



Trowel Talk

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Favourite Succulent – Jade Plant

Terry Mueller

After a long, cold winter, I'm always happy to get outside in the garden again, thrilled to see those small, green shoots emerging. It's proof that my beloved perennials have survived another winter. It is the enjoyment my collection of indoor plants brings to me during the winter months that gets me through to spring!

Over the years that my garden has slowly expanded, so too has my indoor plant collection. Among my favourites is my assortment of succulents, including *Kalanchoe*, *Echeveria*, and *Crassula ovata*. *Crassula*, or jade plant, the first one I acquired, is a common houseplant but is never boring to me. I've always found their glossy, oval-shaped fleshy leaves and thick stems intriguing. These slow growers aren't fussy – exactly the quality I like in a plant.

I bought two jade plants about eight years ago. For the first couple of years, I kept them indoors year-round. I eventually decided to start moving most of the houseplants outdoors for the summer, including the jades. What a difference that has made! While many of my indoor plants benefit from a summer spent outside, none has profited more than the jades.

Jades like neutral to slightly acidic soil and they need bright, but indirect light. When I purchased

Contents

- ◆ Favourite Succulent—Jade Plant 1
- ◆ Ask a Master Gardener 2
- ◆ Invasive Plants--
Where do They Come From? 3
- ◆ A Gift Idea for Valentine's Day 6
- ◆ Microgreens - A Delightful Edible 9
- ◆ Find us 11

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Jade plants
Terry Mueller

Lanark County
Master Gardeners



Ottawa-Carleton
Master Gardeners



Ask a Master Gardener

Compiled by Amanda Carrigan and Ann McQuillan

Master Gardeners answer questions from the help-line.

I have a variety of houseplants that have difficulty blooming in the winter due to lack of light. Do you have any suggestions to help fix this problem?

If your plants aren't getting enough light and you don't have a brighter location for them, consider artificial light. Put them under a grow light or use another set-up. Turn it on for the number of hours the plants require per day, either manually or by using a timer. With the popularity of indoor plants and gardening increasing, there are different options. You can use hanging lamps and desk lamps or traditional bar light setups. All are designed for use as plant grow lights. Special bulbs may also be used, if safe, in existing lamps. That said, some plants naturally stop blooming in winter, so if you have plants of this sort, trying to make them flower out of season is not a good idea.

I want to do a better job of storing my tools this winter. I think the basement pegboard where I hang them is a bit damp, and I've read that a bucket of sand mixed with oil is an alternative. What would you suggest?

The sand and oil mix doesn't seem very environmentally friendly - it usually uses motor oil. Usually, it is used for cleaning tools rather than long-term storage. Instead, try this cleaning and storage method:

- 1) Clean your tool, brushing or washing any soil off. Remove any sticky residue using acetone, rubbing alcohol, or grease (e.g. an oily salve or peanut butter) to remove it.
- 2) Use a grinding tool or a metal file to sharpen anything that needs it, such as shovel and hoe edges.
- 3) Give the clean, dry tools a light coat of oil before storing them away for the winter. Personally, I like boiled linseed oil (gunstock oil) for wooden handles. For metal blades, try something light. Sewing machine oil or kitchen oil (e.g. sunflower, canola) works well. 🌱

them, I was advised to ensure they received lots of sunlight. In the house that seemed to work; I put them beneath a southern window behind the safety of window blinds. When I first brought them outside, I placed them on the south facing steps of our front porch. After a week or so, both plants began to exhibit leaf scorch. I quickly moved them to the front door, under the portico. There, they were shielded from the intense sun but benefited from the bright light afforded by southern exposure. It's there where they have really thrived during the summer months. That mistake taught me a valuable lesson in their care and nurturing.

Proper watering and good drainage are essential for healthy plants. I let my jades dry out before giving them a good soaking, then leave them be until they feel dry again. These plants will rot in cold, wet soil. In the winter months, I reduce the amount of watering. As spring approaches I keep a close eye on them and adjust watering needs as required as this is when they enter a more active period of growth. In spring, I give them a small amount of organic fertilizer.

I recommend planting jades in heavy containers. As they grow, these plants become quite top-heavy and can topple over and break. Three years ago, I repotted mine into sturdy, taller clay pots. They're happier (and safer).

