

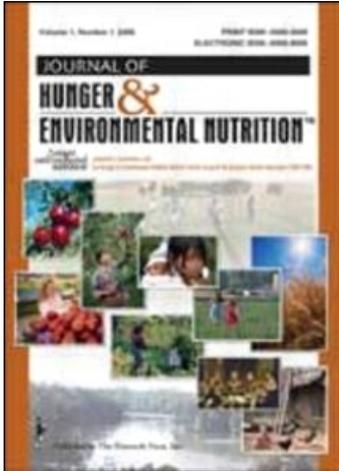
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Publisher *Taylor & Francis*

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## Journal of Hunger & Environmental Nutrition

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t792306860>

### New Approaches to the Health Promoting School: Participation in Sustainable Food Systems

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Online Publication Date: 11 December 2008

**To cite this Article** Carlsson, Liesel and Williams, Patricia L.(2008)'New Approaches to the Health Promoting School: Participation in Sustainable Food Systems',*Journal of Hunger & Environmental Nutrition*,3:4,400 — 417

**To link to this Article:** DOI: 10.1080/19320240802529243

**URL:** <http://dx.doi.org/10.1080/19320240802529243>

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## REVIEW

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# New Approaches to the Health Promoting School: Participation in Sustainable Food Systems

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The authors acknowledge the support of the Nova Scotia Health Research Foundation Graduate Student Award for LC. The authors thank Ralph Hancox for his swift and thorough contribution to the final editing process.

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Journal of Hunger & Environmental Nutrition, Vol. 3(4) 2008

Available online at <http://www.haworthpress.com>

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doi:10.1080/19320240802529243

**ABSTRACT.** The purpose of this review is to synthesize research on 3 strategies that public schools use to procure food from within sustainable food systems—school food gardens, farm-to-school programs, and school procurement policies—and discuss the potential roles for dietitians. Peer-reviewed and “grey” literature provides a wealth of successful models for how schools participate in sustainable food systems, why they do it, what benefits they reap and what barriers they encounter. While available published literature provides reason to believe that these strategies may contribute to sustainable community design, food system localization, and child health and nutrition, it has also been suggested that they may encourage transfer of government responsibilities to the community.

**KEYWORDS.** School food, sustainable procurement, sustainable food systems, community food security, farm to school, school gardens

## **INTRODUCTION**

Both Dietitians of Canada (DC) and the American Dietetic Association (ADA) are supportive of building Community Food Security (CFS) and sustainable food systems (SFS) that include public school participation.<sup>1,2</sup> Dietitians of Canada encourages dietetic professionals to help build CFS by, among many strategies, facilitating the development of school garden and hydroponics projects, creating multisector partnerships and networks that work toward community food security, working with governments, organizations, and communities to develop policies for increasing community food self reliance, and advocating for adequate budgets for institutions.<sup>1</sup> The American Dietetic Association urges professionals to help build SFS by working to improve access to and consumption of locally produced foods, encouraging connections between local producers and institutions and supporting government policies that encourage farm to school programs and school gardens.<sup>2</sup> While the body of research around public school participation in SFS supporting these position statements is growing, there is still a need to better understand the specific health, environmental, social, and economic advantages and disadvantages.

The purpose of this review is to synthesize research on 3 public school sustainable food procurement models used by public schools: school food gardens, farm-to-school programs, and sustainable procurement policies and their contribution to CFS and SFS in the Canadian and American context. It is the authors' hope that this review will help nutrition professionals,

those working with public schools, as well as those interested in SFS, in understanding sustainable food procurement issues in the public school context.

This review will contribute to our understanding and knowledge of sustainable food procurement in schools by situating each of the 3 strategies within the evolving literature on CFS in an effort to clarify the role and value of school participation in SFS. While recognizing that each individual school community is unique and, as a result, the positive and challenging experiences with each project, program, or policy are equally unique, there are common themes that warrant exploration. Finally, several options for research, advocacy and policy, education and awareness, coordination and action are presented.

