

Cross Pollination

Newsletter of the Halton Master Gardeners

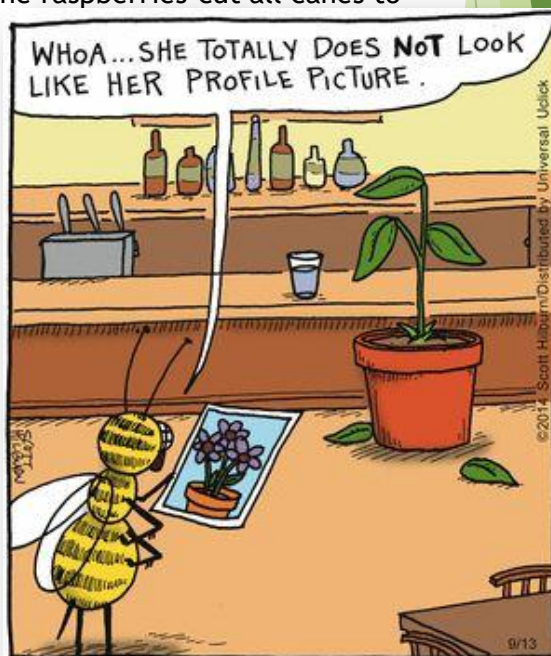
March 'Garden To Do' List

By Halton Master Gardener Claudette Sims

- ❑ **General Pruning** - March is a good time to prune and repair winter damage & check for disease such as [Black Knot Fungus](#). Always use clean, sharp tools. Remove dead, damaged, diseased wood. Cut back branches to just above another branch or a bud. Do NOT prune spring flowering shrubs until after they bloom. Detailed [pruning information here](#).
- ❑ **Pruning with Wildlife in Mind** - Use the '[chop & drop](#)' method to leave prunings in your garden to replenish the soil & provide nesting material for native birds. Leave larger pieces of wood in the garden for wildlife & consider leaving '[snags](#)' in place as long as it is safe to do so.
- ❑ **Evergreens** need very little pruning. *Arborvitae* (cedar hedge), junipers and *Chamaecyparis* will not form new buds on old wood. How [to prune here](#). Learn how to prune and remove multiple leaders and encourage growth of **Douglas firs & spruce** [here!](#)
- ❑ **Old Overgrown Shrubs** - Use [rejuvenation or renewal pruning](#) to restore scraggly or overgrown shrubs. Which shrubs can you renew or rejuvenate? [Here's a list!](#)
- ❑ **Hydrangea arborescens** - (Smooth Hydrangea or '[Annabelle](#)') Prune before new growth appears. Remove old weak stems, leaving about 1/3 of stems 30 cm long for structure and support. Detailed hydrangea info [here!](#)
- ❑ **Clematis** - See detailed pruning information in our 'Question of the Month' pg. 5
- ❑ **Apple, cherry, plum, pear trees** - [Prune](#) before flower buds swell. Remove any dead, diseased twigs and prune for open shape. Pear trees generally don't require pruning, except for shaping.
- ❑ **Raspberries** - Summer-bearing red and yellow raspberries, cut canes back to 4-5 feet tall before growth begins. Fall-only primocane raspberries-cut all canes to the ground before growth begins. Detailed [info here](#).
- ❑ **Blueberries** - Early March, prune out dead, damaged, diseased wood to an open shape to increase air circulation. More info here about [blueberries](#).
- ❑ **Houseplants** - Increase water and feeding as plants start actively growing.
- ❑ **Amaryllis** - After the flowers have faded, cut the flower stalk to within 1" of the top of the bulb. Give plants a maximum of sun and feed 'weekly, weakly' to produce a large healthy bulb & flowers for next year.
- ❑ **Start** onions, garlic, yellow onions when the soil can be worked. Separate cloves just before planting and plant about 2" below soil.
- ❑ **Order Native plants**- Check our [map on nurseries in Ontario](#) for ideas. Nurseries specializing in native plants are marked with green stars.



