

It takes 10 years for something to get established. It's really hard for the teachers, or the principals or us or anyone to go forward with something if you don't really know. Gardens take time. So without knowing, is there going to be funding next year? Is there going to be a hub next year? It holds you back.

Focus group participants

V Regional Hub Highlights

Table 2: Key Partners and Contributions of each Regional Hub

Regional Hub	Key Partner Organizations/Networks	Key Contributions
Vancouver	Hub coordinates with existing regional F2S networks including the Vancouver School Food Network and Farm to School Greater Vancouver	• Maintained and build momentum from prior F2S initiatives in the area • Increased visibility of F2S through printed guide and short video
Capital	Hub is embedded in the Capital Region Food and Agriculture Roundtable (CR-FAIR)	• Facilitated preliminary work toward a district-wide school garden policy • Built coalitions among schools to apply for other grant streams
Kamloops	Hub is embedded in the Kamloops Food Policy Council (KFPC)	• Developed strong F2S support network within the KFPC • Large F2S celebration event incorporating students, teachers, and diverse community groups

Vancouver

Farm to School work in the Vancouver region has a relatively strong history, including an existing network of community stakeholders and organizations that have developed joint initiatives through the Vancouver School Food Network, Farm to School Greater Vancouver and Think&EatGreen@School. There is ongoing interest among a wide range of organizations in Farm to School and a high level of readiness at many schools to develop or continue programs. The Vancouver Hub faces the difficult task of carving out its niche among the large field of players working on school food issues and programs in the region. A challenge for the Hub is making sure that it is understood by stakeholders as a coordinating organization rather than another group doing in-school program delivery. While some long-term members of the Vancouver School Food Network are also involved in the Farm to School Regional Hub as Steering Committee members, the two networks continue to meet separately.

In the Vancouver focus groups, there was considerable discussion of "Farm to School" as a brand. Focus group members saw that this brand could help build a unified Farm to School movement, help support efforts by other individuals and organizations, and serve as a tool for garnering funding and support from the provincial level. The most recent Vancouver Hub Animator foresees a leadership role for the Hub in "telling the story of Farm to School." The Hub is also considering hosting professional development and networking events for teachers and school district personnel, which will be key to assuming this umbrella role.

Capital

The Capital Regional Hub embedded its efforts in the ongoing food literacy work of the Capital Region Food and Agriculture Initiatives Roundtable (CR-FAIR). The Animator expanded his role within the organization and served as a link to other entities interested in Farm to School and food literacy work, contributing to the sustainability of the Animator role. The embeddedness of the Hub within CR-FAIR enabled the Hub to draw on the organization's existing contacts and community of interested individuals and supporters. The Regional Hub Steering Committee has also engaged numerous stakeholders who were not previously involved in CR-FAIR.

The Capital Regional Hub has taken a significant step in addition to administering the Farm to School BC grants, supporting the grantee schools, and garnering awareness and interest in Farm to School activities in the region. The Animator, Steering Committee, and schools in the Hub identified the need for a school garden policy to help set parameters for gardens and clarify responsibilities and relationships surrounding garden maintenance between the students, teachers, and community members working on the gardens and school maintenance staff. They have worked to garner support for developing the policy among school trustees and other stakeholders, and are optimistic that the School District will move forward with the policy development process by Fall 2016. The relationship with CR-FAIR has also helped the Animator and Hub in their school garden policy work, as they have been able to draw on the policy advocacy expertise of leaders in that organization.

Kamloops

The Kamloops Regional Hub network embedded its work in the Kamloops Food Policy Council (KFPC) and the KFPC's associated Community Food Action Team, drawing on the network of organizations and individuals involved in the KFPC. As part of this network the Hub helped advocate for the inclusion of Farm to School in the City of Kamloops Food and Urban Agriculture Plan which was adopted in 2015.

While the Kamloops Regional Hub has been embedded with the KFPC, the efforts of Hub Steering Committee members have moved Farm to School from an issue that was very far down the list of priorities to a more central concern for the KFPC. Though there were some programs in individual schools, there had been no framework in place for supporting Farm to School efforts at the municipal or regional level before the Hub. The Hub has thus not only leveraged the resources of the KFPC, but also provided a new pathway for that network to realize its broader food systems transformation goals. Furthermore, the Kamloops Hub used its Farm to School Celebration event in May 2016 as an opportunity to not only share and celebrate the programs that had been established at Farm to School BC grantee schools, but also to involve community groups that had not previous been involved in Hub work and may be potential partners in the future.