### ***Concepts of Food Security and Community Food Security: A Brief Overview***

Food security is a broad, multifaceted concept that can be described at the global, national, community, household, individual,<sup>3</sup> or cultural level<sup>4</sup> and can be approached from both SFS and anti-poverty perspectives.<sup>5</sup> Health Canada recently reported that over 10% of Canadian households with children experienced moderate or severe income-related food insecurity in 2004; 5.2% of these families experienced food insecurity at the child level.<sup>6</sup> The United States Department of Agriculture (USDA) reported that in 2006, while 15.6% of families with children experienced household-level income-related food insecurity, only 0.6% of these same households reported this at the child level.<sup>7</sup> Measurement of household food security differs in Canada and the United States, so direct comparison is not possible; however, these statistics indicate that in both Canada and the United States, children are experiencing food insecurity.

Currently, there is no national monitoring system in either country that measures the extent of food security at the community level, from an SFS perspective—referred to as community food security (CFS). Despite the lack of prevalence data, in 2007, the Dietitians of Canada (DC) released a public policy statement on CFS<sup>1</sup> acknowledging its conceptual importance. Although this statement accepts Hamm and Bellows' definition of CFS as a situation in which "all community residents obtain a safe, personally acceptable, nutritious diet through a sustainable food system that maximizes healthy choices, community self-reliance and equal access for everyone"<sup>1</sup> (adapted from Hamm and Bellows, p. 2),<sup>8</sup> Hamm and Bellows also point out a lack consensus of what the field of CFS encompasses<sup>8</sup>;

a theoretical framework, defined “community” boundaries, and parameters around how to measure CFS.<sup>8,9</sup> A measurement system for CFS is important to evaluate if and how strategies recommended by the DC and ADA examined in this article are contributing to CFS.

McCullum proposes a framework based on a 3-stage continuum of evidence-based strategies for community food security (adapted from MacRae<sup>10</sup>) where each stage of food systems change is recognized as part of a dynamic, comprehensive transition of our food system towards sustainability.<sup>1,11</sup> The first stage encompasses short-term strategies that initiate food systems change. School projects include classroom-based education or school gardens used as educational demonstration sites for nutrition and ecological studies.<sup>12</sup> The second stage, food systems in transition, involves medium-term strategies such as creating networks and partnerships between local food producers and school cafeterias<sup>13,14</sup> or school gardens that produce food for the cafeteria.<sup>1</sup> The third stage, food systems redesign for sustainability, usually takes the form of sustainable procurement policies at the school, catering company, or school board level.<sup>15</sup> These might include local purchasing but extend to include environmentally and socially responsible procurement policies such as buying organic and Fair Trade products. Here we borrow McCullum’s continuum to frame CFS.

The particular setting, or community, considered here, is the school community—all those in direct contact with the school, including students, staff, administration, parents, volunteers, food service providers and managers, distributors, producers, and growers.

## **METHODS**

Three informal, face-to-face meetings and one telephone meeting were held during the period of March to November 2007 with key informants working with schools on issues of health promotion and local food procurement in the Annapolis Valley, Nova Scotia. These meetings were held initially to explore locally relevant issues and the involvement of community groups in directing the focus of this review.

Online database searches of PubMed, Academic Search Premier, and ProQuest were conducted using the keywords sustainable, local, school, food, procurement, farm-to-school, and school garden in various combinations. Links to related articles were searched where appropriate articles were found and reference lists were scanned for additional related articles.

The ADA and DC Web sites were searched for related position papers, and a Google Scholar search was done using the same keywords to pick up any relevant “grey” literature. Search results were read for different models of sustainable procurement used by public schools, benefits, and barriers, as well as gaps in the research. A general search of the food security and CFS literature was also done to provide context.

## RESULTS

The results are organized to provide a brief background on the school food movement in Canada and the United States and the roles schools play in CFS and strategies employed. Each strategy is then discussed with respect to CFS, providing descriptions and examples, their respective political support, as well as the available published research.