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SOME LIKE IT HOT



Seed germination and soil temperature

By Cheryl Disenza – Halton Master Gardener



Seed Planting Season

It's almost that time! Many gardeners will soon be gathering their seed growing supplies to germinate their favourite vegetables, herbs, and annuals. There are many aspects for successful seed germination, including both chemical reactions and physical reactions. For example, the seed absorbs the water which triggers a variety of chemical reactions that activate enzymes and hormones to stimulate seed growth. Viable seeds require water, oxygen, sometimes light (or darkness), and must have optimal temperatures for successful germination.

How does temperature affect seeds?

Soil temperature is a key factor that either allows for successful germination or prevents it completely. The chemical and physical reactions cannot take place if the temperature is too hot or cold. Most seeds will not germinate below 0°C or above 40°C. If the temperatures are within an acceptable range but not at their optimal temperature range, they may develop perfectly fine, however, it also means there is a greater chance that growth will be slow or stunted. This will cause a weaker seedling or eventual failure of the seed to germinate. For many plants, seeds will not be successful below 4°C - 10°C. The seeds may absorb water but will not start developing which will cause the seeds to become diseased or rot. However, there are some plant species that require cold stratification to germinate.



[Image: BERE College - Grow Appalachia](#)

Cold Stratification

You may have heard of cold stratification. Many of our native plant species require cold stratification, a period of cold temperatures to trigger the chemical and physical reactions in the seed that are necessary for it to germinate. Years of coevolution between our native plant species and climate have created the perfect balance so that the seeds do not start growing on balmy November days, but instead, go through our cold winters and are ready to sprout in the spring.



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Seed germination and soil temperature

By Cheryl Disenza – Halton Master Gardener

What is an optimal temperature for seed germination?

Optimal temperatures for seed germination are the temperatures at which the seed develops the fastest and has the greatest success. The rate of success is based on the number of days the seeds take to germinate. Most crop seeds germinate with a temperature range of 18°C to 29°C, however, all seeds are created differently and therefore the optimal temperature will vary depending on the type of seed. Cool season plants, such as leafy greens, prefer a lower optimal temperature of 7°C to 24°C. These plants can be directly sowed outdoors in early spring. Warmer season plants, such as peppers, have a higher optimal temperature of 29°C. Home gardeners will usually start these seeds indoors in early spring. Heating mats are ideal to raise the soil temperature for the seeds when starting indoors. It is recommended to research the seed you are planning to germinate and determine the optimal temperature range.

How to determine the soil temperature

Most seed packets will offer detailed information for when to start your seeds, whether it's indoors or outdoors. This is the best reference to use when planting your seeds. When directly sowing the seeds outdoors it may be more challenging to know when to plant. Different areas in our yards will probably have different soil temperatures. The soil temperature can be influenced by a few different factors including whether there is mulch on the soil, the location of the soil, and if the location is shaded. Bare soils warm up faster compared to soils covered with mulch. An unobstructed south facing garden will have warmer soil temperatures since it receives longer and more intense sun compared to a north facing garden. One way to determine the soil temperature is to insert a thermometer into the soil at the depth where you would plant the seed.

Summary



The soil temperature is a key factor in seed germination. The temperature will determine the number of days it takes for the seed to sprout through the soil. Seeds have a high success rate if they are viable and given the necessary conditions to grow, including the optimal soil temperature. Always determine the seed type and its growing requirements for successful germination. I have heard people say they cannot grow plants from seeds; however, everyone can be a successful germinator. Just remember, some seeds like it hot.



