DIGGING IN

NOVA SCOTIA HORTICULTURE FOR HEALTH NETWORK

Spring 2024 Volume 10 Issue 2 nshhortnetwork@gmail.com

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/knowledge, and networking.

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Photo top right: E. O'Connor

THAD

Therapeutic Horticulture Activities Database Launched

Text by Lesley Fleming, HTR & Elizabeth (Leah) Diehl, RLA, HTM
Graphic by Alex Lopez

New in the field of horticultural therapy is a free database with therapeutic horticulture activities. THAD (Therapeutic Horticulture Activities Database) was created in December 2023 as a collaborative initiative. The Nova Scotia Horticulture for Health Network was one of the founding partners.

The concept was suggested by Diane Relf, PhD, HTM, Professor Emeritus, Virginia Tech who has pioneered work in the field of horticultural therapy for more than 50 years. THAD has been developed and implemented by the THAD Working Group which includes the California Horticultural Therapy Network, Mid Atlantic Horticultural Therapy Network, Carolinas Horticultural Therapy Network, Florida Horticulture for Health Network, Nova Scotia Horticulture for Health Network, along with the University of Florida's Department of Environmental Horticulture which is hosting the website platform.

THAD's focus is on therapeutic horticulture, a less formalized health intervention than horticultural therapy (with clinical treatment applications). THAD was created acknowledging activities are an integral component of horticultural therapy (HT) and therapeutic horticulture (TH) programs. One key component is that intentional connections to plants are an essential element of each activity. In HT/TH programs, plant-based activities are designed and structured to emphasize identified goals, objectives, and therapeutic benefits based on the needs of the clients.

Most high-quality activities can be adapted or modified to serve different client groups successfully. The activities found in THAD have been developed or adapted by HT professionals and are presented in compliance with standards of practice from the American Horticultural Therapy Association (2023). Although they are formatted for use by horticultural therapy practitioners, the activities can be

adapted and implemented by a broad range of practitioners to suit the needs of both those delivering and benefitting from the activities.

THAD uses three primary categories to present and organize activities: *Activities, Goals* and *Populations.* Each primary category contains related sub-categories.

Activities	Goals	Populations
Planting	Cognitive/Intellectual	All Populations
Propagation	Physical	Children/Youth
Plant Care/Maintenance	Psychological/Emotional	Corrections
Harvesting	Sensory	Physical Disabilities
Herbs	Social	Mental Health
Food/Cooking		Rehabilitation
Design		Food Insecure
Creative Expression/Arts		Veterans/Military
		Medical Conditions
		Seniors/Dementia
		Other Specialized Populations

THAD activities include a description of the activity, therapeutic goals, step by step process for delivery, materials list, safety considerations, applications for populations and author/photographer credit. Therapeutic goals are suggested, in multiple health domains for each activity. Though there may be a number of therapeutic goals identified, typically there would be one or two used in the delivery of the TH intervention. THAD can be accessed via the link:

https://hort.ifas.ufl.edu/therapeutic-horticulture-activities-database/

Lesley Fleming, HTR has been active in the field of HT/TH for more than a decade, leading the Nova Scotia and the Florida Horticulture for Health Networks. Leah Diehl, RLA, HTM, Director of Therapeutic Horticulture, Wilmot Gardens at the College of Medicine, Lecturer in the Environmental Horticulture Department, delivers the Certificate in Horticultural Therapy at University of Florida. Both have been instrumental in establishing THAD, working collaboratively with other HT practitioners and regional HT groups.

THAD Therapeutic Horticulture Activity Database

Activity: Food/Cooking Goal: Social Populations: Other Specialized Populations

TH Activity Plan – Eating Plant Parts – Immigrant/Refugee Populations

Text by Lesley Fleming, HTR
Photos by UFSeeds.com & Long Produce

ACTIVITY DESCRIPTION: Participants will identify edible plants & plant parts of their preferred foods from their homelands, sharing these with others in the group.

THERAPEUTIC GOALS:
Cognitive/Intellectual: Explore ethnobotany & global food knowledge; learn about plant parts that are edible
Physical: Practice reading & writing skills; eat nutritious produce
Psychological/Emotional: Connect with others by sharing food traditions from other countries; reminisce about homeland
Sensory: Explore new gustatory flavors tasting vegetables
Social: Make social connections; demonstrate tolerance of others; practice using language skills

Materials

Variety of vegetables/fruits popular in other countries

Plates, napkins, knives

Gloves, wipes

Tasting chart & pencils

STEP-BY-STEP PROCESS:

1. **Pre-Session Preparation:** In a previous session – ask participants to identify or bring vegetables from their home countries if available. Determine if any participant has allergies, medication-food interactions or swallowing issues that would prevent them from tasting the session's raw vegetables. Gather materials.
2. Facilitator begins session by welcoming all participants to this global food tasting. Each person introduces themselves & the country they lived in prior to coming to the current country.
3. Facilitator shares some food facts about most consumed, nutrient dense vegetables from around the globe, importance of food traditions (trying to include some from participants' countries) as an introduction to session.
4. Facilitator identifies goals: learning about new vegetables or fruits, understanding what plant parts are edible, learning from others, sharing food traditions as a mechanism for accepting others & a new country.
5. One at a time, participants are invited to share information, pictures or produce with group, explaining food traditions, the plant part being consumed & how to prepare the vegetable or fruit. Safe food handling protocols are used.
6. If tasting will be part of the session, plates, forks etc. are distributed, confirmation that no allergies, swallowing issues or medication-food interactions exist & tasting begins. Discussion of flavors, traditions, plant parts, preparations for cooked produce & celebrations with the food provides an understanding of different foods, cultures & plants.

7. Using a *Vegetable/Fruit Tasting Chart* (below) participants identify their preferences for taste, juiciness, firmness, crunch, color, & smell, while including name of vegetable, reference for future purchase, planting & consumption.
8. Group can collectively create a handout for distribution after session with information on the plants, availability, growing conditions, edible parts, nutrition & preparation. This could also be a group exercise for a subsequent session with different educational/therapeutic goals.

APPLICATIONS FOR POPULATIONS: Becoming acquainted with fruits and vegetables popular in other countries or a new country can be daunting, expensive and challenging. With a nutrition focus, therapeutic horticulture goals can include learning about other nutrient dense foods, less available produce, ethnobotany, edible plants and what parts of plants are eaten, along with food preparations. This knowledge transfer can occur in any number of settings from immigrant services programs, churches, community gardens and schools. This can be particularly significant for recent immigrants and refugees who can share their food knowledge, traditions, gardening/growing expertise and culture with others in a safe setting where the information will be warmly received. Social goals establishing new connections can increase participants' sense of belonging, sense of self, attitude about a new country and its tolerance of others. Psychologically, this type of TH activity can impact the mood, self-esteem, ambition and feeling of safety of participants, and by extension, often their families too.

Communication goals can be addressed. Communicating verbally and in writing, reading instructions, sharing pronunciations of plant names, using a *Vegetable/Fruit Taste Chart* or creating a summary sheet handout can boost confidence and be undertaken as a group learning/social activity.

SAFETY CONSIDERATIONS: Prior determination of food allergies, swallowing issues, and medication-food interactions should be done. Safe food handling protocols should be discussed and used.

NOTES OR OTHER CONSIDERATIONS: Not all vegetables and fruits may be available; photos can be substituted. If facilitator/program chooses to have produce for session, shopping at ethnic markets, farmers' markets or talking with urban farm growers can assist in identifying produce like Tokyo Bekana (*Brassica rapa var. chinensis),* 'Blue Pod Capucijner' pea (top left photo), winter squash 'Shishigatani' from Japan, Vietnamese coriander (*rau ram or Persicaria odorata)* (bottom photo), gai lan Chinese broccoli/Chinese kale, tindora *(Coccinia grandis)* or caigua (*cyclanthera pedate).* This activity was adapted from Texas Cooperative Extension. (1999), *Junior Master Gardener Teacher/Leader Guide.*

Vegetable/Fruit Taste Chart

Vegetable/Fruit	Taste	Smell	Firmness	Color	Edible Plant Part
A	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5		
B					
C					
D					
Comments					

REFERENCES/ RESOURCES:

Gomex, S. (2022, July). 11 Caribbean and Latin American vegetables to discover and enjoy. *The Vegan Atlas.* https://theveganatlas.com/11-caribbean-and-latin-american-vegetables-to-discover-and-enjoy/

Fleming, L. (2021). Vegetables on the verge. *Digging In, 7*(2).

Jabbour, N. (2018). *Niki Jabbour's veggie garden remix: 224 new plants to shake up your garden and add variety, flavor, and fun.* Storey Publishing.

Edits were made for THAD purposes in 2023.

TH Activity Plan form developed by Lesley Fleming, Susan Morgan and Kathy Brechner (2012), revised in 2023.

Fulfilling its partner commitment

THAD Activities from Nova Scotia Horticulture for Health Network

Compiled by Lesley Fleming, HTR

Each regional horticultural therapy (HT) partner group has contributed to the THAD database.