### *School Food in Canada and the United States*

It is important to note key differences between Canadian and US school meal environments and policies. In the United States, hot lunch programs in schools have been legislated federally since 1946, making them available to all school children in the country; this expanded to include breakfast programs in 1966<sup>16</sup> and school wellness policies in 2006.<sup>17</sup> While infrastructure and political support for sustainable food procurement is clearly much stronger in the United States than in Canada, where no similar federal government legislation or regulation currently exists, ad hoc, grant, or privately funded initiatives in Canada, reaching only a small percentage of children—often based in the school, nearby church, or community center—have arisen to meet children’s food needs and in many areas these have become institutionalized.<sup>18</sup> More recently policies and programs at the school level have emerged.<sup>19,20</sup> Canadian research suggests that these community-based programs threaten to mask the necessity of federally funded poverty reduction strategies,<sup>3,21</sup> just as their innate “wonderfulness” may mask other negative impacts<sup>22</sup> such as perpetuating health inequalities and disempowering parents.<sup>18,22,23</sup>

### *The Role of Public Schools in Building Food Security*

Dietitians of Canada<sup>1,24</sup> asserts that, when systemic and comprehensive approaches place equal value on the ecological, social, educational, and economic aspects of the dominant food system in Canada, many of its

unintended harms—food insecurity and environmental degradation—will be addressed. Schools can play a particularly important role within such a systemic, comprehensive approach. They reach the majority of children and youth who are captive audiences ripe for learning in multiple settings and engaged in multiple activities.<sup>25</sup> Surveys show adolescents have a limited understanding of how their actions relate to their food systems.<sup>26,27</sup> Thus, it is prudent to instill in youth an ethic of food system sustainability. As important in schools is the teaching of the next generation in sustainable food systems<sup>13,28</sup> through role modeling behaviors and healthy environments.<sup>29–31</sup> Public schools in the United States and Canada as well as Europe<sup>15,32</sup> are developing strategies that support their food system; these strategies can be described across McCullum's 3-stage continuum of evidence-based strategies for community food security.<sup>1,11</sup>

### *School Food Gardens*

Small school gardens that are primarily for demonstration can be considered, according to McCullum's continuum,<sup>11</sup> short-term projects for initial food systems change because they have the potential to build awareness about CFS issues. Larger school gardens that produce enough to supply food to the school cafeteria or the local food bank would be considered medium-term programs supporting food systems in transition to sustainability because they can sustain partnerships and build capacity between groups working to build CFS.

Thousands of US schools<sup>28,33</sup> and at least 129 Canadian schools have food gardens.<sup>34</sup> These gardens range from a small area of simple planter boxes to large plots with many vegetables<sup>35</sup> that can supply their schools a significant portion of their cafeteria food.<sup>36</sup> For example, the Edible Schoolyard at Martin Luther King Jr. Middle School in Berkley, California, incorporates the garden, the kitchen, and the classroom into a holistic approach to sustainable food culture education, known as Seed to Table. Daily garden harvests supply year-round foods to the kitchen, which is managed by a full-time garden coordinator.<sup>37</sup> The Screaming Avocado is a culinary arts program at Northwestern Secondary School in Stratford, Ontario, led by professional chef and high school teacher Paul Finkelstein. It includes a 3000-square foot garden and a 5-acre school farm initiative.<sup>36</sup> Students at these 2 schools are learning firsthand what it means to be a part of their food system, in essence as small-scale producers.

There is no federal or provincial support for school gardens in Canada. Schools often leverage funds through nonprofit organizations such as the

Toyota Evergreen Foundation.<sup>34</sup> In some regions of the United States, on the other hand, there is clearly stronger political support. As recently as September 2007, the Los Angeles Unified School District unanimously approved a motion to Preserve and Sustain School Gardens.<sup>36</sup> On a national scale, largely due to the unified voices of the CFS movement, after months of negotiations, the 2008 Farm Bill Conference Committee drafted a US Farm Bill that included \$5 million in annual mandatory funding for the next 10 years to establish community food projects, which includes projects such as school gardens.<sup>39</sup>

A review of the literature specifically on school gardens in the United States published in 2006 drew attention to the bountiful anecdotal evidence about, but scarcity of empirical research on, the nutritional, environmental, and social benefits of school gardens.<sup>28</sup> Evidence suggests that schoolyard gardens positively influence student learning,<sup>40</sup> nutrition knowledge,<sup>41,42</sup> willingness to taste,<sup>43</sup> eat,<sup>44</sup> and prefer<sup>41</sup> fruits and vegetables, as well as positively influencing physical activity for a broad range of students.<sup>45,46</sup> The ability of school gardens to provide opportunities for community capacity building, create a sense of belonging at school, influence school food culture, and foster school pride is supported by building inferential and anecdotal evidence<sup>28,35,47,48</sup> but is not yet supported by rigorous inquiry. Similarly, school gardens have been, and are, used to foster environmental awareness and ecological values among school children,<sup>12,28,48–52</sup> but peer-reviewed evidence of these outcomes is lacking.

