

DIGGING IN

NOVA SCOTIA HORTICULTURE FOR HEALTH NETWORK

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The Nova Scotia Horticulture for Health Network is a coalition of people interested in supporting horticulture for health initiatives through resource sharing, exchange of practices and knowledge, networking and capacity-building.



Photo: Borrowed Time Nursery

Bewitching Plants for Fall

By Susan Morgan, M.S., CDP

Pumpkins, scarecrows, and candy corn... oh my! Aside from pitching up some corn stalks and hay bales and adorning them with pumpkins, there are also plants and other decorating ideas that can also get the garden in the Halloween spirit. Plant some garlic to keep the vampires away. Arrange containers planted with a mix of plants featuring orange, black, burgundy, or dark purple foliage or flowers. Sprinkle in some pumpkins or other decorative elements into the planting. Hang garlands of multi-colored dried corn, dried peppers, or mini-pumpkins or gourds from hanging baskets of 'Bewitched' sweet potato vine. Add a touch of whimsy by dressing a scarecrow in an inspired costume.

Take a look at these festive plants to get your garden in the mood.

Corkscrew rush (pictured above) (*Juncus effusus* 'Spiralis'): Give garden visitors the "willies" with this screwy haired grasslike plant. Corkscrew rush is a fun conversation starter with its soft waxy corkscrew foliage. Propagation: division.

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‘Black Pearl’ ornamental pepper (*Capsicum annuum* ‘Black Pearl’): Tell tales of swashbuckling pirates through the ‘Black Pearl’ ornamental pepper. Its purple red “berries” are flashy against striking deep purple, almost black foliage. Combine it with the autumnal-colored foliage of Croton. *Peppers are very hot – use with caution.* Propagation: seed, though can take a long time to germinate and grow.



Photo: L. Fleming

Marigold (*Tagetes* sp.): Though you might consider marigold as a summer annual, it actually makes a wonderful season extender, adding a punch of hot colors to the fall garden.

Try out the more upright African marigolds (*Tagetes erecta*) with their big, bold flowers and fine textured foliage. Good alternative or complement to mums. *Though flowers are considered generally edible but bitter tasting, they can cause nose and eye irritation.* Propagation: seed.

Bat-face cuphea (*Cuphea ilavea* ‘Bat Face’): It doesn’t get more creepy than this annual with a batty name. The flowers on this plant have purple “bodies” with red wings that eerily resemble tiny bats. Propagation: seed, though it can have uneven germination.

Firebush (*Hamelia patens*): An excellent summer annual that withstands heat and drought, firebush blooms summer through fall. With cooler temperatures, plants develop an orange red tinge on the leaves, complementing the red-orange flowers. Propagation: cuttings or seed.



Photo: S. Morgan

Swiss chard (*Beta vulgaris*): Though commonly sold as the colorful mix of ‘Bright Lights’ Swiss chard, pick out this yellow-orange leafy edible from its red-, pink-, and white-veined counterparts. It’s a cool season vegetable that will hold up in cooler temperatures and even keep its color through the winter in some climates. Pair this one with ornamental peppers or orange and black flowering pansies in a container. Propagation: seed.

Plants with Spooky Names

- ‘Ghost’ fern (*Athyrium* ‘Ghost’)
- ‘Goblin’ gaillardia (*Gaillardia x grandiflora* ‘Goblin’)
- Snapdragon (*Antirrhinum majus*)
- Pumpkin-on-a-stick (*Solanum integrifolium*)
- Spider plant (*Chlorophytum comosum*)
- Voodoo lily (*Amorphophallus*)
- Japanese bloodgrass (*Imperata cylindrica* ‘Red Baron’)
- ‘Red Dragon’ Japanese maple (*Acer palmatum dissectum* ‘Red Dragon’)
- Witch hazel (*Hamamelis virginiana*)



Photo: S. Morgan

- Eyeball plant (*Spilanthes oleracea*)

‘Red Bor’ kale (*Brassica oleracea* ‘Red Bor’): Another ornamental yet edible plant, ‘Red Bor’ kale has deep purple, almost black foliage that complements other cool season companion plants. And you can eat it too! Propagation: seed.



Photo: L. Fleming

Black elephant ears (*Colocasia esculenta*): Conjure up some dark wizardry in your garden with the soft dark foliage of the favorite ‘Black Magic’ elephant ear. Looking for the same effect with shinier, even darker foliage? Check out ‘Black Coral’, which is also durable in high heat and sunny conditions. *All parts of the plant are toxic, unless cooked.* Propagation: division.

Ornamental napier grass (*Pennisetum purpureum*): This dark-foliaged ornamental grass adds a spiky punch to any plant combination. There are cultivars of varying heights available – from the tallest ‘Prince’ to the diminutive ‘Princess Caroline’ or the “just-right” height of ‘Princess’. Propagation: take cuttings on stems closest to the ground; also can be divided.