Propagating jade can be accomplished by taking cuttings. Just remove a leaf, allow a callus to form, and then place it in moist potting mix.

Jade plants won't survive a hard frost. By September, I bring them indoors again, along with the other houseplants. I give all of them a good misting with warm, slightly soapy water to ensure they don't bring any unwanted bugs inside.

The Crassulas may sulk for a time when they first come back indoors. Like me, they aren't thrilled about the shorter days and impending cold to come. They drop a few leaves, but eventually settle in for the winter waiting for spring. In that way, they are a lot like me – always happiest when spring arrives and it's time to go live outdoors again. 🌱

Invasive Plants-- Where do They Come From?

Dale Odorizzi

Invasive alien species have been identified as the second greatest threat to biodiversity, after habitat loss. Invasive species take hold slowly. Their impact is often not recognized until it is too late. The damage can be irrevocable, and the cost of management enormous.

How do these invasive species come to Canada? Chart 1 from the Canadian Food Inspection Agency (CFIA) shows suspected pathways of introduction.

We gardeners must take a large share of the blame for their introduction with our desire for beautiful ornamental plants, agriculture, and herbal medicines. We are also responsible for much of their spread through our movement of soil, garden equipment, garden supplies and recreation and tourism.

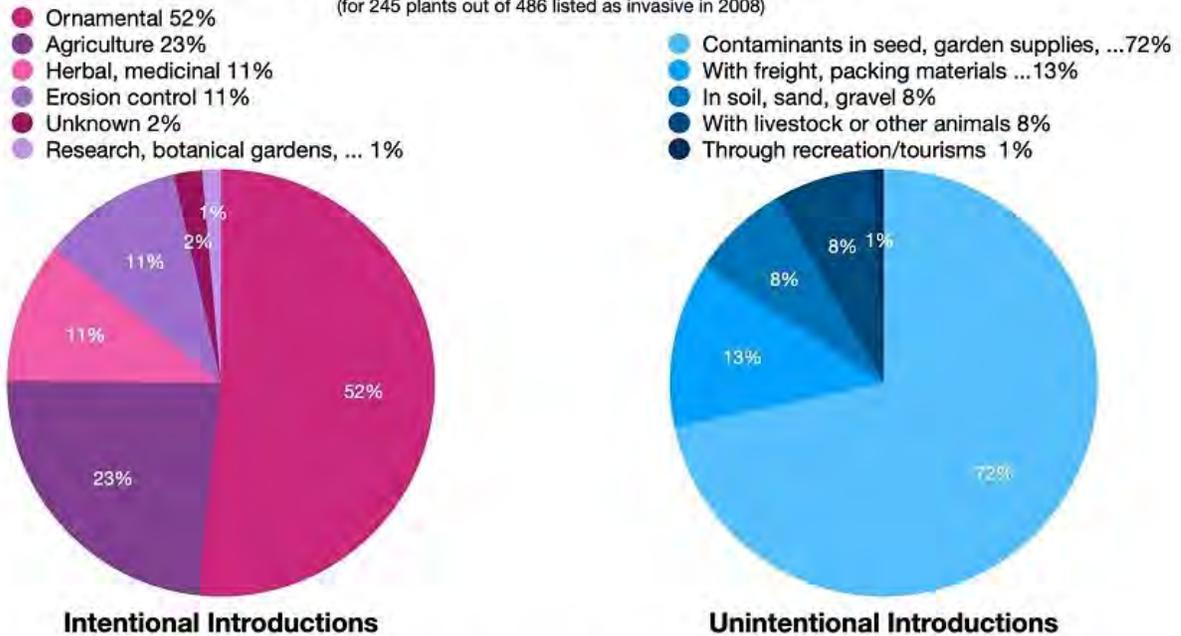
More than 80% of the invasive alien plants originated primarily in Europe, western Russia, and the Mediterranean and about 15% came from China and Japan.



Chart 1

Suspected Pathways of introduction for invasive alien plants in Canada

(for 245 plants out of 486 listed as invasive in 2008)



Canadian Food Inspection Agency. 2008. *Invasive Alien Plants in Canada: Technical Report*. CFIA. Ottawa, ON http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf

How do these invasive plants make it to Ontario?