Central barriers to school gardening have been identified by California public school principals<sup>12</sup> and teachers.<sup>42</sup> Identified barriers included lack of funding,<sup>12,35</sup> space,<sup>35</sup> gardening supplies,<sup>12</sup> volunteer time,<sup>12,35</sup> a coordinator who can alleviate teacher time and skill constraints,<sup>12,35,42</sup> and of curricular materials to support teachers.<sup>12,42</sup> In Canada, lack of provincial policy and leadership supporting school gardens, lack of support from school board administration, challenges around maintenance and volunteer participation, teacher turnover, and lack of time were the central barriers identified in a report based on key informant surveys and interviews with over 50 representatives from 19 schools across 22 school boards across Canada conducted by Evergreen in 2006.<sup>53</sup>

Though there has been little empirical research to show how these programs impact individual (i.e., child), family, school, or community food security, combining the evidence to support nutritional, environmental, economic, and educational benefits, there is theoretical and logical reason to believe that they do.<sup>28</sup> However, these should be weighed carefully against the constraining factors before determining a preferred course of

political action. It is not clear whether school gardens are prone to the same challenges as other ad hoc community-based feeding programs<sup>3,16,18,21–23</sup> or if they can be effective in contributing to longer term, systemic changes to food systems.

### ***Farm-to-School Programs***

Farm-to-school (FTS) programs can be considered, according to McCullum's continuum,<sup>11</sup> medium-term programs that are part of a food system in transition toward sustainability. These programs are part of a growing movement to support SFS while providing fresh food to school children by developing relationships between cafeteria managers and local producers.

The California-based Centre for Ecoliteracy outlines 5 successful models for purchasing from local producers.<sup>54</sup> Each of the models refers to a variation on what is called an FTS program, connecting schools to local farmers, where the school or district (1) facilitates direct purchases between food service and farmers, (2) uses a "forager" to act as a go-between to facilitate purchasing, (3) arranges for purchase through a local farmer's market, (4) enters into a "contract growing" arrangement with farmers, or (5) sources locally grown food through a distributor.

While it is not the intent of this review to provide details of each variation, Montgomery has provided an in-depth review of FTS projects in the United Kingdom, the United States, and Canada.<sup>32</sup> The report includes a database of 99 programs, categorized and compared according to who initiated the program, the nature of the relationship between the farms and the schools, what kinds of food-related activities are being conducted in schools in conjunction with the program, and what kinds of supports partner organizations offer the school or school board. Major programmatic challenges are discussed and the best practices used internationally to overcome these challenges are presented. This document is a crucial resource for any school considering an FTS program.

In the United States<sup>14</sup> and Canada,<sup>32</sup> program funding available for FTS programs is inconsistent. In the United States, FTS programs unify the support of 3 advocacy groups, namely the alternative agriculture activists, anti-hunger or poverty groups, and public health and nutrition under the umbrella of CFS advocacy and action.<sup>14</sup> Though there has been ample policy and program support from the federal government, funds come largely from non-federal sources.<sup>14</sup> Allen and Guthman<sup>14</sup> assert that this lack of federal support symbolizes the devolution of responsibility for

the quality of food served in schools from the federal government to local institutions or even volunteers. Moreover, they suggest that this in turn creates disparities in access to nutritious food nationally, exacerbated by the fact that exemplary FTS programs are often supported by academics, chefs, or celebrities who can draw both volunteer and financial support.<sup>14</sup> However, the language used in the 2008 US Farm Bill, described under School Gardens, now allows schools to give preference to local agriculture—making FTS programs easier to establish.<sup>39</sup>