Tea Cup Planters: Zuzana Poláčková

Blueberry Activities: Lesley Fleming, HTR

Plant Puns on Pots

Building & Planting a Pallet Garden: Kathy Carroll, HTR

Making Salsa: Kathy Carroll, HTR & Bob Carroll

Houseplant Beading: Antonia Philips

Flower Vase Bouquet: Hand Held Method

Flower Arrangement in a Box-Wellness

Growing Garlic: Janice Morrison

Propagating Geraniums: Janet Carter

Roots & Resiliency: Christina Wilson, MSW, RSW

Tending Garden Beds-Dementia &
Individuals Plot Gardening at Facilities: Beth House & Lesley Fleming

Previously published TH activities in NSHHN *Digging In*, reprinted in THAD:

Herbal Tea Party: Mary Partridge, HTR & Lisa McCuaig, CTRA
Fring Frang Acadian Potato Dish: Lesley Fleming, HTR & Kathy Carroll, HTR
Eating Plant Parts – Immigrant & Refugee Populations: Lesley Fleming, HTR
Sowing Seeds in Winter: Zuzana Poláčková
Lettuce be Different: Kathy Carroll, HTR

https://hort.ifas.ufl.edu/therapeutic-horticulture-activities-database/

University Students' Health & Well-Being Supported by Nature Engagement & Campus Gardens

Text by Lesley Fleming, HTR
Photo by Acadia University Acadia Farm & L. Fleming

University and college students are experiencing stress at unprecedented levels related to their studies, COVID-19, financial demands of higher education, climate change, violence and hate on campuses, and food insecurity. Research is recognizing this population as a distinct group, separate from younger students, and is exploring connections between well-being and nature.

A wide array of nature interactions is offering engagement that the research suggests, is positive for their mental well-being. These include access to campus green spaces (gardens, forests, meadows, lawns) (Larsen et al., 2022), social prescribing to spend time in nature and Nature Rx programs available to students (Rakow & Eells, 2019), reflexology paths on campuses for stress relief (Fleming, 2022), and therapeutic horticulture programming (Diehl, 2021; Li et al., 2022). Viewing foliage colors, for example, has been identified as improving relaxation and emotional status of university students across countries according to Kexiu et al. (2021). Simple actions like having houseplants, desktop aquariums, nature photography as art, natural light lamps, and nature soundscapes can address student well-being (Joly et al., 2022).

Volunteering in plant-rich environments and gardening at on-site campus gardens is common on many campuses. Interest and action by students related to food insecurity and food system changes have provided access to nature and plants while generating alternatives to campus foodscapes (Classens et al., 2022), these linked to student well-being.

Most Nova Scotia universities have community gardens on campus, many of these food gardens intended for students to garden, grow food, interact with the larger community while connecting with nature. These include food gardens at Dalhousie University's Halifax and Truro locations, Acadia University Community Farm in Wolfville, Cape Breton University Community Garden, and Mount Saint

Vincent University's community garden used by students, community members and university departments as an outdoor classroom and research.

Campus gardens come in several shapes and forms. St. Francis Xavier University medicinal garden was specifically installed for indigenous students, staff and faculty to practice their culture with plant connections tied to their history and healing. Universite Sainte-Anne's green commitment and green campus in Church Point uses biomass, wind and solar thermal processes reflecting students' values for sustainability and climate action. These appear to be more than trends. Post secondary students, their choices, actions and future directions are linked to the natural world, humanitarian efforts and choosing mechanisms for supporting their own mental well-being.

Classens, M., Adams, K., & Srebot, S. (2022). Food systems change and the alternative campus foodscape. *Journal of Agriculture, Food Systems, and Community Development, 12(3), 155-176.*

Diehl, L. (2021). The effect of therapeutic horticulture on student wellbeing. *AHTA Magazine, 49*(3), 11.

Fleming, L. (2022). Landscapes for health: Reflexology paths. *Cultivate, 2*(1). https://www.flhhn.com/uploads/1/3/8/6/138696150/winter_2022._cultivate_epub.flhhn.pdf

Joly, J., Kuhlken, H., & Rakow, D. (2022). *Nature Rx guide for first year college and university students.* Families in Nature & Cornell University.

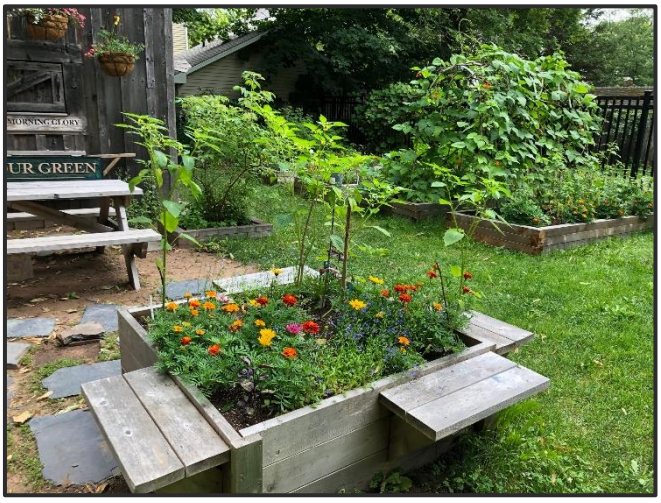
Kexiu, L., Elsadek, M., Liu, B., & Fujii, E. (2021). Foliage colors improve relaxation and emotional status of university students from different countries. *Heliyon, 7*(1), e06131.

