

CULTIVATE

FLORIDA HORTICULTURE FOR HEALTH NETWORK

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The Florida Horticulture for Health Network's vision: To promote activities and connect organizations to each other and resources that use horticulture to improve health including: therapeutic horticulture and horticultural therapy, landscapes for health, nature, emerging professional support, allied horticulture and health services, community and school gardens, and food security initiatives.

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Photo: J. Fleming

Landscapes for Health: Reflexology Paths

Text by Lesley Fleming, HTR

Reflexology paths offer a variety of sensory experiences. Based on the ancient healing art of reflexology, paths made of stones and other materials stimulate specific reflex areas on the feet, which are linked to organs and other parts of the body. Many reflexology paths are found within garden settings, and are used for both recreational and therapeutic applications.

Reflexology has been practiced by many cultures for thousands of years, and is a widely accepted therapeutic acupressure intervention (Embong et al., 2016). "The purpose of reflexology is to normalize the body's function, break down tension, alleviate stress, and improve nerve function and blood supply throughout the body. ...this practice has shown benefits in a wide variety of medical conditions" (Quindlen, 2019). Researchers found that walking a reflexology paths three times a week for 30 minutes over 16 weeks can reduce blood pressure and improve balance" (Li et al., 2005).

Reflexology Pathway at Nova Southeastern University Medicinal and Healing Garden

A 66 foot reflexology pathway in Davie, Florida was installed in 2010, initiated by Carsten Evans, Creator of Grounds, reflecting the university's commitment to wellness and integrative medicine. The pathway, designed by Elizabeth Marzitta, is an intricate pattern of stones with a "theme of the five Chinese Meridian elements [of] water, wood, fire, earth, and metal, each representing a season, an organ system, and a color" (NSU Florida, 2021). Set within a medicinal garden featuring plants with healing properties, the Yin/Yang garden design represents the Eastern philosophy of balance. Jesse Durko, horticulturist and nursery owner from Davie, Florida, provided complimentary garden design and maintenance in addition to sourcing rose quartz stones from Jakarta used for garden seating. The reflexology path is part of a holistic strategy for health and wellness. Intended as an experiential landscape for health addressing student's stress, the reflexology pathway is also popular with staff and faculty, with public access for the larger community. It functions as a living classroom and teaching lab for nutrition, acupuncture, aromatherapy, Asian medicine, health psychology and wellness.

Reflexology paths are part of the expanding wellness sector, appropriate for people of all ages, offering self-directed sensory engagement and therapeutic options (Chen et al., 2021). They are found throughout the world at health facilities, educational institutions, public parks and resorts. Examples in the United States include: [Bastyr University Herb Garden Path](#) in Kenmore Washington; [Florida International University Reflexology Path](#) in Miami FL; Lancaster Pennsylvania's public parks - [Marymoor Park](#), [White Center Heights Park and Steve Cox Memorial Park](#); and [True Nature Healing Reflexology Path](#) in Carbondale Colorado's Peace Garden.

Barefoot Trails, Parks and Earthing

Designed as sensory experiences using a variety of materials, barefoot trails and parks in public spaces are more numerous in Europe than North America. Fun for all ages, these barefoot adventures have a secondary goal of strengthening foot and leg muscles providing [connections to nature in outdoor settings](#).

Park activities include walking through brooks and over suspension-bridges, climbing and balancing challenges, use of different soil conditions, visual/auditory/olfactory stations for sensory stimulation, [foot gymnastics](#), and [foot sensation trails](#). The term earthing refers to the process of walking on natural substances – mud, sand, grass, wood and stones.

A listing of [barefoot parks in Europe](#) is available, with less information on American trails other than [Oxbow Park in Rochester Minn. Tips for walking barefoot](#) are provided by Connecticut Forest and Park Association, Society for Barefoot Living and Seattle Barefoot Hikers.

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Compare/Contrast Therapeutic Horticulture Activity

Lettuce Be Different

Text by Kathy Carroll BS, MS, HTR

Photos by L. Lulucmy, P. Messina, P. Magera, Demitri.unsplash

The concept of comparing and contrasting plants is an activity that can be adapted for any therapeutic session, any time of year, using any type of plant. Used successfully in the *Digging Horticulture* program for at-risk middle school students, a Michigan program, it was an effective stand-alone activity as well as a springboard for subsequent sessions.

The activity involves participants using a rubric, looking at attributes of three different types of lettuce. Applications for other plants like herbs, fruits and vegetables, particularly those with vibrant colors—purple eggplant, orange carrots and red sweet peppers—can be appealing on a sensory level as well as easily adapted for participants with visual impairments, intellectual disabilities, or eating disorders.