Books to Check Out

- D'Amato, P. (1998). *The Savage Garden*. Berkeley, CA: Ten Speed Press.
- Goldman, A. (2004). *The Compleat Squash: A Passionate Grower's Guide to Pumpkins, Squashes, and Gourds*. New York, NY: Artisan.
- Mellichamp, L., & P. Gross. (2010). *Bizarre Botanicals: How to Grow a String-of-Hearts, Jack-in-the-Pulpit, Panda Ginger, and other Weird and Wonderful plants*. Portland, OR: Timber Press.
- Stewart, A. (2009). *Wicked Plants: The Weed that Killed Lincoln's Mother & Other Botanical Atrocities*. Chapel Hill, NC: Algonquin Books.
- West, K. (2010). *The Real Witches' Garden: Spells, Herbs, Plants and Magical Spaces Outdoors*. Llewellyn Publications.

Susan Morgan, M.S., is a horticulturist and therapeutic horticulture practitioner at The Horticultural Link, LLC. She has degrees in landscape design and public horticulture from the University of Tennessee, a certificate in horticultural therapy from the Horticultural Therapy Institute, and an International Diploma in botanic garden education from the Royal Botanic Gardens, Kew. Susan completed a horticultural therapy internship at the Chicago Botanic Garden. She granted reprint permission for this article, originally published in AHTA News Magazine 40(4) in 2012.

International People-Plant Initiatives: Dalhousie's Work in Africa

Text & photos by Lana Bos, DipOH, BSc.

Dalhousie University, Faculty of Agriculture contributes to agricultural transformation and social wellness on a global scale promoting food sustainability, health and wellness around the world. The Faculty has worked in International Development for decades in dozens of developing countries. Current initiatives are focused in the East African corridor, specifically focusing in Ethiopia and Uganda.

The Agricultural Transformation Through Stronger Vocational Education (ATTSVE) project is a six-year project in Ethiopia that is built on three main pillars: institutional transformation, instructor training



and program support, and establishing linkages and networks between training, research and academic institutions. In collaboration with McGill University, MEDA and JUCAVM, the Faculty of Agriculture is working with four agricultural training institutions in Ethiopia to strengthen their abilities to deliver competency based education and training focusing on entrepreneurship, gender equality and the environment. Five new occupational standards have

been developed for high value commodities and growth industries, along with curriculum and teaching materials. Multiple trainings have been delivered to staff to upgrade their skills in delivering a hands-on based training program that meets the needs of the labour market.

Through intuitional strengthening and investment in equipment and infrastructure, the goal is to graduate students who are competent in agricultural production and farm management. The project is designed to increase food production, open up opportunities for rural youth and women and help transform agriculture from subsistence farming to economic development and growth, contributing to better livelihoods and well-being for the country (Dalhousie 2018).

ATTSVE is now in its final years, and it has seen many successes along the way. Hundreds of staff have been trained in leadership, curriculum development, teaching methodologies and technical training. Gender equality has been mainstreamed throughout the curriculum and major advancement at the college level have been implemented including gender offices and, and the first female Dean appointed this past year. There have been major upgrades to internet and computer access, library and resource upgrades, farming infrastructure and equipment and technology upgrades. The training institutions have started training the farming community on better farming practices and the transfer of knowledge and skills to the farmer and community level is being seen. Support for multiple student

enterprises and have been successful with rural youth and especially the empowerment of young women in the farming community. Interviews with new student farmers included comments that their biggest achievement was their ability to hire local labour to help run the farms and increase employment and economic growth in their communities.

The Faculty of Agriculture is similarly working on a three-year project called the Uganda Skills Development Project (USDP) working with Bukalasa Agriculture College and three Vocational Training Institutes to develop National Occupational Standards and agriculture programs that meet the needs of the labour market. There is a strong need for entrepreneurship in Ugandan agriculture to create employment opportunities and financial security for subsistence farmers, rural youth and women.

The project is fairly new, but occupational standards and curriculum have been developed with measurable advancements at the college level, including multiple trainings to upgrade instructor skills and competencies. In the next year, improvements of equipment and infrastructure and training for new programs started in September 2019. A group of college instructors visited Canada February 2019 for intensive training, with another group expected in Nova Scotia in 2020.



The coordinator for the USDP project and Department Head from Bukalasa Agriculture College visited the Agricultural Campus in Truro, NS.

Dalhousie University (2018). Programs & Certificates. *Dalhousie University, Faculty of Agriculture*. Retrieved from <https://www.dal.ca/faculty/agriculture/programs.html>

Lana Bos, DipOH, BSc. (Agr.), Education and Training Developer, Dalhousie University, Faculty of Agriculture. Lana helped develop and deliver the Horticulture Skills Training Program at Nova Institution for Women and currently develops competency based education and training (CBET) programming nationally and internationally with a focus on food sustainability & economic development. She leads international missions for the development of occupational standards, curriculum, teaching and training materials for higher education institutions, with current focus on the East African corridor.

Look for the network
on its facebook page

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Praise the Gourd

By Lesley Fleming, HTR

Nova Scotian grown gourds have garnered national attention for such things as the world's longest gourd, Port William's TapRoot Farm loofah business, and Sicilian Serpent gourd seeds available from Annapolis Seed Company. The three basic types of ornamental gourds can be grown in Nova Scotia—*Lagenaria*, used for birdhouses and dippers; *Luffa* used as sponges; and *Curcubita* gourds used as decorations.



Growing gourds requires rich well-drained soil, full sun, and viable seeds. The National Gardening Association recommends May 6 (after frost) for seeds planted in the ground. Harvesting ornamental gourds for future use is best done when they have matured in the late summer/early fall, when stems have dried and before frost hits. Refer to resources from the Canadian Gourd Society, the American Gourd Society, and *The Gourd Magazine* for more detailed information.

