



Growing Healthy Food on Canada's School Grounds

March 2006



"The most important thing that students get is accountability and responsibility. They're taking care of life... They learn the bigger picture, and how what they are doing in the garden affects them and the earth." (Teacher, ON)

Acknowledgements

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1.0 Introduction

Growing Healthy Food on Canada's School Grounds arose out of Evergreen's long-held interest in helping schools across Canada create healthy, outdoor environments that meet a wide range of children's physical, educational and social needs. It was also a response to surging interest among schools in creating food gardens – currently, over 30 percent of 381 schools participating in Evergreen's online project registry have food gardens. Growing food on school grounds presents an innovative, community-based strategy for addressing children's nutritional needs, as well as offering an important life lesson about where food comes from and what it takes to get it from seed to table.

School food gardens are also a simple yet powerful response to the complex health, environmental and educational challenges affecting Canada's children and youth today. We live in a society that consumes vast quantities of processed convenience food that's high in fat, sugar and salt. Poor diet, combined with inactivity, has created an epidemic of obesity and related disease – over 26 percent of Canadian children and youth are either overweight or obese. On top of this, more than 1.2 million Canadian children – one child out of every six – lives in poverty, and 10 percent face food deprivation at least once a month. We can do better. We must do better.

Growing Healthy Food on Canada's School Grounds was also conceived with the recognition that, while many *local* organizations are actively advocating for innovative programs and policies that promote access to healthy, nutritious food, no other group is working at the national level to promote and support gardening on school grounds. In so doing, Evergreen sought to identify how a national dialogue on school food gardens could identify real solutions to children's health and nutrition problems.

The issues are complex, crossing health, economic, environmental and cultural boundaries. This calls for multi-sectoral, collaborative solutions, solutions that cross jurisdictional boundaries, bring together advocates from the health, environmental, educational, agricultural and labour sectors, and that can mobilize schools and their local communities.

Growing Healthy Food on School Grounds was launched in January 2005 with this collaborative approach in mind. We sought input from other non-governmental organizations (NGOs) with food mandates, from municipalities, school boards, teachers and grounds staff. We looked at best practices in Canada and abroad, as well as the barriers that stand resolutely in the path of this work. This report summarizes the major lessons learned over the past year, and presents strategic directions for building national momentum for school food gardens.

1.1 Summary of Key Findings

1. In 2005, the majority of school food gardens in Canada were at elementary schools. Most of these schools had a garden committee with an average of six members, both teachers and parents. Schools grew an average of five kinds of vegetables, and the most successful plants were potatoes, carrots, beans, tomatoes, beets, sunflowers, herbs, lettuce and squash.
2. Broader school board acknowledgement of the importance of healthy food to students would help to counter many of the barriers schools face in creating and maintaining food gardens. Connecting school gardens to the curriculum and the lunch room will help ensure they are not viewed as marginal, an optional bonus made possible by the extra effort of dedicated teachers, parents and community volunteers.
3. The growing public concern about obesity among Canada's children and youth is fuelling action among a wide range of stakeholders. From school salad bar programs and daily physical education, to discussion of a Children's Food Bill among municipal, provincial and national stakeholders, there is clear momentum to foster healthier eating and activity habits in kids. Evergreen's role in forging links between school food gardens and what children eat, between the garden and curriculum, and as a means of promoting physical activity, is seen as a welcome contribution to this dialogue.
4. An exploration of international case studies where school systems have embraced food gardening demonstrates that policy support from government is ultimately critical for success. According to FoodShare's Executive Director, Debbie Field, Canada is the only G8 country without a national school food program. This is, frankly, disgraceful. Public awareness campaigns are crucial to advance provincial and federal policy supporting healthier foods for our children.
5. Programs that bring together teachers, parents, students and the local community are an effective way of promoting better nutrition and a more active lifestyle. These programs should also promote partnerships among grassroots organizations working on children's environmental and health issues by identifying common goals and streamlining their outreach to schools.

1.2 Research Approach

Over the past year, Evergreen consulted a wide range of Canadian organizations involved in children's health, environmental and educational issues, including municipal governments, boards of education and

NGOs. Their feedback has helped shape the recommendations in this report. The findings are also informed by the following:

- delivering 11 workshops and co-leading one conference on school food gardening to a total of 338 people in Vancouver, Edmonton, Toronto, Stratford and Laval;
- surveying over 50 representatives from 19 secondary and primary schools and 22 school boards from across Canada to identify the key barriers to food gardens; and
- researching approximately 20 Canadian and international programs with a focus on food gardening with children, youth or students to identify the range and depth of program offerings; level of integration with community, other agencies, policy and curriculum; keys to success, best practices and innovation.