Therapeutic goals can be wide-ranging depending on the client, and may include: development of verbal and social skills; modeling healthy patterns of social interaction; increasing feelings of calmness and relaxation; improving social functioning, memory, reasoning skills; and physical improvements in fine and gross motor skills eye-hand coordination. Participation in adjunct activities like harvesting, cutting, cooking, and mixing edibles can focus on following directions, building self-esteem, and identifying positive traits in self and others. Individual or group discussions might include food experiences, school and home gardens, and food security. One important aspect offered from this activity is social metaphoric implications—people come in all different shapes, sizes, and colors with different attributes, feelings and preferences. Using a salad analogy, literally and figuratively, mixing people together makes a delicious combination!



Lettuce Be Different	Sample A	Sample B	Sample C
What do the seeds look like?			
What color are the leaves?			
How do the leaves feel?			
What shape are the leaves?			
How tall is the plant?			
How does it taste?			
What else do you notice?			

Kathy Carroll, BS, MS, HTR wrote a version of this activity in 2016, which was published in Michigan Horticultural Therapy Association's *People~Plant Interactions*. Kathy's formula for effective programming was integrating education and HT with a dash of fun during her 35 year career as an educator.

Populations with Sensory Challenges: Considerations for People-Plant Programming

Text by Lesley Fleming, HTR
Photo by R. Melnychuk.unsplash

Understanding the characteristics, needs, and health challenges of special populations is essential for providing effective people-plant programming. What populations have sensory challenges and how are these defined?

The starting point should be understanding sensory processing. This is defined as the integration, registration, and accurate interpretation of sensory inputs by the brain, including sight, sound, smell, touch, and taste. Lesser known senses—proprioception (body awareness) and vestibular (movement) also provide sensory inputs that are received, responded to, and organized. These allow a person to interact effectively with their environment (Arky, 2021).

People-plant programming uses sensory stimulation as a technique and activity for both therapeutic and recreational purposes. Understanding the theory of sensory processing can inform effective use of sensory stimulation for these types of programs (Gabaldo, 2019; Fleming, 20xx). This information, along with knowledge of specific populations where sensory processing may be considered a characteristic or health issue is essential.

What populations have sensory processing challenges? Though professionals evaluate each person based on their individual health, there are some populations where sensory challenges commonly present. Veterans, particularly those with PTSD, may have sensitivity to certain sounds, smells, and visual images (Cooper Marcus & Sachs, 2014). Individuals with autism spectrum disorder (ASD) and sensory integration dysfunction (SID) may be sensitive to some types of sensory stimulation including tactile defensiveness—each individual presenting differently (Weitlauf et al., 2017; Schaff et al., 2018). Chemosensory dysfunction, with sensitivity to taste and smell, is typical in cancer patients (Bernhardson et al., 2007). Individuals with smell disorders like anosmia, hyposmia, dysosmia, and taste disorders like ageusia, hypogeusia, and dysgeusia (Leopold, 2016) have more significant sensory challenges. Individuals with cognitive decline may respond well to sensory stimulation using taste, smell, touch, and sight as alternative approaches to memory or intellectual cues. Aging also affects sensory abilities (e.g. 24.5% of adults 53 or older have olfactory impairment - Boesveldt et al., 2002). Medicine, smoking, and genetics can factor into an individual's sensory abilities.



Research continues to reveal the complexity of sensory processing. Using autism population as an example for planning plant-based activities, certain factors may guide programming choices. People on the autism spectrum and those with sensory integration dysfunction (SID) may benefit from sensory stimulation and activities that focus on proprioceptive and/or vestibular (balance) systems, rather than tactile, gustatory or auditory senses which may be compromised. A very general explanation—the vestibular (balance) system relates to an individual's sense of body orientation and movement. The proprioceptive sense provides inputs on an individual's body parts relative to other body parts (ReadyBodiesLearningMinds, 2017).

Plant-based activities that incorporate proprioceptive and/or vestibular systems might include: moving plant materials around the garden varying the heights (e.g. - picking up a tray of plants from ground level and placing it on shelf at waist or shoulder height, shoveling soil or compost from ground level, and twisting the torso and releasing materials into a container at slightly higher elevation, or an assembly line activity set-up where participants walk along filling containers with various soil components of sand, soil, and amendments).

Expanded research and evidence-based practice related to sensory challenges and its applications to horticultural therapy, people-plant programming and nature interactions can provide critical information for practitioners, elevating knowledge in the field, while also supporting best practices.

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Lesley Fleming, HTR has worked with a variety of populations who experience sensory processing challenges. In her recent research, she examined relevancy of sense of taste to horticultural therapy.