For use as decorative items including birdhouses, the following steps are recommended:

- Rinse and disinfect surface of gourds using hot soapy water
- Dry gourds out of direct sunlight, hanging them or laying on newspaper, without them touching others
- Turn gourds once a day, inspecting them for mold, wiping them with disinfectant after a week
- Once dried, move them to a warm, dark, dry place to cure for 3-4 weeks, at which point they should be light and the surface hard to the touch
- Paint, shellac, wax or decorate

The Canadian Gourd Society offers these important health and safety tips when working with gourds:

- Wear gloves when handling gourds; a metallic taste in mouth is a sign of tactile-taste problems
- Use mask or respirator, cover hair and change clothes to avoid airborne dust particles when cleaning, cutting, sanding gourds, preferably working with gourds in an outside location

Cornell University (2014). The culture and use of ornamental gourds. Retrieved from https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/5496/The_Culture_and_Use_of_Ornamental_Gourds.pdf?1420476769

Canadian Gourd Society (n.d.). Health & safety issues: Working with gourds. Retrieved from <https://www.canadiangourdsociety.ca/all-about-gourds/>

Lesley Fleming has long admired decorated gourds in the educational garden at Manatee Extension Office, Florida, prompting her to research further the details of growing and decorating these plants. She selects other activities for her therapeutic horticulture programs, determining that the airborne particles from cleaning and decorating gourds might be a safety risk for her clients.

Series Part 4:

Research Investigates Horticulture for Health Activity

Nova Scotia Food Action

By Lesley Fleming, HTR, Amy Unicomb, BSc, MSc,

Janet Carter, BMusTH, Beth House, BRec, Lana Bos, DipOH, BSc

Photos by L. Fleming



The level of food action in Nova Scotia from 2010-2018 has been significant. Researchers Williams and Johnson commented on the cultural shift where horticulture, food systems and community health took center stage in Nova Scotia, “building on existing momentum and readiness for change”, where food action promotes supportive environments for people to live healthy lives (2014). Attitudes, policies and actions by many organizations—the large health system, educational facilities, non-profit organizations, and individuals—provided the context and the foundation where food action could flourish. In fact, these activities, analyzed as an important component of horticulture for health activity, became the catalyst for other positive health initiatives in the province (Fleming et al, 2019).

The research revealed small scale food production (defined as horticulture vs agriculture), was an important strategy for many organizations, communities and individuals, as a viable mechanism for improving health through increased food production, improved nutrition and better access to healthy food. As a direct result of food action initiatives, measurable outcomes were evident—an increase in construction of gardens, development of urban food production sites, new therapeutic horticulture programming, social affiliations, and increased advocacy.

The food action movement grew out of concern for long-standing high rates of food insecurity in Nova Scotia—15% or 60,000 households (Statistics Canada, 2010). Related issues of poverty, food justice, rural community restructuring, diet-related illnesses, poor wages for food workers and unsustainable food systems exacerbated food insecurity, defined as the inability (or uncertainty) to access/consume sufficient quantity and/or quality of food, household income [that] does not cover basic needs”, and/or the inability to make a living by growing and producing food (FoodARC, 2018; Food Security Projects, 2005).

Across the province a shared vision emerged around 2005, with a common goal for food justice whereby “communities exercise their right to grow, sell, eat food that is fresh, nutritious, affordable, culturally appropriate, and grown locally with care for the well-being of the land, workers and animals” (Alkon & Agyeman, 2011). Since 2010, more than 100 organizations at local, regional and provincial levels have delivered programs and services, united in improving health through food action, each from the perspective of its own organizational mandate (FoodARC, 2018; M. Riebe-Butt, personal communication, Aug. 2018).

Province-wide Initiatives:

Province-wide organizations focused on food action made significant inroads during the period 2010-2018. The scope of their aggregate work was broad, addressing food insecurity in a variety of ways.

FoodArc, the Food Action Research Center at Mount Saint Vincent University “undertakes research and action to build food security in NS”, working with more than 200 international, national, provincial and local community, university, and government agencies (FoodARC, 2018). Landmark research on

food costing - *Activating Change Together for Community Food Security*, and *Co-Creating Food Security Solutions in Nova Scotia Insights Report 2018* have been instrumental in providing evidence-based data from which programs have been developed (FoodARC, 2018a).

Ecology Action Centre, funded in part by the Public Health Agency of Canada, has, and continues to provide leadership and institutional support for food actions taken within the province. Their *Our Food Project Reconnecting Food and Community 2013-2017* report (2017) identifies more than 250 initiatives it, in collaboration with community and government partners undertook. Promoting gardening skills, food and garden infrastructures, civic engagement for policy change, knowledge, and advocacy to expand capacity building that facilitates connections between food systems, the environment and community, these efforts sought to “increase individual and collective food access and self-reliance” (Ecology Action Centre, 2017). Strong community engagement supported the delivery of programs like Food Miles, Food Upskilling! Festivals, construction of new and expanded gardens, seed sharing, pop-up markets, and community food smart bulk buying clubs. Concurrently, Ecology Action Centre staff delivered food literacy workshops, developed local garden networks and related online portals, developed policies like food procurement purchases from local farmers for schools and other institutions (2017).