Some plants were brought here when our ancestors immigrated to Canada. As you can see in Chart 2, over 150 invasive alien species were introduced to Canada from 1800-1900, a time of high immigration. For example, garlic mustard (*Alliaria petiolata*), one of our most aggressive invasive plants, is an herb

that is native to Europe. Rich in vitamins A and C, it first arrived in Canada in the 19th century and was cultivated for eating. It spends its first year putting down substantial root system and then grows in dense stands that double in size every four years. Within 5-7 years of introduction, it can become the most dominant plant in the forest. White-tailed deer graze down native shrubs but turn up their noses at garlic mustard.



Number of Invasive Alien Plant Species by Province (in 2008)



Invasive alien species introduced into Canada from 1600 to 2005. The Cumulative number of invasive aliens plant species continues to climb.

Canadian Food Inspection Agency. 2008. *Invasive Alien Plants in Canada: Technical Report*. CFIA. Ottawa, ON http://publications.gc.ca/collections/collection_2008/inspection/A104-74-2008E.pdf

The most invasive plants intentionally introduced in Canada came as ornamentals brought here by the horticulture industry.

What do these alien invasive species have in common?

Invasive plants invade our forests, prevent native plants from growing, and have a negative impact on how ecosystems function.

Most invasive species:

- grow in a wide variety of soil and light conditions.
- alter growth form to suit current conditions.
- grow more quickly than their native counterparts.
- form dense clumps, preventing other plants from growing.
- sprout earlier in the season than natives, shading out the native plants.
- lack any natural predators and pests.
- produce a large quantity of seeds and berries that are spread far afield by wind or wildlife.

Some Examples

European buckthorn (*Rhamnus cathartica*) was introduced to North America from Eurasia in the 1880s as an ornamental shrub and was widely planted for fencerows and windbreaks. It can survive in a wide range of soil and light conditions. It forms dense stands under which few other plants can grow. It can invade roadsides, riverbanks, mature forests, fields, and hydro corridors. Birds and small animals eat its fruit and carry the seeds long distances.

“I like my garden plants. They are not a problem in my yard. They are so pretty.” This is a common statement from gardeners. For example, purple loosestrife (*Lythrum salicaria*), a native of Europe and Asia, was introduced as an ornamental plant and is reasonably well behaved in private gardens. But it made its way into wetlands by seed dispersal or gardeners irresponsibly discarding excess plants and became a profoundly serious issue.

Periwinkle (*Vinca minor*) is native to central and southern Europe and is sold as a beautiful ground-

cover. It did that job a little too well. It rapidly covered areas in the garden and often escaped into the natural areas nearby. In many areas, it covers whole swaths of the forest floor, crowding out our beautiful native wildflowers. Often, it escapes when gardeners toss extra or unwanted plants over the fence into nearby natural areas.



Vinca
Kim Allen

Phragmites (*Phragmites australis*), a grass, originates in Eurasia. It is another invasive plant causing damage to Ontario's biodiversity, wetlands, and beaches. Twenty years ago, Presqu'île Provincial Park on Lake Ontario was a bird lover's paradise. The boardwalk through the marsh was filled with birds and their songs. Now the boardwalk runs through huge stands of phragmites. The birds and their songs are gone. Phragmites is uprooting the boardwalk. It is extremely aggressive, spreads quickly, and out-competes native species for water and nutrients. It releases toxins from its roots that can hinder the growth of surrounding plants, or kill them. *P. australis* is known to cross breed with our native phragmites (*P. australis* subspecies *americanus*). The invasive plant easily outcompetes its native counterpart.

Dog-strangling vine (*Vincetoxicum rossicum*) is an invasive herbaceous perennial in the milkweed family (*Asclepiadoideae*), a native to southern Europe. Like other invasive species mentioned above, it spreads rapidly and causes damage to Ontario ecosystems. It chokes out native species and grows in a wide range of habitats. The seeds are spread

long distances by wind and by moving machinery and equipment. Because dog-strangling vine is a member of the milkweed family, monarch butterflies have been observed mistakenly laying their eggs on it, instead of on milkweed (*Asclepias* spp.). When their caterpillars emerge, they are unable to eat the leaves and die.

What can we do about invasive plants?