Nor does government support for FTS programs exist in Canada—not even on paper. Instead, in some provinces in Canada, efforts are driven by networks of academics, teachers, nutritionists, students, and nongovernmental organizations and have focused on attempting to broaden the reach of FTS programs.<sup>32</sup>

According to the results of the Michigan Farm-to-School Survey completed by 383 (58% response rate) food service directors (potentially limited by responder bias<sup>55</sup>) and of a survey of 4 Midwestern states—with 237 (19% response rate) individuals responsible for foodservice operations<sup>56</sup>—the beneficiaries of FTS programs are perceived to reach beyond the institution to include school children, producers, food service managers, and communities. Whereas future studies are needed to evaluate the strength of the evidence for specific benefits, we provide here a brief summary of the evidence, based on the very small body of primary research (primarily surveys soliciting perceptions), as well as reviews and “grey” literature.

In FTS schools, schoolchildren benefit directly through increased access to fresh foods at school.<sup>56–58</sup> Schoolchildren also benefit through experiential education for sustainability.<sup>13,58</sup> Experiential education through, and role modeling of, sustainable food practices may be beneficial in elementary years especially, as high school students, “like all consumers, [find] it difficult to see how choices in one part of the food system make consequences in other parts”<sup>26</sup> (p. 95). Bisonette highlights the “need to make salient to adolescents the environmental impact of food production practices through both cognitive and experiential approaches”<sup>27</sup> (p. 1).

School food service managers benefit from access to fresh foods that would spoil during long-distance transportation and handling, making their job of providing healthy food to children easier and less costly.<sup>56,57,59</sup> Local producers benefit from FTS programs and local procurement in a steady income and convenient delivery.<sup>56,58,59</sup> Resulting sustainable food system participation also helps with reductions in urban

sprawl and protection of farmland.<sup>13</sup> Benefits to the community include not only an infusion of money into the local economy but also building relationships and community capacity.<sup>13,56,57</sup>

In *Bringing Local Food to Local Institutions: A Resource Guide for Farm to School and Farm to Institution Programs*, Bellows et al suggest that processed food in schools, and the growth in the fast food industry, may well have prompted children to reject meals prepared from whole, locally sourced foods,<sup>57</sup> leading to constraints in the development of FTS programs and cafeteria offerings.<sup>57</sup> The pressure to generate revenue and limited cafeteria budgets for food purchases, cooking facilities, and staffing costs also impede the use of whole, fresh foods.<sup>14,55,56,59–61</sup> In the absence of federal support, inconsistent provincial involvement, and limited school cooking facilities, this is especially true for Canadian schools. In addition, small, local producers are often not set up for light processing to supply schools looking for foods that require less preparation (P. Richards, Acadia Centre for Social and Business Entrepreneurship, interview, April 13, 2007).

Distribution-related factors in the United States (distance, quantity, frequency, seasonality) and invoicing complexity contribute to the resistance by food service directors to purchase within the food system.<sup>56,57,59</sup> In addition, regulatory issues (bidding requirements, health and safety standards) make it difficult for schools, especially those with food service contracts, to purchase from smaller farms that are not accredited<sup>59</sup> (or to use food from a school garden).

Canadian and Northeastern US schools must consider that the growing season is much shorter than in the more southerly United States (where much of the research originates) and severely limits local purchasing between November and April. Despite this handicap, a growing number of principals, organizations, and public health professionals have boldly integrated their schools into their local food system—despite the challenge discussed previously of programs that rely on competitive grants or private funding.<sup>32</sup>

Peer-reviewed research examining the outcomes of FTS programs on SFS and community food security (combined and discussed under Sustainable Food Procurement Policies) is also scarce, in spite of its value in securing reliable political support and funding.

### ***Sustainable Food Procurement Policies***

Situated within McCullum's continuum,<sup>11</sup> institutional procurement policies that ensure that food purchased for the school is produced locally

and in a sustainable manner are considered long-term strategies, part of food system redesign for sustainability. Such policies may include local sourcing (i.e., FTS programs), extended to include environmental and social organic and fair trade requirements.