Other province-wide organizations involved in food action offered different models. Nourish Nova Scotia, begun in 2012, provides financial/program/nutritional expertise in support of food literacy programs and nourishment in school communities including: breakfast programs in 93% of NS schools; school edible gardens; nutrition knowledge and food skills (Nourish Nova Scotia, 2018). Feed Nova Scotia coordinates food distribution through 145 food banks and meal programs. Its 1984 mandate of providing emergency food relief in Halifax expanded in 2002 to include coordinating food banks across the province and capacity building within this network (Feed Nova Scotia, 2017). Local Food Nova Scotia, as part of Spirit Nova Scotia, has partnered with Community Foundation of Nova Scotia to create and administer the Local Food Fund for developing and sustaining projects in support of a healthy local food supply for Nova Scotians since 2009. Projects have included seed saving workshops in Sydney, community gardens, and development of Shelburne County’s farmers markets (Local Foods, 2014). No Farms No Food community coalition, based in Kings County, seeks to “preserve farmland from residential, commercial and/or industrial development recognizing long-term sustainability of farmland”. Activities have included advocacy work, political action related to Municipal Planning Strategy and Land Use Bylaw, development of Annapolis Valley Farmland Trust and Farmworks, a community economic development investment fund begun in 2011 (No Farms No Food, 2015).



Locally Based Initiatives:

Food action based in local communities underscores strong support and food insecurity across the province. An increased level of community capacity has occurred since 2010; province-wide organizations guide infrastructure improvements for program delivery by local groups (A. Gasparetto, personal communication, Aug. 2018).

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Ten regional and local community food security alliances throughout Nova Scotia have been created, many since 2012. Cumberland Food Action Network, for example, created to “promote sustainable food growing and community food security through education, action and events” has supported 11 community gardens, seed exchange, directory of farmers markets in the region, development of school and community food procurement programs, cost share box program, and gardening skills sessions (Ecology Action Centre, 2017). Antigonish Food Security Coalition’s regional community food assessment baseline study was used for effecting policy change. The Coalition also purchased land for an incubator farm, created a food hub as a centralized location for local food availability, and supported St. Francis Xavier University student-led Food Strategy Group (Ecology Action, 2017; Sustainable Antigonish, 2018). Pictou Landing First Nation undertook research in collaboration with Atlantic Aboriginal Health Research Foundation and FoodARC, studying the community’s food insecurity to support requests for health services (Williams & Johnson, 2014). Other innovative local projects have included: vegetable garden at a local daycare, intergenerational events to educate and share traditional foodways from elders, community freezers, delivery of food boxes to pregnant women and children in Annapolis Valley, food donations from gleaning programs, and re-establishment of roadside farm-fresh markets (Williams & Johnson, 2014).

Food action within Nova Scotia played an important role in expanding horticulture for health activity between 2010 and 2018. It appears to be sustainable, contributing extensively to health improvements at individual, community and provincial levels. The ‘Nova Scotia Horticulture for Health’ research manuscript, submitted to the *Journal of Therapeutic Horticulture*, presented food insecure populations, and food action used as public health strategies as a broader and emerging interpretation of horticultural therapy as demonstrated in Nova Scotia (Fleming et al, 2019).

Alkon, A. & Agyeman, J. (2011). *Cultivating Food Justice*. Cambridge: MIT Press.

Ecology Action Centre (2017) *The Our Food Project Reconnecting Food and Community 2013-2017*. Halifax, NS: Ecology Action Centre.

Feed Nova Scotia (2017). About. Retrieved from <https://www.feednovascotia.ca/about>

Fleming, L., Unicomb, A., Bos, L., House, B. & Carter, J. (2019). Nova Scotia’s horticulture for health activity. Manuscript submitted for publication.

FoodARC (2018). Voices for food security in NS 2005-2017. Retrieved from <https://foodarc.ca/projects/voices-for-food-security/knowledge-mobilization/>

FoodARC (2018a). Publications. Retrieved from <https://foodarc.ca/resources/publications/>

Food Security Projects of the Nova Scotia Nutrition Council & the Atlantic Health Promotion Research Centre, Dalhousie University (2005). *Thought About Food? A Workbook on Food Security & Influencing Policy*. Retrieved from <http://www.foodthoughtful.ca/index.htm>

Local Foods NS (2014). Local food fund invites new round of grant applications. Retrieved from <http://www.localfoodns.ca/news>

No Farms No Food (2015). Don’t take farmland for granted. Retrieved from <http://www.nofarmsnofood.ca/>

Nourish Nova Scotia (2018). Our story. Retrieved from <https://nourishns.ca/>

Statistics Canada (2010). *Household Food Insecurity 2007–2008: Canadian Community Health Survey*.