- Remove any invasives from your garden.
- Do not compost any invasive plants you remove. Check with your municipality before putting discarded plants out as yard waste.
- Plant native plants. The Ontario Invasive Plant Council has produced excellent booklets [Grow Me Instead for Southern Ontario](#) and [Grow Me Instead for Northern Ontario](#)
- Do not allow invasives to go to seed.
- Clean your tools, equipment, hiking, and fishing gear.
- Volunteer at community removal efforts.
- Talk to experts at your local nursery or your local Master Gardeners when selecting plants for your garden.

Only a few invasive plants are mentioned in this article. Some plants, such as wild parsnip and giant hogweed can cause severe blistering and should be approached with caution. No plant should be dug from the wild and brought home. Invasives can take over your garden, but native plants often do not survive the move. 🌿

Invasive alien plants are a massive threat to the ecological functioning of natural systems and to the productive use of land.
—Thoko Didiza, South African politician.

Love appeared when you didn't want it and refused to go. It was like an invasive species that entered your garden without warning, and proceeded to grow wildly out of control, resistant to every method employed to kill it. - Lisa Kleypas, author

A Gift Idea for Valentine's Day

Penka Matanska

When we think about gifts for Valentine's Day, chocolates and red roses come to mind. Instead, consider getting creative and making a container garden for a person you love.

Begin by gathering the necessary materials – planter, commercial potting soil with slow-release fertilizer, hand trowel, garden gloves, small pruner, enough pebbles to cover the bottom of the planter and the plants.

The diagram shows the position of each plant in the planter.

Penka Matanska

When choosing a container, the only requirements are a proper drainage hole in the pot that holds the soil. I chose a bright red elongated metal pot with a plastic insert with drainage holes. Choose a soil type suitable for pots. The medium I used is a premium potting soil with a slow-release fertilizer designed specifically for containers and indoor plants.

Garden gloves and a hand trowel are needed for filling the container with soil and planting. For the pruning, a handheld pruner will do the job of removing the spent flowers, dead leaves and trimming of the plant tips when needed.



Valentine's day planter



1. Indoor Azalea, *Azalea*
hardy to zone 12

2. Primula, *Primula*
hardy to zone 5

3. Hyacinth, *Hyacinthus orientalis*
hardy to zone 5

4. Corkscrew rush, *Juncus effusus*
hardy to zone 6

5. Clovers, *Trifolium repens*
hardy to zone 5

I chose the following plants:

1. **Indoor Azalea** (*Azalea*) prefers cooler temperatures and bright filtered sunlight. It is important that azaleas do not dry out. They need to be watered thoroughly. To prolong the blooming period, spent flowers should be removed as they fade. If an azalea is not available, a good alternative would be a red cyclamen (*Cyclamen persicum*).
2. **Primula Joker series** (*Primula*) is a colourful perennial with flowers that have a yellow center

and bi-coloured petals. It complements the colour of the container, vibrant and fresh. It prefers well-drained soil and a semi-shade to full-shade location outside. It is hardy to zone 5. By June, it could be planted in the garden or left in the planter to be placed on the patio or balcony.

3. **Hyacinth** (*Hyacinthus orientalis*) is a spring flowering bulb that comes in various colours. Hyacinths prefer well drained neutral to slightly acidic soil and need to be watered carefully without wetting the leaves. The white/green inflorescence is

dainty, giving a lacy appearance, the perfect choice for your Valentine's Day planter. The smell of a blooming hyacinth will fill a room with sensual aroma setting the romantic mood.

4. **Corkscrew rush** (*Juncus effusus*) is an herbaceous tender perennial (hardy to zone 6) with leathery stems in the form of long cylindrical tubes. This type has a spiral appearance, hence the name: corkscrew rush. The plant creates a nice contrast to the primula's large oval leaves. It also gives height and an added layer of vertical interest. This plant is difficult to find in the middle of winter. I used one from last summer that I was wintering in my garage. A good replacement for this plant will be a *Dracaena trifasciata*, which is easily found in garden centres all year long.
5. **Four leaf clover**, (*Trifolium repens*, 4 Luck® 'Green Glow') is a small perennial herb, a good filler for this arrangement. The leaves can spread, providing nice greenery on the surface. Another plant for this purpose could be a ground ivy (*Hedera helix*).