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Seed germination and soil temperature

By Cheryl Disenza – Halton Master Gardener

Soil Temperatures for Germination : Soil Temperatures for Germination

Germination Temperatures for Field Crops and Herbs				Germination Temperatures for Vegetables			
Species	Minimum (°C)	Preferred (°C)	Days to Germinate	Species	Minimum (°C)	Preferred (°C)	Days to Germinate
Grains				Bean	8-10	16-30	6-8
Wheat Triticum aestivum	4	20	-	Beet	4	10-30	4-6
Barley Hordeum vulgare	3-5	20	-	Cabbage	4	7-35	4-6
Oats Avena sativa	5	20-24	-	Carrot	4	7-30	6-8
Rapeseed Brassica napus	7	15-20	-	Cauliflower	4	7-30	5-7
Forage Crops				Celery	4	15-21	7-9
Alfalfa Medicago sativa	1	25	2-6	Corn	10	16-32	10-12
Birdsfoot Trefoil Lotus corniculatus	1	26		Cucumber	16	16-35	3-6
Red Clover Trifolium pratense	3	25	4-6	Aubergine	16	24-32	6-8
Sweet Clover Melilotus officinalis	1	18-25	4-6	Lettuce	2	4-27	3-5
White Clover Trifolium repens	5	18-20	4-6	Onion	2	10-35	6-8
Fescue Grass Festuca spp.	3	13-18	-	Parsnip	2	10-21	14-17
Orchardgrass Dactylis glomerata	4	18-20	-	Pea	4	4-24	6-8
Timothy Phleum pratense	4	18-22	-	Pepper	16	18-35	8-10
Herbs				Pumpkin	16	21-32	4-6
Basil Ocimum basilicum	18	21-24	3-5	Radish	4	7-32	4-6
Mint Mentha spicata	18	20-24	10-15	Rutabaga	4	16-30	4-6
Parsley Petroselinum crispum	4	10-30	13-16	Spinach	2	7-24	5-7
Lovage Levisticum officinale	16	21	10-20	Squash	16	21-35	4-6
Summer Savory Satureja hortensis	18	20	14-21	Tomato	10	16-30	6-8
Chives Allium schoenopras	16	21	14-21	Swiss Chard	4	20-23	4-6
Fenugreek Trigonella foenum-g	16	21	3-5	Turnip/Rutabaga	15	18-21	3-6
				Celeriac	15	18-29	14-21

Source: <https://www.permaculturenews.org/2017/03/09/soil-temperature-seed-germination/>

References

- [Annual Flower Seed Germination Guide, Iowa State University](#)
- [Soil Temperature Conditions for Vegetable Seed Germination, University of California](#)
- [Seeds of different plants have different requirements when it comes to soil temperature, Penn State](#)
- [Soil Temperature and Seed Germination, Permaculture Research Institute](#)
- [Planting by the Soil Temps, Berea College](#)
- [Soil Temperature Conditions for Vegetable Seed Germination, Alabama & Auburn Universities](#)



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A Philosophical Approach to Co-existing with Critters in the Garden

Episode One: Public Enemy Number One

By Pam MacDonald—Halton Master Gardener

In anticipation of spring and the imminent activity of wildlife doing what nature does in spring, we recommend reading [An Informed Approach to Animal Pests in the Garden](#), a compilation of information from reliable websites and posts on [Master Gardeners of Ontario Facebook Group](#). Contributors included Halton MGs Cathy Kavassalis, Janet Hughes-MacKey and Claudette Sims. As always, the guidance is thoughtful and thoroughly researched, encourages tolerance for wildlife and offers humane solutions to the problems gardeners encounter. This is worthwhile reading every spring and fall when wildlife emerge, eager to start new families. It's also worth considering at the other end of the summer when they are looking for a place to take their long winter nap - and may be trying your patience.



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A Philosophical Approach to Co-Existing with Critters in the Garden

Tongue firmly in cheek, we are publishing this companion piece, **A Philosophical Approach to Co-Existing with Critters in the Garden**, in a three-part series. The author of this philosophical treatise has requested anonymity to avoid self incrimination and to preserve the dignity of her thrice skunked dog. Our mystery author offers her 'tips from the trenches' to augment your arsenal and help you keep your cool when you might be tempted to abandon the informed and humane approach.

Episode One: Public Enemy Number One



For many, Public Enemy Number One is a one-pound busybody with industrial strength teeth and a bushy tail: the grey squirrel.