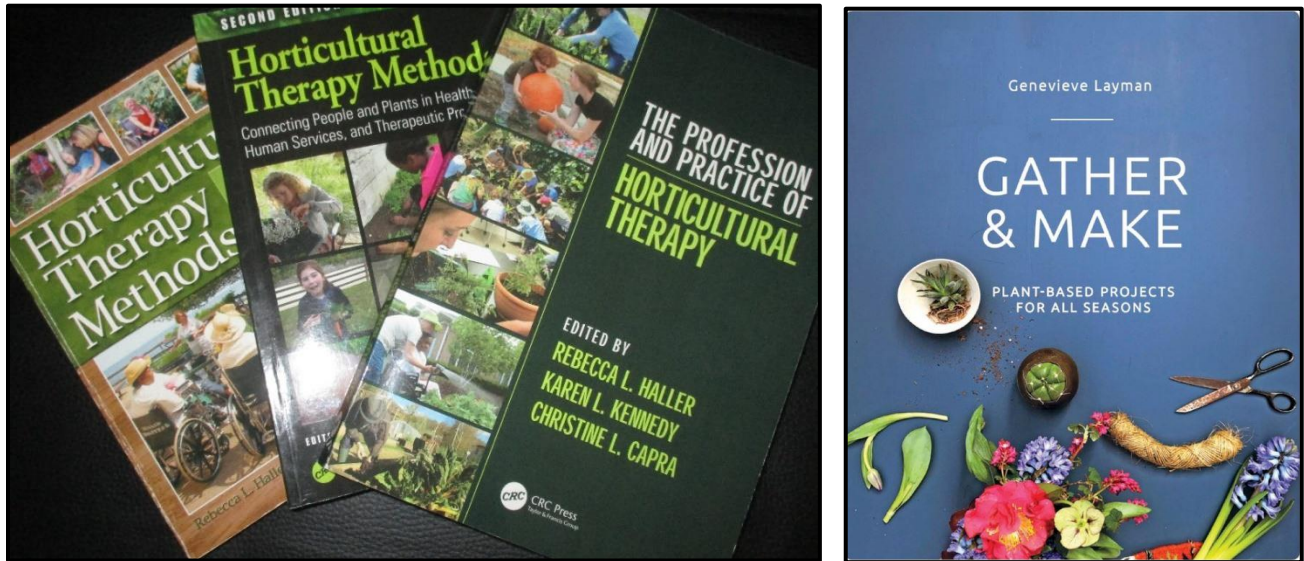
Sustainable Antigonish (2018) Projects and events. *Sustainable Antigonish*.

Williams and Johnson (2014). *Making Food Matter: Strategies for Activating Change Together*. Social Sciences and Humanities Research Council of Canada. Retrieved from https://foodarc.ca/wp-content/uploads/2014/11/Making-Food-Matter-Report_March2015rev.pdf

Books on People-Plant Topics

Compiled by Kathy Carroll, MS, HTR

Photos by G. Layman & L. Fleming



The following list organizes books by topic, providing a rich bibliography for those involved in people-plant activity.

Horticulture

Bryant, G. (2006) *Propagation A to Z*

Bubel, N. (1988) *The Seed Starters Handbook*

Hessayon, D. (1993) *The Houseplant Expert*

Hobbs & Gardner (2013) *Grow It Heal It: Natural and Effective Herbal Remedies from Your Garden or Windowsill*

Jabbour, N. (2011) *Year-Round Vegetable Gardener: How to Grow Your Own Food 365 Days a Year*

Jabbour, N. (2018) *Veggie Garden Remix: 224 New Plants to Shake Up Your Garden and Add Variety, Flavor, and Fun*

Munro, M., Newell, R. & Hill, N. (2014) *Nova Scotia Plants*

Turner & Aderkas (2009) *Common Poisonous Plants and Mushrooms of North America*

Adaptive Gardening

Adil, J. (1995) *Accessible Gardening for People with Disabilities: A Guide to Methods, Tools and Plants*

Cassidy, P. (2011) *The Illustrated Guide to Gardening for Seniors*

Rothert, G. (1994) *The Enabling Garden: Creating a Barrier-Free Garden*

Gardens

Cooper Marcus & Sachs (2017) *Therapeutic Landscapes: An Evidence-based Approach to Designing Healing Gardens and Restorative Outdoor Spaces*

Goltsman, Gilbert, Wohlford (1992) *The Accessibility Checklist: An Evaluation System for Buildings and Outdoor Settings*

Forrest McDowell & Clark-McDowell (1998) *The Sanctuary Garden*

Marshall & Pollock (2012) *Designing Outdoor Spaces for People with Dementia*

Moir Messervy (1998) *The Magic Land: Designing Your Own Enchanted Garden*
Olson, M. (2002). *A Garden of Love and Healing*
Rodiek & Schwarz (2005) *Role of the Outdoors in Residential Environments for Aging*
Smith, S. (2000) *Greenhouse Gardeners Companion*

Plant-based Activities

Doherty, J. (2010) *Calendar Year of Horticultural Therapy: Tending Your Garden Tends to Your Soul*
Greenstein, D. (1995) *Backyards and Butterflies: Ways to Include Children with Disabilities in Outdoor Activities*
James, C. (2015) *Garden Classroom: Hands-on Activities*
Layman, G. (2018) *Gather and Make Plant-Based Projects for All Seasons*
Lovejoy, S. (1999) *Roots, Shoots, Buckets and Boots: Gardening Together with Children*