Trifolium repens or white clover normally has three leaflets, but naturally occurring mutations can give rise to clover leaves with four or more leaflets. Finding a four leaf clover is considered lucky.

Arranging the plants involves six steps:

Photography by Penka Matanska



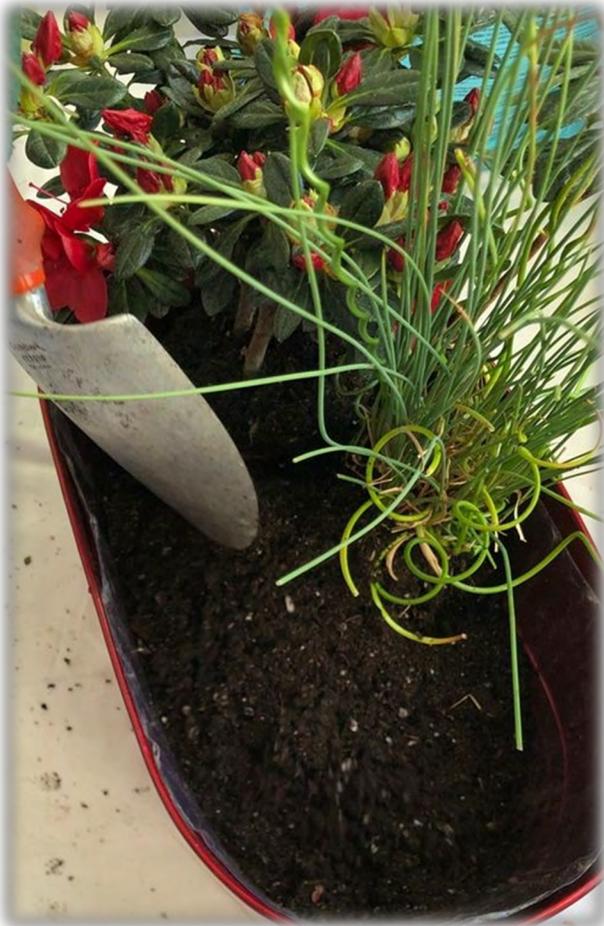
Step 1: Fill the bottom of the container with small pebbles to approximately 0.6 cm.



Step 2: Drainage holes were made in the liner, which was then placed inside the trough and filled with soil to roughly 1/4 of the height of the liner.



Step 3: First, position the tallest plants to the back. Remove azalea (1) from its original pot. Gently loosen the rootball to ensure the plant does not stay bound and then carefully position it.



Step 4: Plant the corkscrew rush (4) next, keeping it in its original pot, place it in position. Lightly cover it with soil.



Step 5: Carefully position the hyacinth bulbs (3). Add more soil to secure the plants.



Step 6: Plant the primula (2) and clovers (5) last. Arrange them at the front of the container. Lightly press the soil around to fix them in place.

The planter was watered well and placed by a bright cool windowsill with morning sunlight. The container should be checked daily to ensure the plants stay healthy. The corkscrew rush needs to stay moist at all times so its own pot should be watered every couple of days.

Spent primula, azalea and other plant flowers should be removed to prolong the blooming period. Yellow leaves should be removed with pruners. Plants should be checked for pests and other health problems. The best prevention is to keep the plants healthy by proper watering, fertilizing and minimizing stress to the plants by avoiding cold drafts or heat vents.

In the spring, when temperatures warm up and it does not freeze at night, this planter can be positioned on a patio, balcony or directly in the garden in a cool semi-shade location. It will continue to provide a focal point and interest until fall when you can return it indoors.

The beauty of this small garden will make someone's day very special. 🌱

Microgreens - A Delightful Edible

Nancy McDonald



Microgreens

Nancy McDonald

I confess, by the end of October when fall chores are completed and the garlic bed is tucked in, I am ready to take a break from gardening. Getting caught up on reading and finishing rug hooking projects fill the gap. But then, the green thumbs get itching. It's too early for seed starting, so growing microgreens is just the crop to fill the gap.

For anyone unfamiliar with microgreens, these are immature edible greens harvested when they are 5-7.5 cm in height. The stem, the cotyledons (seed leaves) and first sets of true leaves are microgreens. They are trendy as toppings on everything from appetizers to entrées in restaurants. Alternatively, you can grow them at home within 7-28 days for your culinary enjoyment. And, may I add, for the cost of pennies.