VI. Conclusions and Recommendations

In Table 3 we summarize how the Regional Hubs model has progressed toward goals specifically set out for the program, and identify challenges for ongoing implementation and advancement of the Hub mandate.

Table 3: Successes and Challenges in the Regional Hubs program

Building and strengthening Farm to School programs in communities	**Successes**: In each region, the Hub activities and Hub *network involved new individuals and groups* who had not previously been involved in Farm to School activities. Hubs have helped to *lay groundwork for policies* to support Farm to School programs (e.g. school garden policy, inclusion of Farm to School in municipal food and agriculture planning).
	Challenges: Hub Steering Committees felt their capacity for long-term strategic planning for building Farm to School programs was limited by the short duration of the funding cycle and uncertainty about future funding, especially for coordination and expansion of the network.
Increasing the number of schools involved in Farm to School initiatives	**Successes**: Animators supported both the 24 grantee and at least 10 additional schools in developing F2S programming.
	Challenges: Animators and Steering Committees had limited resources (time and funding) for working with schools beyond the grantee schools.
Establishing networks and resource groups for providing support for establishing and maintaining Farm to School programs (connecting stakeholders)	**Successes**: Through the Steering Committees and Farm to School gatherings and celebrations, Regional Hubs connected individuals and groups with prior interest in Farm to School who had been working independently. Fully embedding Capital and Kamloops Hubs in existing food systems organizations and networks increased the support for Farm to School in these regions.
	Challenges: Some key groups of stakeholders are not well-represented on Hubs Steering committees, including peri-urban and rural farmers and representatives from Parent Advisory Committees.
Communicating about Farm to School initiatives to the general public	**Successes**: The Farm to School video produced by Vancouver Hub and VSFN has been shared on social media both across the province and across Canada. Communications through existing newsletters, webpages, etc. of CR-FAIR and the KFPC enabled information about Farm to School to reach the large memberships of those networks. Regional Hub celebrations, gatherings, and roundtable events shared information about Farm to School with existing stakeholders and others interested in food systems work.
	Challenges: Hubs have had limited communications about Farm to School with the general public beyond those already involved in food systems organizations.
Establishing a Regional Hub model that might be applied throughout British Columbia, and elsewhere in Canada, but remains flexible to meet the needs of different communities	**Successes**: Flexibility of the Hubs model allowed each Hub to adapt to the needs and circumstances of its region. Animator reports, blogs, and F2S programming materials provide detailed information about the successes and challenges of Hubs in their regions, and can be used as resources for future implementation
	Challenges: There is not currently a long-term funding model in place to support either the long-term future of the existing Hubs or the development of new Hubs in other regions

As described in Section II, Joshi et al (2008) outline three key factors for successful implementation of Farm to School programs: *leadership, partnerships, and creativity*. The Farm to School Regional Animators have provided essential *leadership* by assembling diverse and often disconnected stakeholders and by empowering champions of Farm to School efforts within individual schools and in their broader regions. The Hubs have fostered the development of several types of *partnerships:* with food systems organizations and networks that the Hubs are embedded in; between individual schools and community members and groups, between schools, and among varied community organizations. The Hubs have helped to foster *creativity* in operating and supporting Farm to School programs by encouraging schools and community groups to look for innovative program expansion opportunities and to develop solutions to challenges related to policies, facilities, schedules and other hurdles.

Recommendations

Clarification of the role of the Hubs

The Animators and Hub Steering Committee members should identify additional means to support schools in developing Farm to School programs in the absence of administering and supporting F2S granted programs (assistance in grant writing to other agencies, facilitating training sessions, etc.).

Lengthened funding cycle to increase the sustainability of the Regional Hubs Animator position

A longer funding cycle for the Animator position (e.g. 3-5 years) would allow for deeper, more sustained program development and long-term strategic planning. It may be appropriate to fund the Animator position as a grant to an existing food systems organization rather than as a stand-alone position.

Timing of grant delivery

Future grants to schools should be distributed in cycles which follow school and growing seasons to allow for time to successfully implement programs and encourage curriculum integration with Farm to School activities. Funding for Animator positions should align with grant funding cycles, to support schools in the first year of program implementation.

Engagement of additional stakeholders

While the Hubs are largely coordinating networks, there is an opportunity for teachers and parents to be more directly involved in Hub operations. Another key stakeholder group that is largely missing from the Hubs are farmers from the larger peri-urban and rural farm communities surrounding the Hub centres. "Low-hanging fruit" strategies for engagement could include activities such as inviting farmers to school campuses for learning and celebration events and engaging with school cafeterias and school meal programs around activities supporting local procurement.