Highlighting leadership from health professionals, catering companies, governments, school boards, or the school itself, in an unpublished review of the literature on initiation of such policies in schools, MacLeod and Scott summarize two exemplary international models.<sup>15</sup>

In Italy, over 300 schools have local procurement policies,<sup>15</sup> despite restrictive laws within the European Union that are put in place to maintain an open, competitive market.<sup>15,62</sup> For example, local health authorities work with parents and the City of Rome to ensure that meals in the schools are of high quality, holding food service contractors to principles of the nutritional, environmental, and social health of the children. In the United Kingdom, one catering company has taken leadership in connecting up to 120 schools to their local food system without increasing student cost, reinvesting profits into the schools.<sup>15</sup>

To circumvent the EU laws, strategies being used across Europe to facilitate local procurement demand product criteria such as freshness, domestic varieties, or products and use seasonal menus that favor local producers. Other avoidance strategies use structures such as not-for-profits organizations to run school canteens or operate only occasional "local food days."<sup>62,63</sup>

Across the United States, and to some extent Canada, hundreds of schools, school boards, and education ministries have developed policies pertaining to healthy and sustainable school food. In Nova Scotia, for example, the Department of Education has incorporated sustainable procurement in the Food and Nutrition Policy for public schools through a recommendation that ". . . schools and food service providers . . . use food and beverages that are grown, produced, or manufactured in Nova Scotia and Atlantic Canada."<sup>19</sup> This is not a binding directive. Even so, the Annapolis Valley Regional School Board (AVRSB) board-run cafeterias have taken the lead in sourcing from a distributor that prioritizes local products and people.<sup>64</sup> Other innovative ideas, adopted or proposed to improve school food, have been compiled into *Healthy School Food Policies: A Checklist*, a working paper of the Centre for Food and Justice, Urban and Environmental Policy Institute ([www.uepi.ox.y.edu](http://www.uepi.ox.y.edu)).<sup>17</sup>

Barriers to sustainable food procurement, documented in the "grey" literature and through survey research, are similar to those described previously for FTS programs. These include (1) regulatory issues in

international trade rules<sup>15</sup> and state/provincial food regulations<sup>55,56</sup>; (2) challenges of distribution and numerous small-scale orders<sup>15,55,56,58</sup>; continuity and seasonal availability,<sup>15,55,56,65</sup> and sufficient quantity<sup>15,55,56</sup>; (3) prohibitive factors such as higher cost for local, organic, or Fair Trade products<sup>15,55,56,58,65</sup>; (4) limited kitchen facilities,<sup>15,65</sup> staff training and time limitations,<sup>15,56,65</sup> knowledge of sustainable sources,<sup>56</sup> computerized ordering and billing<sup>55,56,65</sup>; and (5) consistent product accountability and quality,<sup>55,56,58,65</sup> packaging and labeling for nutrition and allergy information, and consistent product quality.

Some examples above demonstrate that not all barriers are insurmountable. If locally sourced nutritious food is to succeed in public schools, Morgan and Morley suggest that local supply chains need to be mobilized, pupil involvement harnessed, and the playing field between small farmers and multinational food corporations must be leveled.<sup>63</sup>

Volumes of food purchased by schools have the potential to have a greater impact on local economies than individual households, as well as to initiate change and help lead the current food system's shift away from the marginalization of small-scale producers, the loss of rural ways of life, and offset alienation from our food and consumer "deskilling."<sup>55</sup>

There is evidence that sustainable environmental, economic, health, and socially oriented procurement strategies, such as FTS and others described in this section, can also (1) reduce greenhouse gas emissions and the use of pesticides<sup>15,56,58</sup>; (2) help keep food dollars and generate employment in local economies<sup>15,56,58</sup>; (3) increase food security<sup>15,56</sup> and increase awareness about food production<sup>58</sup>; (4) provide good public relations<sup>56</sup>; and (5) engender health benefits through access to fresher food in smaller quantities, as well as improved knowledge of product sources and food safety.<sup>56</sup>