2.0 Children's Health and Nutrition and the Opportunity for Canada's School Grounds

Evergreen's 15 years of experience helping schools transform their grounds from barren, turf and asphalt environments into dynamic spaces for play and learning, as well as a growing body of research, has demonstrated the range of benefits that emerge when communities work together to green the school yard:

- Increased student enthusiasm for learning
- Increased environmental awareness and stewardship
- Greater knowledge retention and creative thinking
- Enhanced motivation for teaching and willingness to use innovative instructional strategies
- Improved student behaviour, with an increase in effective communication and cooperation
- Increased quality and diversity of play
- Increased levels of physical activity
- Fewer knock-and-bump injuries
- Greater acceptance of differences in gender, class, race and intellectual ability
- Increased opportunities for community involvement in and around schools

Yet, despite the fact that children spend over 25 percent of their day on the school ground, the vast majority of schools have not harnessed the full potential of this space for play, experiential learning and, ideally, growing food. According to Evergreen's research, only 0.5 percent of Canada's 16,000 schools

have food gardens – and these are primarily at elementary schools. In contrast, 5 to 10 percent of schools in the UK have food gardens and 30 percent of California schools have them.

For those schools that have created gardens, the projects have become not only a source of food, but an extension of the curriculum:

- 90 percent of the schools surveyed for this project are using garden produce as part of teaching activities, class parties or snack programs
- 63 percent send produce home with volunteers, students and staff
- 70 percent of teachers using the gardens are teaching in them twice a week or more
- 91 percent of respondents to a soon-to-be-released Evergreen-Health Canada study feel that school food gardens foster awareness and appreciation of nutritious food
- 89 percent of those respondents feel that food gardens at their schools are providing important opportunities for moderate physical activity.

2.1 Looking Beyond Our Borders: Successful School Garden Programs in the US and UK

California: A Garden in Every School

The tipping point for school food gardening in the US occurred in 1995, when California's Superintendent of Public Instruction for the Department of Education, Delaine Eastin began building support and momentum for the idea of "A Garden in Every School." Support for the initiative within the California state government was built in stages. First, the Integrated Waste Management Board became engaged when they became convinced that composting programs, integrated within the school gardens, were an effective means of reducing solid waste at schools. Next, the Department of Health Services joined the campaign for school gardens as a means to combat childhood obesity and related illnesses, including juvenile diabetes and high blood pressure. Finally, the Department of Food and Agriculture recognized the important role school food gardens played in promoting the agriculture of the state of California, America's number one agricultural state. "A Garden in Every School" became a program that agency chiefs could support irrespective of the political party in power.

Some of the funding that has resulted has included support for part-time garden coordinators and part-time cooks who turn the garden produce into meals and snacks. This program is now well established, complete with cook books, lesson plans for teachers and nutrition education funding, and has continued to innovate and co-evolve alongside a new Farm to School program and dozens of highly specialized non-profit organizations. The University of California, Davis, has also stepped in to deliver teacher training. Out of roughly 10,000 schools, over 3,000, or approximately 30 percent of California's schools, have food gardens.

While the focus of these gardens is on teaching more than growing produce to feed the school, they are viewed as an effective educational accompaniment to feeding programs and increased physical activity.

The most famous school food garden in California is the Edible Schoolyard in Berkeley. The brainchild of chef Alice Waters of Chez Panisse Restaurant and Café, it has significant ties to the Centre for Ecoliteracy and its Rethinking School Lunch program. The collaboration and advocacy of these groups has led to national legislation mandating wellness policies at American public schools. The Berkeley school board has fully embraced the idea and has ambitious plans to implement its own wellness policy, establishing gardens in each of its 13 schools, creating garden and food preparation curriculum and introducing communal dining. This is an excellent model to look to when exploring how to fully realize the potential of school food gardens.

UK: The Power of Celebrity

The popularity of school food gardens in the UK is the result of the convergence of several forces: a national curriculum with renewed emphasis on children's health, a proven school ground greening organization (Learning through Landscapes) and the vision and impeccable timing of celebrity chef Jamie Oliver. In 2005, Oliver did a television series, *Jamie's School Dinners*, in which he brought his skills and passion to the stainless steel kitchens of the school system to try to improve the appalling fare offered to students. He charged that the ill health of British children is due, in large part, to an inadequate school food system and a lack of basic education about nutrition and healthy eating.