Finally, there is the need for an outcome-focused evaluation of the Regional Hubs program in the future. Focus group participants echoed this need, and were interested in such questions as "How can we tell if student food literacy is actually increasing?" and "Are students increasing their intake of fruits and vegetables?". We recommend that planning for this potential outcome evaluation begin in the near future, so that reporting structures and data will be in place to help support it.

Bibliography

Blay-Palmer, Alison, Karen Landman, Irena Knezevic, and Ryan Hayhurst. 2013. "Constructing Resilient, Transformative Communities through Sustainable 'food Hubs.'" *Local Environment* 18 (5): 521–28.

Bontrager Yoder, Andrea B, Janice L Liebhart, Daniel J McCarty, Amy Meinen, Dale Schoeller, Camilla Vargas, and Tara LaRowe. 2014. "Farm to Elementary School Programming Increases Access to Fruits and Vegetables and Increases Their Consumption among Those with Low Intake." *Journal of Nutrition Education and Behavior* 46 (5): 341–49.

Conner, David S, Andrew Nowak, Joanne Berkenkamp, Gail W Feenstra, Van Soelen Kim, Toni Liquori, and Michael W Hamm. 2011. "Value Chains for Sustainable Procurement in Large School Districts: Fostering Partnerships" *Agricultural and Resource Economics Review* 1 (4): 100-113.

Conner, David S., William a. Knudson, Michael W. Hamm, and H. Christopher Peterson. 2008. "The Food System as an Economic Driver: Strategies and Applications for Michigan." *Journal of Hunger & Environmental Nutrition* 3 (4): 371–83.

Cullen, Tracy, Janelle Hatch, Wanda Martin, Joan Wharf Higgins, and Rosanna Sheppard. 2015. "Food Literacy: Definition and Framework for Action." *Canadian Journal of Dietetic Practice and Research* 76 (3): 1–6.

Davis, Jaimie N, Mackenzie R Spaniola, and Shawn Somerset. 2015. "Sustenance and Sustainability: Maximizing the Impact of School Gardens on Health Outcomes." *Public Health Nutrition*. 18 (13): 2358-2367.

FoodShare. 2015. "Schools." http://www.foodshare.net/schools.

Fridman, Joel, and Lindsey Lenters. 2013. "Kitchen as Food Hub: Adaptive Food Systems Governance in the City of Toronto." *Local Environment* 18 (5): 543–56.

Heiss, Sarah N., Noelle K. Sevoian, David S. Conner, and Linda Berlin. 2014. "Farm to Institution Programs: Organizing Practices That Enable and Constrain Vermont's Alternative Food Supply Chains." *Agriculture and Human Values* 32 (1): 87–97.

Izumi, Betty T., D. Wynne Wright, and Michael W. Hamm. 2010. "Market Diversification and Social Benefits: Motivations of Farmers Participating in Farm to School Programs." *Journal of Rural Studies* 26 (4): 374–82.

Johnston, Josée, and Lauren Baker. 2005. "Eating Outside the Box: FoodShare's Good Food Box and the Challenge of Scale." *Agriculture and Human Values* 22 (3): 313–25..

Joshi, Anupama, Andrea Misako Azuma, and Gail Feenstra. 2008. "Do Farm-to-School Programs Make a Difference? Findings and Future Research Needs." *Journal of Hunger & Environmental Nutrition* 3 (2-3): 229–46.

Matts, Colleen, David S. Conner, Caitlin Fisher, Shakara Tyler, and Michael W. Hamm. 2015. "Farmer Perspectives of Farm to Institution in Michigan: 2012 Survey Results of Vegetable Farmers." *Renewable Agriculture and Food Systems*, January, 1–12.

Moss, Ashley, Sylvia Smith, Dawn Null, Sara Long Roth, and Ulrike Tragoudas. 2013. "Farm to School and Nutrition Education: Positively Affecting Elementary School-Aged Children's Nutrition Knowledge and Consumption Behavior." *Childhood Obesity* 9 (1): 51–56.

Rojas, Alejandro, Will Valley, Brent Mansfield, Elena Orrego, Gwen E. Chapman, and Yael Harlap. 2011. "Toward Food System Sustainability through School Food System Change: Think&EatGreen@School and the Making of a Community-University Research Alliance." *Sustainability* 3 (12): 763–88.

USDA. n.d. "The Farm to School Census." http://www.fns.usda.gov/farmtoschool/census#/.