So trendy, but do microgreens have any nutritional value? A study from the College of Agriculture at the University of Maryland working with the United States Department of Agriculture examined nutrients in microgreens compared to the mature plant. Vitamin C, E, K and beta carotene were found in 25 different types of microgreens including cilantro, cel-

ery, red cabbage, green basil and arugula. Their results verified that microgreens contain four to 40 times more nutrients than their mature counterparts. Did I mention growing microgreens is easy? It's a great indoor gardening project to do with children. I have a tabletop grow light system that I set up in early winter for seed starting. But if just growing microgreens, I often use recycled take out food containers or even an aluminum pie plate. Poke a few holes in your recycled container for drainage. Fill your shallow container with pre-moistened potting soil to depth of 2.5 – 4 cm. I have used both a seed starting mix and a soilless potting mix successfully. Sow your seeds evenly. I spread quite densely as these plants will not be growing to maturity. Sprinkle moistened potting soil lightly to cover seeds. After placing the container on a drainage tray, I water lightly.

As with all seed starting until germination occurs, light isn't required but it is important to keep your growing tray in a warm location with humidity. I use the takeout food cover initially as a dome to preserve humidity and then remove it to use as a drainage tray once germination has occurred. Germination times depend on the seeds you have planted. Radish and arugula take approximately four days to germinate while sunflowers can take 10-14 days.

Once seedlings emerge, move tray to your sunniest window sill or under grow lights. Keep the soil moist by spritzing or bottom watering the tray daily. No fertilization is necessary. I cut the greens at soil line with scissors when they are 5- 7.5 cm tall. Some growers prefer to pull the plant, wash and eat the whole thing, root and all. Fresh is best, but you can refrigerate the harvest if you don't plan to use right away.

Microgreens that do well in window light or lower light conditions include lettuce, arugula, mustards and Asian greens. These, along with kale, radish,

broccoli and cress, are considered both fast and easy to grow. Consider any of them when starting out. Most seed catalogues have informative sections on growing microgreens.

My interest in microgreens began just over a year ago, so I am still experimenting with seed varieties for the first time. So far, I have enjoyed kale, arugula, swiss chard and radish microgreens. I plan on growing sunflower microgreens this winter as many microgreen growers rave on about their nutty flavour and enjoyable crunch. Growing microgreens in the winter is a good way to use up those partial seed packets as any edible herb, vegetable and some flowers can be grown as microgreens.

And once you have harvested, enjoy. Adding microgreens to a dish adds colour, flavour, texture and, of course, additional nutrition. I use mine as toppings on soups, salads and just out of the oven flatbread. I have also incorporated them into frittatas and love the additional crunch that microgreens bring to a sandwich. I encourage you to grow microgreens and enjoy this delightful edible. 🌱



Pizza

Nancy McDonald

Microgreens are not sprouts. Sprouts do not have leaves and are harvested 2-7 days after germination. They are grown in water, and need no added nutrients and very little light. The whole plant including the seed is eaten.



Lily of the Valley (*Convallaria majalis*) is another example of an invasive that started out as a beloved garden plant. It has escaped into natural areas damaging the existing eco-systems. It forms a dense groundcover that in a garden will choke out weeds, but in natural areas it will eventually eliminate the existing native plants. In the picture these are Canadian mayflower (*Maianthemum canadense*) and a Solomon's seal like plant

Huron park, Kitchener.

William Morrison

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Send questions and photos of garden pests, diseases or plants for Identification.

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This is your chance, as a reader, to suggest an idea for an article you would like to see in Trowel Talk. Click on the button.



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Letters to editor: mgottawaeditor@gmail.com

Banner Photograph: African violets, Julianne Labreche .



Clinics

Closed



Talks and Events

We are doing some talks for Garden Clubs and Horticultural Societies using Zoom or other virtual meeting software. Attendance is by invitation from the host organization. We are planning to offer our own series of virtual presentations in this year. In-person clinics at farmers' markets are cancelled until further notice.

Master Gardeners of Ottawa-Carleton and Master Gardeners of Lanark County are member groups of Master Gardeners of Ontario Inc., a registered charity with the mission of providing free gardening advice to the public.