There is a saying among school garden leaders that "kids who grow vegetables eat vegetables," and it is true. Oliver's televised year with the school food system showed that students won't eat healthy food unless they are exposed to vegetables and have a positive and personal association with them. Research backs up the TV version of the story with results showing that school food gardens and garden-based nutrition education improve student food choices. It has also been demonstrated that kids who eat healthy food learn better.

Oliver's television series garnered huge support among the British, and that public attention during an election year pressed the government into announcing £280 million in funding to tackle the school meals crisis, as well as considering a Children's Food Bill, complete with mandated national garden curriculum. The Bill is currently being reviewed by committees, preparatory to going before the House.

For its part, Learning Through Landscapes (LTL), an international leader in school ground greening, has

documented that the majority of greening projects in the UK include food gardens. And LTL says that food garden programming is also a growing point of interest for its funders, especially now that the national government is acknowledging the links between healthy food, healthy students and education.

3.0 Barriers to Food Gardening at Canada's Schools

So why aren't school food gardens being embraced and promoted in Canada to the same degree? What barriers, both real and perceived, need to be overcome? Our surveys and interviews revealed the following obstacles:

Provincial policy and leadership – Wide-spread adoption of school food gardens will only develop and flourish when provincial Ministries of Education provide a promotional, policy and financial push. While we anticipate the key support will be needed from the Ministries of Education across the country, we realize that there is also a role for coordinated support from the provincial Ministries of Health and Agriculture.

School board administration – At most boards, there is no central coordination or organized support for gardens. Nor is there budget or on-the-ground expertise to effectively manage these projects. They don't fit neatly into the standard board infrastructure and are seen as a problem rather than an enhancement.

Garden maintenance and volunteer participation – More hands-on participation in weeding and watering is necessary in order for both the gardens to thrive and to gain greater support from senior school officials. We have a chance of moving past this set of barriers by establishing working agreements about garden maintenance standards between boards and schools. Maintenance usually succeeds when a range of people, including students, teachers and parents are involved. While the average garden committee is comprised of six participants or less, the real issue seems to be ensuring that the committee can work effectively and avoid burnout.

Teacher turnover and time crunch – High rates of teacher and principal turnover came up consistently as a key barrier. When the main driver behind a project moves on, the momentum goes with him or her. Heavy demands on teachers' time are also seen as an important issue. Gardens are major work for teachers to take on when other supports aren't there. The solutions are in recruiting garden coordinators, providing release time for training and making it simple to integrate the garden with the curriculum.

Case Study: Stratford Northwestern Secondary School, Ontario

The 3,000 square foot food garden at NSS is only one part of an equation that adds up to healthier and more well-informed students. Through the school's culinary arts program, teacher Paul Finkelstein launched a student-run cafeteria, The Screaming Avocado, which features fresh, high-quality, nutritious meals for reasonable prices. The ingredients are sourced from local farmers and suppliers, and now, with the Seeds of Change program, from the school's own courtyard. Student cooks help sustain the program by selling take-out meals, holding community dinners, and catering events (such as a 200-person wedding). The garden allows for not only nutritious dietary choices, but also exposure to the seed-to-table cycle, and appreciation of food origins. Northwestern invites elementary school classes to tour the garden, ensuring these seeds of learning are not lost on future generations. The students also did a "slow food" exchange with Edward Milne Community School in Sooke, BC and have traveled to Japan as part of their food studies.

Funding – Start-up funds were seen as helpful or necessary for ensuring garden success. Starting a school food garden requires upfront capital:

- 83 percent of gardens cost under \$5,000 to start
- 65 percent of gardens cost under \$2,000
- 24 percent cost under \$500.

The largest costs were fences required by school boards. But once a garden is established, maintenance costs are relatively low: 76 percent of gardens cost under \$500 a year to maintain. While proper funding can help alleviate the burden on teachers' time by paying for additional expertise to support garden planning and maintenance, survey respondents also commented on the value of funding for small but urgent needs, such as paying someone to water for a week when all volunteers are away. Likewise, they said funding to hire a part-time garden coordinator would make things a lot easier.

Vandalism – Vandalism in and of itself is usually not a stand-alone barrier, and can be addressed as a subset of garden participation. By engaging the broader community (including youth), schools can minimize the problem.

Case Study: Belfast Elementary School, Calgary

In 2001, Jim Sangster of Belfast Elementary put his vision of a healthy school environment/healthy students into practice with the construction of a 300 m² vegetable garden. The staff found inspiration by reading David Suzuki's Sacred Balance, and committed to a three-part plan that includes the garden, an outdoor classroom and general schoolyard naturalization. Sangster sought support from the city, which waived costly landfill fees, and from the community, whereby families signed up for one week of summer garden maintenance. As well, Belfast maintains a relationship with a nearby non-profit childcare centre, which claims a third of the garden space and helps maintain the garden in summer. Another third of the garden is devoted to food bank donations, while the final third is for classes to enjoy. Obstacles have been overcome with creativity and resourcefulness: students built a pioneer-inspired 'sod house' when the ground was prepared for gardening, and floodlights have been installed to quell a minor vandalism scourge. Students now have constant, hands-on exposure to healthier eating options and ecological learning for, thanks to donations and communal efforts.