Sensory Engaging Plants for Therapeutic Gardens

Text & photo by Susan Morgan

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As green industry professionals, we have firsthand experience with the restorative benefits of tending gardens and growing plants. For the past 10+ years since earning my horticultural therapy certificate and additional training, I have facilitated therapeutic horticulture programming, using creative ways to connect the benefits of plants and nature experiences with clients of various ages, abilities, and cultural backgrounds in different settings.

In situations where indoor or outdoor plant-centric spaces are developed for my clients, careful planning goes into the creation of the therapeutic garden space. A therapeutic garden is defined by the American Horticultural Therapy Association as “a plant-dominated environment purposefully designed to facilitate interaction with the healing elements of nature.”

Whether in a collection of raised planters and hanging baskets or an in-ground garden, there are several sensory engaging plants that I prefer to use in these outdoor spaces. Plant selection is based on cultural familiarity to clients, unique sensory qualities, ease of growth and care in the garden, budget, scale of garden, and intended program uses.

Sensory engaging plants offer a combination of interesting tactile, olfactory, aural, visual, and gustatory characteristics. With endless possibilities of plants ideal for therapeutic gardens, below are some herbs and ornamental plants I use with clients.

It is important to note that when working with vulnerable populations, including individuals with cognitive impairments and certain medical conditions, you need to screen plants for their safe use in the garden space. I look for plant toxicity, thorns, caustic properties, and other potentially irritating or hazardous qualities, and select accordingly. Plants with vigorous or unruly growth habits (think: mint) or a short growing season are carefully considered before use and often planted in pots for better management.

Citrus scented plants. Besides the flavors of vanilla, chocolate, and strawberry, citrus scents are universally appreciated, anecdotally speaking. Consider herbs featuring a range of citrus scents, including lemon thyme, lime basil, lemon balm, grapefruit, mint, and orange-scented geranium. Lemon verbena is a client favorite for its bright lemon scent, which smells like lemon drop candies.

Basil. Clients are often surprised by the basil available — ‘Mrs. Burns’ lemon, cinnamon, purple leafed, boxwood, Thai, and standard sweet basil, among others. I love variegated ‘Pesto Perpetuo’. Its green and creamy white variegation looks great in a mixed planting and is good for culinary use in savory recipes and herbal compound butters.



Susan Morgan is a member of GPNs 40 Under 40 Class of 2017. She offers virtual therapeutic horticulture programming and consulting.

Rosemary. Rosemary means “remembrance” in the Language of Flowers. Perhaps that’s because after touching its foliage, its scent lingers and inspires reminiscing of the garden walk or an unrelated memory of a loved one. Though I don’t have a specific variety preference and like both the upright and trailing forms, I love its bright blue flowers and culinary and fragrant floral arranging uses.

Lavender. There are many stress-reducing uses for lavender — sachets, handmade spa products, infused drinks and baked goods, and so on. When growing lavender, I have had success with fernleaf lavender (*Lavandula multifida*), ‘Goodwin Creek’ and the lovely ‘Phenomenal’.

Scented geranium. A standard program plant, scented geraniums are ideal for indoor and outdoor sensory growing because they offer various fragrances, leaf textures, and bloom colors, and have multiple herbal uses, including potpourri making and plant propagation activities. I prefer lemon scented geraniums (over minty-lemon options), as well as ‘Orange Fizz’, ‘Lady Plymouth’, rose, chocolate, mint and more.

Soft plants. Plants with soft and fuzzy leaves are popular for their tactile features. These include Dusty Miller (I like ‘New Look’ and ‘Silverdust’), ‘Angel Wings’ senecio, lamb’s ear, purple leaf sage (*Salvia officinalis* ‘Purpurascens’), silver sage (*Salvia argentea*), cardoon (*Cynara cardunculus* — can get prickly) and ‘Silver Shield’ plectranthus.

Pollinator plants. Pollinators are key ingredients to therapeutic gardens because they encourage moment-making opportunities for observation and discovery, and evoke a sense of awe and wonder. I intentionally use certain host plants, such as dill and bronze fennel, that caterpillars love to browse, and nectar plants, like pineapple sage (I like ‘Golden Delicious’) and Tithonia, on which hummingbirds and butterflies feed.

Ornamental grasses. Grasses offer movement and sound in the wind and interesting textures in the garden year-round. I like to use Mexican feather grass (*Nassella tenuissima*), lemon grass (*Cymbopogon citratus*) and pink muhly grass (*Muhlenbergia capillaris*).