Research is needed, however, on moving toward a local food system.<sup>15</sup> Specifically, it is needed on the following issues: (1) the implications of trade policies on SFS, (2) efficiencies in delivering small food orders, (3) mechanisms to match local farmers with institutions, (4) full economic potential of purchasing locally,<sup>15</sup> (5) a full cost/benefit analysis of food transportation,<sup>15,56</sup> (6) nutritional consequences of conventionally grown/transported compared to local and organic food,<sup>15,65</sup> (7) potential barriers and opportunities for local food in public sector procurement,<sup>55,65</sup> (8) implications of a regional buy local policy on supply and demand,<sup>15,55</sup> and (9) the safety of the local food supply.<sup>56</sup> For FTS programs, more research is needed to determine the specific benefits to students, schools, and farmers; how to overcome obstacles; and the role of community partners.<sup>55</sup>

## ***RELEVANCE TO DIETETIC PRACTICE AND RESEARCH***

Participation in SFS is adding an ecological “layer” to health-promoting school environments and broadening the working definition of health in the school context. Through research, advocacy, policy education, and awareness-raising, and through direct coordination and action, professional dietitians are well positioned to support schools as role models for comprehensive health promotion.

### ***Research***

Peer-reviewed evaluation research on sustainable school procurement policies is currently limited but will be important in building a strong advocacy platform on which to stand. As we have shown, the body of published research is growing, but our knowledge of the health (including human, environmental, and social) outcomes of school gardens, FTS programs, and sustainable procurement policies is still limited. Working with a gathering political momentum, dietitians, together with schools, community members, and academics, have a strong case for sustainable financial support in order to mount a long-term, practice-based evaluation research program. This should include specific CFS outcomes evaluation of the 3 strategies discussed in this review and account for the unique nature of each school’s approach. Recognizing the measurement limitations surrounding CFS, outcomes of interest could be developed specific to the school community.

### ***Advocacy and Policy***

In the UK, the Department of Education and Skills has incorporated local and sustainable food procurement into mandatory standards.<sup>32</sup> In the United States, several states have established mini-grant programs to start up FTS programs, created state-wide programs housed within the Department of Agriculture, and even passed legislation to promote local foods in schools. Support for school gardens in the new Farm Bill is pending.

In Canada, it is perhaps appropriate to first consider a combination of federal and provincial funding to support a national school lunch program that will reach all Canadian school children while sustaining our food system. Funding could also provide technical assistance, training, loan guarantees to producers, and grants in order to facilitate marketing opportunities and direct sales to schools and school boards.<sup>59</sup>

On a more local scale, dietitians can initiate and support enforceable procurement policies at the school and board level to promote and protect the local food system. Dietitians can further advocate reliable funding to support either food purchasing, (adequate) staff salaries, or policies to promote and protect local, sustainable farms. For schools interested in gardens, dietitians can work with school boards to negotiate school property use and custodial support. The Centre for Food and Justice working paper *Healthy School Food Policies: A Checklist*,<sup>17</sup> described earlier, provides excellent and well referenced examples of school sustainable procurement policies across (mainly) the United States and Canada. Examples include policies to ensure role modeling of educational messages, access to free drinking water, experiences with gardening, relationships with local farms and farmer's markets, local purchasing, and adequate food service wages.

### ***Education and Awareness***

Teachers and school administrators, as well as food service staff in some boards, have professional development days built into the school year, which provide first-class opportunities for dietitians to offer workshops on the educational and health benefits of local and sustainable procurement. Awareness-raising and training can be extended to producers as well to encourage FTS connections, to which dietitians can then lend coordination support.

### ***Coordination and Action***

Networks are invaluable resources, and dietitians can play a role in mapping out and connecting schools that are making efforts to participate in SFS. Professional committees such as the DC Nutrition and Food Security Network and the ADA Hunger and Environmental Nutrition Dietetic Practice Group, the Community Food Security Coalition, or provincial/state food security networks can play a key role in facilitating dietitians' work in this area. Reliable federal and provincial/state funding as well as professional training for dietitians would be essential in this process.

Alongside any level of involvement, it is important to recognize the paramount nature of the need for collaborative research efforts. Just as long-term political and financial support for these programs is limited by the lack of peer-reviewed evidence, the short-term funding of these programs limits a systematic investigation of how and to what extent schools contribute to community food security.

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