Seasonal Barriers – Maintaining gardens through the summer is often cited as a barrier, as are Canada's long winters and short growing seasons. Again, addressing these issues at the planning stages is important. Northern and prairie schools are growing successful food gardens through plant selection and season-extension techniques, such as cold frames and greenhouses.

4.0 Breaking the Barriers – Strategies for Supporting School Food Gardens

The following section contains three major strategic directions that are the distillation of both the research and Evergreen's experience: advocacy, a pilot project and a public awareness campaign. Practically, work on all three strategies would happen simultaneously, informing the approach and outcomes of each other as they evolve.

4.1 Advocate for school gardens within the framework of Provincial and School board "Wellness Policies"

Rationale

It is clear that without a policy mandate from provincial governments and, in turn, school boards, school gardening will remain poorly supported and disconnected from other wellness initiatives at the provincial, school board and school level.

A recent decision by the American federal government has resulted in a mandate, through the Child Nutrition and Women Infant Children (WIC) Reauthorization Act of 2004, to establish standards for diet

and health in American public schools. The Act increases the focus on comprehensive solutions that incorporate healthy habits, nutritional education, and increased physical activity with ongoing efforts to combat hunger and food insecurity. School food gardens will be a natural fit within the Wellness Policies that each school board has been mandated to create. Wellness Policies have the potential to significantly change practices and programming at every school in the US. The Center for Ecoliteracy, an American NGO, has created a Model Wellness Policy guide to help school boards craft their own policies and implement them in partnership with their schools.

Evergreen believes a Wellness Policy (or something analogous) for school boards, mandated by provincial Ministries of Education, is an appropriate and fitting framework within which school gardening could be promoted and supported.

Goals

1. To establish the policy framework that supports the broad-scale implementation of school gardens within the larger context of student wellness, including physical activity, nutrition, social interaction and community engagement
2. To secure public funding to support school gardening.

Description

We believe one of the important aspects of this advocacy strategy will include making the provincial Ministries of Education and Health, as well as Health Canada, aware of the American Child Nutrition and WIC Reauthorization Act of 2004. Further work will then need to be done to identify the right legislative tools, as well as which jurisdiction and ministry would be appropriate to put forward the legislation. Subsequently, we believe that, as the Center for Ecoliteracy has done in the US, there may be a role for the creation of a “Model Wellness Policy” for schools. We propose that such a policy be created through a coalition of groups that, at minimum, would include a number of those we were in touch with over the past year. They would include:

- The farm-to-school initiative in Ontario
- Ontario Healthy Schools Coalition
- Breakfast for Learning/Canadian Living Foundation
- Ontario Society of Nutrition Professionals in Public Health – School Nutrition Workgroup Steering Committee
- Coalition for School Nutrition (Newfoundland and Labrador)
- OPHEA (Ontario Physical and Health Education Association)
- Toronto Public Health
- Canadian Council of Student Nutrition

This work will also need to be informed by related initiatives that have taken place in recent years or are currently underway in Canada. These include:

- The Education Improvement Committee – Collaboration Among School Boards (Ontario)
- Recent changes in Ontario to ban junk food in vending machines (Policy no. 135)
- PEI province wide policy for healthy eating in schools
- New (2005) Food and Nutrition policy in New Brunswick
- Draft School Food and Nutrition Policy in Nova Scotia
- The Living School Report (2005) – OPHEA
- A Children's Food Bill

We also believe that a Children's Food Bill may be an effective legislative tool that would promote and support student nutrition, regulate food marketing to children and support school food gardens among other things. This idea is currently in discussion in Canada and has been largely informed by a Children's Food Bill that is currently before the British House of Commons, where it has the support of 150 organizations. Evergreen has a role to play in promoting the inclusion of school food gardens in such a bill.

4.2 School board-wide pilot project

Rationale

Broader school board acknowledgement of the importance of healthy food to students would counter some of the critical barriers facing schools in creating food gardens and help to ensure that school food gardening is not viewed as a marginal activity.