Horticultural Therapy

American Horticultural Therapy Association *Journal of Therapeutic Horticulture*
Bruce, H. (2004) *Gardening Projects for HT Programs*
Chicago Botanic Garden (2016) *Health Through Horticulture: A Guide for Using the Outdoor Garden for Therapeutic Outcomes*
Eatherington, N. (2012) *Gardening with Children with Autism*
Fleming, L. (2016) *Therapeutic Horticulture A Practitioner's Perspective*
Haller & Kramer (2006) *Horticultural Therapy Methods Making Connections in Health Care, Human Service, and Community Programs*
Haller & Capra (2017) *Horticultural Therapy Methods Connecting People and Plants in Health Care, Human Services, and Therapeutic Programs*
Haller, Kennedy & Capra (2019) *The Profession and Practice of Horticultural Therapy*
Hewson, M. (1994) *Horticulture As Therapy: A Practical Guide to Using Horticulture as a Therapeutic Tool*
Jiler, J. (2006) *Doing Time in the Garden: Life Lessons through Prison Horticulture*
Sempik, Aldridge & Becker (2005) *Growing Together: A Practical Guide to Promoting Social Inclusion Through Gardening and Horticulture*
Wise, J. (2015) *Digging for Victory: Horticultural Therapy for Veterans for Post-Traumatic Growth*

Connecting with Nature

Kaplan & Kaplan (1989) *The Experience of Nature*
Lewis, C. (1996) *Green Nature/Human Nature: The Meaning of Plants in our Lives*
Louv, R. (2006) *Last Child in the Woods: Saving our Children from Nature-Deficit Disorder*
Louv, R. (2011) *The Nature Principle: Human Restoration and the End of Nature-Deficit Disorder*
Selhub & Logan (2012) *Your Brain in Nature The Science of Nature's Influence on Your Health, Happiness, and Vitality*

As a board member, Kathy Carroll, HTR helped obtain relevant titles for the book sales at the Michigan Horticultural Therapy Association's annual conference for 10 years. Her familiarity with seminal books on people-plant topics provides a shortcut to finding best informative important publications.



Approaches to Accessibility: The Environmental Press Model

Text by Alexandra Marcaccio, MA

Photos by L. Fleming

Environmental Press is a problem-solving framework that focuses on evaluating the effects of an environment on a person. The model encourages therapists to assess the different components of a client's environment and understand how the interaction between client and environment leads to specific responses. The "press," or different limiting and stimulating aspects of the environment, can then be adjusted based on individual need. Thus, therapists are able to adjust the environment to improve the therapeutic potential of a space using Environmental Press (Diehl, 2019).

This framework was initially developed for applications in geriatrics, especially for "aging in place," an approach to health care for older adults that seeks to provide necessary health and social services that will allow an older adult to remain in their own home and community for as long as possible (Government of Canada, 2016). Early studies in this field, such as Litchenberg et al (2000), investigated how Environmental Press theory could be used to help older adults adapt to disability. Given the emphasis on adaptation in Environmental Press theory, this model can be applied to other therapeutic fields.

Within the Environmental Press model, there are two major factors to consider: the person and the environment. To create a successful environment, a person's competencies must be considered. An individual's "physical health, cognitive and sensory-perceptual abilities, ego strength, and the resulting behaviours" determine how they might interact with a space, and thus must be evaluated (Diehl,

2019). Understanding these needs allows therapists to make a space that is fully accessible to a client, but that still provides proper stimulation. From here, the space can be adapted to suit an individual's needs.

The layout of the space, the physical accessibility of materials, the multi-sensory stimulants, potential distractions within the space, and the physical and cognitive demands of activities in the space can all be adjusted for a specific individual. For example, if a client has limited range of motion in their arms, materials can be placed on lower tables instead of higher shelves. This process is continual and ongoing. Adjustments to a space are made, and then the space is reevaluated again to track improvements and challenges in the space.

The philosophy of Environmental Press can be used within people-plant programming to make simple adjustments that allow more people to enjoy programming. By focusing on individual response, a single activity can be used for a variety of people with different abilities because it allows therapists to individualize that activity. Key to success is ensuring a holistic approach that considers physical accessibility, cognitive accessibility, and sensory accessibility. A plant that has a strong scent can be swapped for a milder smelling plant for individuals with scent sensitivities. Ensuring that a space has handrails can help individuals with mobility issues move around the space and complete an activity that requires movement. Since the ultimate goal of Environmental Press is to create a space that “promotes reasonable challenge, but doesn’t frustrate,” people-plant programming can be adapted using this framework so that common goals and outcomes of an activity remain the same, but more people can participate. The intent is to structure therapeutic settings to optimize participation and outcomes.

Federal/Provincial/Territorial Ministries (2016). Thinking About Aging in Place. Government of Canada.

Diehl, E. (2019). Techniques: Environmental press. In Haller, Kennedy & Capra (Eds.) *The Profession and Practice of Horticultural Therapy*. New York: CRC Press.

Litchenberg, P., Mast B. & MacNeill, S E. (2000). Environmental Press and adaptation to disability in hospitalized live-alone older adults. *The Gerontologist* 40(5); 549-56.

Alexandra Marcaccio is an MA graduate with an interest in research and horticulture. Drawing on her previous accessibility training, she often writes articles concerning issues of accessibility.



Photo: K. Carroll



Photo: L. Fleming

Upcycling: Safe Pallet Gardening

Text & photo by Kathy J. Carroll, BS, MS, HTR

Consider upcycling wooden shipping pallets for gardening projects. The environment wins by rescuing pallets from landfills and you are provided with a free or low-cost material. The possibilities are endless, especially for people-plant connections in low budget horticultural programs.