Seasonal annuals. To keep clients planting season to season and provide ongoing programming, we often change out annuals with colorful flowers and foliage. These include annual vinca (*Catharanthus roseus*, I like Cora and Cora Cascade series), coleus, gomphrena, celosia, sweet potato vine, zinnia, petunia, pentas, sunflower, marigold, pansy, snapdragon, Swiss chard, and more.

For more information, go to www.ahta.org/about-therapeutic-gardens.

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Cultivating Horticultural Therapy in Canada

Text by Bianca van der Stoel

Graphics courtesy of the Canadian Horticultural Therapy Association

While our world faces increased pressures of urbanization, technology, and the never-ending 'ending' to a worldwide pandemic, the need is greater than ever before to draw individuals back to the healing influence of nature and horticulture. Luckily, recognition of the value of being in nature is rising; 1 in 5 Canadians started a home garden in response to the COVID pandemic (Mullins et al., 2020). While this pandemic has drawn some individuals back into their gardens and their forests, the [Canadian Horticultural Therapy Association](#) (CHTA) is observing a need for professionals who have the skills to link communities back to nature. As neighbours in the North, the CHTA is meeting the needs of a significant increase in the awareness and interest in horticultural therapy (HT) and therapeutic horticulture (TH) in Canada as a result of these societal shifts.



Above and beyond the increase in CHTA membership, HT-related speaking engagements, HT corporate wellness programming, and HT/ TH education attendance, the country is seeing societal and political shifts towards nature. [Parks Prescriptions](#) (PaRx) are gaining attention with physicians and health-care practitioners across Canada and 2022 will be announced as [Canada's Year of The Garden](#). Both of these initiatives are being planned and promoted in collaboration with the CHTA as a way to ensure that the healing lens of horticultural therapy helps mold decisions and actions. One such action that will be directly supported by horticultural therapy professionals are weekly 'garden invitations', along with a social media campaign, drawing Canadians to their garden spaces in new and unique ways. In addition, the CHTA will be educating and advocating for the value of therapeutic gardens during the Year of the Garden - promoting therapeutic aspects to be considered in community gardens, urban gardens, and horticultural training. With this increasing voice of advocacy, the CHTA intends to promote HTRs as the healthcare practitioner supporting the follow-through of appropriate parks or garden prescriptions.

To support the need for more HTRs, the CHTA is increasing their national presence. CHTA membership has increased significantly in the last year and the board has also expanded. The association has launched new initiatives and educational opportunities to support professional development in HT/ TH. The annual conference shifted to a virtual format, promoting accessibility across the nation, and opening doors for international guests and speakers. This shift led to a significant increase in registrants and increased net profits. The CHTA relaunched regional branches in 2020, using online format.

HT/ TH education has grown to include more virtual formats as well, increasing the reach across Canada. Educational webinar series delivered through CHTA have engaged Canadian and international participants, and is a valuable way of forming mutual understanding and support across CHTA membership. Issues related to definitions for HT and TH, common understanding of titles protecting

the title of Horticultural Therapist Registered (HTR) for those who have been granted HTR status by the CHTA or AHTA, the use of the title Horticultural Therapy Practitioner in Canada (- a title only deemed appropriate for individuals who have completed an HT certificate and are actively working in the field of HT on a direct path towards applying for HTR registration), and greater understanding of the professional registration process are being addressed.

As the CHTA strives to grow roots across Canada, there is an awareness of the need for wise leadership, membership support, and increased access to HT/ TH education. Some of the key goals as the CHTA moves forward with recent momentum are to increase relevant, rich educational opportunities; promote the value of HT professionals on care teams and across industries; and get more Canadians with their hands in the soil. The CHTA community strives to provide an antidote to the stress, pressures, and pace of life—whether for students, incarcerated individuals, elders living in long term care, burnt-out corporate professionals, lonely individuals, and beyond—through the therapeutic experiences horticultural therapy professionals can offer.

While the CHTA is poised to support the rising interest in HT and TH, the world is also ready. Healthcare systems are continually evolving away from the medical model and this is the time to be bold advocates for effective, alternative therapies such as horticultural therapy as a complement to a healthcare team. Schools and communities are discussing ways to re-engage individuals with their natural spaces (Jenkins, 2013), penitentiaries are considering the effect of nature (Moran & Turner, 2019), and community planners and political change makers will rely on the voices of horticultural therapy and other nature-based professionals as they design cities and policies. The CHTA cannot wait to see the roots of the HT community strengthened, and the branches stretched and extended across Canada, offering comfort, wellness, and inspiration to Canadians and beyond.

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This article is the second in a series by Siang Yu Tham on Horticultural Therapy Worldwide.

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Spring 2022 Issue of *Cultivate*:
The Price is Right- HT Fees, Memory - Smell Connections

Editor in Chief Lesley Fleming, HTR

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