The best examples of school gardening in Canada are a scattered, largely disconnected group of schools from many parts of the country. A key step in testing the viability of broad scale school gardening is to work closely with one or two school boards in the country to build structured and consistent support to their schools. Evergreen's experience with seven different school board partners has revealed how significant these partnerships can be for the success of school greening projects. Our research indicates that a school board can be both the most significant hurdle to overcome as well as the biggest potential ally.

Goals of the pilot

1. To cultivate the school board support necessary for school gardens to be successful in a diversity of school settings
2. To concentrate school gardening activity in order to increase understanding of best practices.

Description

This initiative is intended to build greater institutional support for school food gardening at the board level through a collaborative project that provides new services to schools. The building blocks of the pilot include:

- Identifying and securing school board partners
- Identifying and recruiting the project schools
- Providing hands-on expertise for site visits, consultation and delivery of workshops
- Providing grants to schools for food gardens
- Coordinating the development of board-wide guidelines, approval processes, maintenance plans and community liaison
- Building the network among internal school board staff and relevant external organizations, including local municipalities
- Coordinating volunteer training
- Establishing teacher training and curriculum links to support teaching in the gardens
- Coordinating the use of greenhouse space in schools across the board.

A concentrated effort in a single school board will also provide additional case studies and content to feed into a future publication on best practices for school gardening. It's recommended that such a pilot would focus first on a school board that currently supports greening initiatives.

4.3 Publishing and a public awareness campaign

Rationale

A large degree of public support will be required if school food gardening and board-wide wellness policies are to become legislated and implemented. This part of the strategy will be critical in building that public support and interest in the issue. The largest scale examples of progress in school food gardening have happened in California and in the UK and both have had successful public awareness campaigns. In both cases, celebrity chefs have played a central role in bringing the issue to public attention: Alice Waters in California and Jamie Oliver in the UK.

With the momentum among groups working on student nutrition, physical activity, food gardening and food preparation, multiple stakeholders could participate in promoting a large campaign, likely focused on the issue of wellness in schools.

Goals

1. Introduce Canadian schools and school boards to the variety of successful school food gardening projects through the publishing of select case studies

2. Raise awareness among Canadians of the importance of school food gardening through a high-profile public education campaign.

Description

Case study publication – Document successful school food gardening projects and best practices across Canada and distribute this publication to school board officials and other policy makers. This would include how-to information on growing from seed, soil preparation, species recommendations, composting, garden maintenance and pest management.

Public awareness campaign – Large-scale support for the idea of “a garden in every school” will be built through a multi-faceted public awareness campaign. The components of such a campaign would include:

- Recruiting a celebrity spokesperson
- A national public relations campaign focused on getting coverage in print and on radio and TV
- A poster campaign for schools, public buildings, restaurants and private businesses
- A dedicated and dynamic website and discussion forum
- Newsletters and e-bulletins distributed to schools across the country.

5.0 Conclusion

“Learning to make the right choices about food is the single most important key to environmental awareness — for ourselves, and especially for our children.”

Alice Waters, 2005

Over the course of this initiative, we have come to believe that food is a key entry point to the most pressing environmental issues of our day. Amid the considerable body of work currently underway on food issues, school food gardens have a unique and important role. They offer both a captivating doorway into the fascinating world of food science and a riveting starting place for teaching ecological literacy, providing educators with a rich palette of teaching opportunities that can be adapted to different ages and stages of development.

Food gardens also make visible our intimate connection with the land and are a powerful way of building community. They reinforce how looking after the natural world and looking after each other are one and the same. With such a clear need for action on food issues and with the knowledge of promising development in other countries, Evergreen is compelled to work collaboratively to push the school gardening agenda forward in Canada.



*St. Jerome Catholic School potato project
Edmonton, Alberta*



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People and Organizations Consulted

School and school board telephone surveys, December 2005 and January 2006

- BC Anonymous: Curriculum Specialist; Grounds Specialist
Mike Bobbitt, Teacher, Edward Milne Community School (High School), Sooke
Ruth Hoefner, Parent/Garden Coordinator, South Carvolth Elementary School, Langley
Sharon Hanna, Garden Coordinator, Queen Alexandra Elementary School, Vancouver
- AB Claude Blais, Estimator/CPSI Inspector, Grounds Department of Facilities Maintenance Services, Edmonton Public School Board
Daryl M. J. Chichak, Science Consultant Edmonton Catholic School Board
Tina Donkers, Parent/Garden Coordinator, Glendale Elementary School, Calgary
Michelle Dupuis, Principal, St. Jerome Catholic Elementary School, Edmonton
Rob Illick, Grounds Supervisor, Facility Renewal Services & Environmental Services, Calgary Board of Education
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- QC Julie Hobbs, Assistant Director General, Riverside School Board
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