1. FIND A PALLET OR TWO. DESIGN AND BUILD

Use Google, YouTube, or Pinterest to search for possible design ideas. For example, you could attach individual pots to the outside of the pallet wall. You can also set pots on the pallet shelves. Creativity knows no bounds!

2. ATTACH FABRIC

Staple landscape fabric around the exterior of the pallet walls and along the bottom footings to prevent soil from washing away. Leave top open for ease of watering and planting. There are several ways to staple the fabric.

3. ADD SOIL

Consider using a drip system for irrigation.

4. POSITION THE GARDEN

Option: Attach wheels for garden mobility. The garden might have considerable weight.

5. SELECT PLANTS AND PLACE IN NEW GARDEN

It is fun to mix edibles and ornamentals. For example, succulents and strawberries are great for a sunny spot. The choices are endless. Once you have selected plants, cut X-shaped slits in the fabric and carefully place plants through fabric making sure the soil is packed around the roots. Depending on the design, some pallets that are completely covered with landscape fabric could be left horizontally for a few weeks to give plants time to root and keep soil in place. The following example of a pallet garden has horizontal planting shelves as part of the design.

Kathy J Carroll, BS, MS, HTR has worked with children gardening in school settings as well as other populations. Environmentally concerned, she encouraged her mother, at 85, to garden with pallets on her back deck.

Safety First!

Make sure to follow all safety requirements when cutting, painting, staining, or sanding. Use safety glasses, gloves, and dust masks in a well-ventilated area.

Planting Edibles:

Make sure you know the pallet source! Pallets should have information stamping. Look for HT (Heat Treated) pallets. Pallets marked MB (Methyl Bromide) are unsafe, as this pesticide makes pallets toxic for edible plants. While Canadian pallets are usually HT, they are often recycled and may have been exposed to toxic chemicals. When in doubt, do not plant edibles. Not all harmful substances can be washed off and will leach into the soil. When painting, use non-toxic exterior paint.



2019 Digging In Workshop: Professional Development in Nova Scotia

Text by Lesley Fleming, HTR

Photos by Kathy Carroll, HTR

The Nova Scotia Horticulture for Health Network's annual Digging In workshop was delivered Aug 14, 2019 at Halifax's Central Library. Co-sponsored by Dalhousie University Extended Learning, the professional development attracted a cross-section of professionals, with sessions focused on competencies relevant to horticultural therapy, therapeutic disciplines and people-plant programming. Presenters from several disciplines reflected the broad paradigm horticulture for health encompasses:

- **Top Ten Plants for People-Plant Programming**- Amy Unicomb, MSc., Social Program Officer at Nova Institution for Women
- **Networking within Nova Scotia**- Lana Bos, DipOH, BSc. (Agr), Education and Training Developer, Dalhousie University, Faculty of Agriculture
- **Best Practices & Best Ideas for Special Populations** (mental health populations; garden-based populations- school, community and food security gardens; and multiple populations)- Dr. Tara Perrot, Dalhousie Dept. of Psychology, Kelley Cavan, PhD, Public Health Nutritionist, Kathy Carroll, MS, HTR, Special Education Specialist & CHTA member
- **Herb Container Garden Activity**- Lana Bos, BSc. & Antonia Philips, Landscape Horticulturist
- **Propagation Tips**- Sherry Chaisson, Dalhousie Faculty of Agriculture Plant Specialist
- **Acquiring Credentials** (HTR, Certified Dementia Professional, Master Gardener Training & Certificate in Specialization in Organic Agriculture)- Lesley Fleming, MA, HTR & Shelly Juurlink, MSc., Dalhousie University, Faculty of Agriculture Program Manager



Acquiring Credentials for Horticulture for Health Activity

By Lesley Fleming, HTR & Ashley Coffin, BSc, MHE



The 2019 Digging In workshop offered a session on acquiring credentials in several areas related to horticulture for health. The following provides quick facts and links:

Registered Horticultural Therapist (HTR) & Horticultural Therapist Technician (HTT):

https://www.chta.ca/assets/downloads/CHTA_Professional_Application_Form_June%2017_2018.pdf

The Canadian Horticultural Therapy Association grants these credentials for voluntary professional registration based on points accumulated from specified education and practical experience, recognizing educational courses, volunteer and paid experience. Note that HTR designation requires a university degree. The HTT designation requires fewer points than the 10 required for HTR.

Certified Dementia Practitioner (CDP):

<https://www.iccdp.net/certification.php>

The International Council of Certified Dementia Practitioners is the governing body that sets standards, code of ethics, delivers courses and grants credentials for several types of certification. They state that “while certification promotes and maintains quality, it does not license, confer a right or privilege upon or otherwise define the qualifications of anyone in the health care field”. This credential is not widespread in NS. Its benefits include curriculum covering a wide range of topics related to dementia care, delivered on-line via 10 videos, with reasonably priced certification and course fees.