Vallianatos, Mark, Robert Gottlieb, and Margaret a. Haase. 2004. "Farm-to-School: Strategies for Urban Health, Combating Sprawl, and Establishing a Community Food Systems Approach." *Journal of Planning Education and Research* 23 (4): 414–23. doi:10.1177/0739456X04264765.

Vidgen, Helen Anna, and Danielle Gallegos. 2014. "Defining Food Literacy and Its Components." *Appetite* 76. Elsevier Ltd: 50–59. doi:10.1016/j.appet.2014.01.010.

Appendix: Focus Group Questions

Fall

For all regions:

Program Goals and Definition:

Going into this project, what did you believe were key components of a Farm to School program? Has that perception changed during your involvement? If so, how?

Probe: food literacy, health and nutrition, agricultural development, environmental sustainability, community development, food security, food sovereignty

What are some of the reasons that you believe the Regional Hub is needed (in other words, what are the motivations for establishing the Regional Hub)?

Stakeholder Identification:

Who do you see as the key stakeholders in your community when it comes to Farm to School initiatives and the Regional Hubs?

Probe: farmers, educators, school admin, NGOs, municipal government, parents, etc.

What community groups have been involved in the establishment of the Regional Hub?

Have you identified "champions" in your area for Farm to School initiatives and for the Regional Hubs?

Are there any local/regional stakeholders who should be involved in the Regional Hub who are not, and why should they be involved, and in what capacity?

Has there been a networking event for existing and interested Farm to School programs in your region? If yes, what aspects of it did you feel were successful and which were unsuccessful?

Relationship with Schools:

How are schools interacting with the Regional Hubs?

What is the level of engagement of [insert different school administrators] with the Regional Hubs?

What roles have parents been playing in the Hubs and in the implementation process?

What kinds of outcomes are [insert different stakeholders] experiencing?

Hub Implementation

What has been your level of satisfaction with the process of developing the Regional Hub so far? What could be done to improve that level of satisfaction?

Please describe any challenges that you have encountered related to the **establishment** of the Regional Hub?

What is the progress on the development of the Regional Hub communication system? What stakeholders are currently incorporated into the system, and how are they communicating with each other and with the Animator?

What sort of media initiatives are you using/are being used to engage with the wider community (beyond those already involved in the Regional Hub project) about Farm to School?

What are your perceptions of the process by which schools were selected to receive Regional Hub funding? What improvements could be made to this process?

Questions specifically for the Vancouver Hub:

Have there been any conflicts or overlaps with existing (Farm to School) groups in the region, namely the Vancouver School Food Network? If so, how have you been approaching these situations?

How has the Farm to School video produced by your Hub been received in the community? What enabled the video and what challenges were associated with it?

What kinds of synergies exists between the local procurement programs and the school garden programs that are happening in your Hub?

What kind of relationship has the Hub developed with the Vancouver School Board? How is the Hub involved in the purchasing order arrangement with Fresh Roots?

Questions specifically for Kamloops:

How is the integration with Food Policy Council actions going? How has that integration been facilitating or limiting?

Your Hub documents indicate that some schools have interest in more local procurement. What role does the Hub have in that?

Your Hub documents indicate concerns over wild game and other traditional foods being integrated into school food initiatives. Could you elaborate more on what kinds of conversations have surrounded this, and any future plans that are developing?

Questions specifically for Capital Region:

Please describe the relationship between the Capital Region Hub and CR-FAIR? Where do you see the efforts of the two integrating and where do you see them acting independently?

How is the Regional Hub supporting procurement of local food in schools, and how is it working with other institutional/school food procurement initiatives in the Capital Region?

Spring

Do you think the Hub has been successful in meeting its stated objectives? Do you think the Regional Hub should continue, and why?

What sort of resources have been developed to support the future/sustainability of the Hub?

Assuming the Hubs program does not secure additional funding for the Animator position, will the Regional Hub continue, and if so, how?

Assuming the Hubs program DOES secure additional funding to continue the Animator position, what are the plans for the Hub beyond June 2016?

In the fall focus group, you described communications in your Hub as having x, y, and z challenges or successes (list based on individual Hubs). Have there been any changes in how communications are being handled in your hub, and please describe?

In the fall focus group, you mentioned that the Hub hoped to engage the additional stakeholders (list stakeholder groups mentioned in Fall Session). Have any of these stakeholders become involved, and if so, how?

Have you identified any additional stakeholders since our last meeting whom you would like to become involved in the Regional Hub?

What do you see as an ideal future for Farm to School activities in your region? Are there any benchmarks by which you would measure Farm to School efforts as having achieved “success”?