Larson, L.R., Mullenbach, L.E., Browning, M.H.E.M., Rigolon, A., Thomsen, J., Metcalf, E.C., Reigner, N.P., Sharaievska, I., McAnirlin, O., D'Antonio, A., Cloutier, S., Helbich, M., & Labib, S.M. (2022). Greenspace and park use associated with less emotional distress among college students in the United States during the COVID-19 pandemic. *Environ Res., 204*(Pt D), 112367.

Li, Y.L., Li, F., Gui, Z., & Gao, W.B. (2022). Promoting effect of horticultural therapy on college students' positive psychological quality. *Front Psychol., 13,* 864147.

Meredith, G.R., Rakow, D.A., Eldermire, E.R.B., Madsen, C.G., Shelley, S.P., & Sachs, N.A. (2020). Minimum time dose in nature to positively impact the mental health of college-aged students, and how to measure it: A scoping review. *Front. Psychol., 14.*

Rakow, D. A., & Eells, G. T. (2019). *Nature Rx: Improving college-student mental health*. Cornell University Press.



Campus Nature Rx

By Tim Mason
Photo by Acadia University

A growing movement across North American university campuses is promoting *Campus Nature Rx*. The goal is to support nature engagement for students on and off campuses sharing ideas, strategies and collaborations. Beginning with 4 U.S. campuses in 2019, the program has grown rapidly and is now delivered in nearly 70 North American colleges, including Cornell, Harvard, Yale, and Canadian members Humber College and University of Calgary. The coalition of Campus Nature Rx members are dedicated to supporting mental and physical health of students through inclusive and equitable nature engagement teaching, research, outreach and resources.

A free virtual symposium is held annually each Fall to ensure members are kept connected with peers, as well as innovation and studies in campus nature engagement. The sharing of ideas through discussions is encouraged and is a large component of the event, embodying the principles of collaboration and shared knowledge of evidence-based studies.

Recent articles support the Campus Nature Rx program: "*An increasing number of studies have provided evidence that people who spend time in nature-rich environments benefit psychologically and physiologically…studies that show that as little as 10–20 min of time spent sitting or walking in nature has a beneficial effect on college-aged adults' mental health*" (Meredith et al., 2019). Rakow and Ibes' article proved the investment of developing campus nature engagement provided valuable benefits, whether creating new spaces or making existing outdoor spaces more welcoming and engaging: "*The COVID pandemic had some administrators questioning the need for residential college experiences, particularly given the high cost…Campus Nature Rx movement provides compelling evidence that on-campus nature experiences provide a high return on investment by offering scientifically proven, equitable, and cost-effective solutions for improving college student mental health, among other benefits*" (2020).

Expanding the Campus Nature Rx network further across the continent and into Canada is an important step in advancing the statistical data of nature engagement studies. Larger sample sizes, and consistency of similar activities across different regions and types of environments will add further credibility to ongoing research on the benefits of spending time in nature settings.

Meredith et al. (2019). Minimum time dose in nature to positively impact the mental health of college-aged students, and how to measure it: A scoping review. *Frontiers in Psychology, 10,* 2942.
Rakow, D.A. & Ibes, D.C. (2022). Campus Nature Rx: How investing in nature interventions benefits college students. *Frontiers in Psychology, 13.*

Tim Mason is a nature-based gardener living in Halifax, Nova Scotia. Originally from Australia, Tim grew up with a deep love for nature which influences his work, garden design and creation, notably 'Wildlife Windows'.

Resources Spring 2024

Food action initiatives making an impact:

Farm to Cafeteria Canada non-profit works with partners to grow capacity of school communities & school food systems connecting students to food & local systems that produce it.

New food program @ Holy Heart of Mary High School, St. John's NL uses funding for kitchen equipment & hydroponic equipment to grow lettuce. Local farmers are donating food to the school.

Downloadable *Native Farm to School Guide: Connecting Traditional Foods, Stories, Language, and Community* guide shares ideas from successful programs.

Try it Tuesday program seeks to provide an opportunity for students to try local food as new snacking experiences - sweet potato tortilla, tomato smoothie & beet hummus.

Publisher & Editor in Chief Lesley Fleming, HTR

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We would like to acknowledge Nova Scotia is traditional territory of the Mi'kmaq people.