Master Gardening Training Program- Atlantic:

<https://registeratcontinuingeducation.dal.ca/public/category/courseCategoryCertificateProfile.do?method=load&certificateId=28402&selectedProgramAreaId=17381&selectedProgramStreamId=17410>

With three start times per year, the training program consists of four independent-study classes available online and a one-week, on-site summer school, and the option of taking one course or all three. Courses cover plant ID, art and science of gardening. Requirements for becoming certified include: twenty-five hours of annual volunteer work for 2 years, and 8 hours continuing education.

Certificate of Specialization in Organic Agriculture:

<https://www.dal.ca/faculty/agriculture/extended-learning/organic-agriculture.html>

All university credit courses required for this certificate are available on-line, with application made through Dal Undergraduate Certificates. Courses include: transitioning to organic horticulture, principles of organic horticulture, composting, organic crop and livestock production.

Artist Training Certificate:

<https://creativeaging.org/>

The National Center for Creative Aging (U.S.) offers a free on-line artist training course for those interested in leading lifelong learning programs that engage older people as creators. The self-guided training includes key concepts, methods, aging process, current research from the field of arts and aging. It is applicable for all types of expressive arts including gardening, therapeutic horticulture, and botanic art.

Ashley Coffin has worked in Extended Learning for the past 4 years and has spoken at several events, meetings, celebrations, garden clubs, and institutions promoting the various courses and programs within the Faculty that have included the Master Gardener Training Program and the Organic Agriculture Certificate. Lesley Fleming has been a registered horticultural therapist for 10 years and has frequently explained the professional registration process to emerging professionals.



Photo: L. Fleming

Fall 2019

Practitioner's Forum: Populations Exhibiting Behavioral Challenges

Text & photo by Lesley Fleming, HTR

Understanding the characteristics, needs and health challenges of special populations is essential to providing horticultural therapy services. The previous three articles in this series focused on special population overview, senior populations and populations with sensory challenges.

Q: Are behavioral challenges limited to those with mental health diagnoses?

A: No. Using the definition of behavior as the way in which one acts or conducts them self, especially towards others, there is always some type of behavior. Horticultural therapy practitioners can identify specific behavior patterns, positive and challenging, for each and every population they work with. For example, elder populations can present with social behaviors—unwillingness to participate in group settings or anxiety. These may be organic-based or due to the social context. Behavior may not always be population specific. Aggressive behavior can be linked to people who have experienced frustration due to learning disabilities, trauma or situations that are stressful like war, jails, communal living, or homes with substance abuse.



Stress impacts behavior in many ways: memory and cognition; eating, nutrition and physical strength; emotional outbursts; crime; sleep patterns and circadian rhythms; substance abuse; self-esteem. Understanding the characteristics of populations, and then being aware of an individual's social, medical and even environmental setting is good preparation for dealing with behaviors.

Q: What strategies can a horticultural therapist use when there are behavioral issues during a therapeutic session?

A: Understanding the client's health and background information, as well as the group's behavioral characteristics is essential. Selecting a strategy appropriate for the individual, given their situation, will guide the practitioner in not only de-escalating a situation, but in providing the client with tools to behave appropriately. Strategies may include: working one on one; removal from group session and rescheduling; intervention by other therapists or staff; separation of individuals who may be having conflict; selection of activity where socialization or anger management goals are addressed; discussion with client re appropriate behavior, consequences and rewards; visit to green outdoor space as a restorative action; and continuation of the activity so that other participants have minimal disruption or upset. Following set protocols of facility will provide consistent responses when behavioral issues occur during therapeutic sessions.

Trauth, J. (2017). Lighthouse Community School: A case study of a school for behaviorally challenged youth. *Journal of Therapeutic Horticulture* 17(1).

Lesley Fleming, MA, HTR wrote this series for the Mid-Atlantic Horticultural Therapy Network in 2018 based on her experiences with senior, children and incarcerated populations.

Resources Fall 2019



Photo: L. Bos

Scree gardens use stone and gravel in garden design. Benefits include good use of drainage and free-draining habitats important for some landscapes, as well as right place for sun-loving plants.

<https://www.hortmag.com/weeklytips/screegarden>

<https://jcra.ncsu.edu/horticulture/gardens/details.php?name=scree-garden>

<http://www.leevalley.com/us/newsletters/gardening/7/5/article3.pdf>

Dalhousie Agricultural College Rock Garden uses only Colchester County stone and incorporates red granite, a dry stream bed, alpine plants, scree bed and cedar bridges constructed by students.

<https://www.dal.ca/about-dal/agricultural-campus/about/gardens/rock-garden.html>

<https://www.saltscapes.com/9-home-cottage/324-the-gentle-art-of-rock-gardens.html>

Balancing stone therapy is the act of balancing stones in artist formations. Therapeutic benefits include creative expression, serene nature activity, as well as pathway to connecting with nature.

<https://www.youtube.com/watch?v=CiW-03hNZko>

1000 best rock garden ideas on pinterest shows ways to incorporate rocks into landscapes with zen, rockery, Japanese, rain, desert, southwest garden styles.

<https://www.pinterest.com/wwwdreamyardcom/rock-garden-ideas/>

<https://www.csmonitor.com/The-Culture/Gardening/2009/1202/the-right-rocks-are-essential-for-a-rock-garden>

Nova Scotia Horticulture for Health Network

To receive current or back issues of *Digging In* contact NSHHortNetwork@gmail.com

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CHANGE Garden in Mahone Bay, Profile of Humble Burdock Flower Farm

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