George H Harrison

Squirrel Wars and Other Battles With Backyard Wildlife

It's spring and the busybodies with bushy tails are back. Or probably never left if like me, a part of your enjoyment of your garden is feeding and watching the birds in winter. You feed the birds ergo you feed and do battle with the squirrels. You may also find yourself contending with a larger more menacing version of the busybody - the raccoon. Or a smellier one - the skunk. Or one with longer ears - the rabbit. One way or another if you are a gardener, you will at some time find yourself dealing with 'uninvited guests' and will need to decide how you are going to deal, or should I say cope, with them.

?



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Episode One: Public Enemy Number One (cont'd)



To arrive at one's personal approach to busy bodies, masked(raccoons) and tuxedoed (skunks) intruders in the garden some soul searching is required. Would protecting your flattened petunias really be worth dealing with the fury of a raccoon in a trap? If you murdered a mother squirrel over her fixation on your tulips, could you look her kids in the eye? Having myself made the masochistic decision to replant tulips over and over again, while feeling persecuted by a one-pound busybody, I cannot over emphasize the importance of a session with Dr Phil.



In recent times I have had to contend, simultaneously, with a denning mother skunk under a shed and partying raccoons overhead on a pergola. I have sat glumly with severed tulip in hand, watching a horde of squirrels, led by one called Genghis Khan, descend the trees of Dundurn Park, scale the ramparts of my fence and lay siege to my birdfeeder. In confronting these wildlife challenges, I have finally settled on the philosophical approach - though not the nihilism of Nietzsche.

This Photo by Unknown Author is licensed under [CC BY-SA](#)



George H Harrison, who I quoted earlier is in fact a 'wildlife gardener'. He points out that both the wildlife we invite and the wildlife that crash the party are looking for the same things - food, water and single family detached homes. Mind you, he wrote his book in 2000 - they are now hoping for 400 square foot condos to raise their families in. I digress. Since these necessities of life are what uninvited guests are seeking, generally the idea is to reduce, eliminate or control

access to food, water and shelter likely to attract the critters unwelcome in your garden. It has taken years of psychoanalysis for me to accept that the busybodies are not out to get me - and to stop planting tulips. When I keep George's advice in mind, I find I may not win, but I may be able to call it a draw.

Squirrels are tough nuts to crack though. They are smart, persistent and there are just so darn many of them! A good place to start then, is to assist them with family planning. Discourage them from nesting if you can. Every spring, we disrupt squirrel nest building in our climbing hydrangea. I call this form of birth control 'nesting interruptus'. It probably doesn't reduce the squirrel population by much but even one fewer descendant of Genghis Khan is a win.

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Episode One: Public Enemy Number One (cont'd)



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Bird feeders are magnets for squirrels. I feed birds but I don't keep a bird feeder stocked with seed in my garden anymore. In winter and spring, I put some seed out daily on a platform and hang a suet feeder. Safflower seed is less appealing to squirrels than sunflower seed. Woodpeckers and nuthatches are regular visitors to the suet in late afternoon and then I bring the feeder inside for the night - it will attract raccoons as well as squirrels. As spring progresses and there are insects and other food available for the birds, I slow down and then stop feeding them. They keep coming for the water and other attractions our garden offers.



Gardening Humour FB

My homicidal thoughts about 'busybodies with industrial strength teeth' have been dramatically reduced by evolving my plant choices. There are so many alternatives to tulips for spring gardens that I have stopped growing tulips altogether. My garden now boasts drifts of daffodils rather than tulips, along with early blooming wildflowers like trilliums and Virginia blue bells.

I have started planting many more plants with seeds and berries that are food sources for both migratory and overwintering birds. I have yet to see a horde of squirrels descend on the coneflowers, sunflowers, dogwood and elderberry in my garden, the way they will on a bird feeder.

And my dog, who you will learn in next month's episode, can spell SQUIRREL, is quite helpful with selective wildlife control. In truth I believe 'the chase' is a game both Tuli and the squirrels enjoy. More than once a member of the Khan clan has come to the kitchen window and caught Tuli's eye as if to say 'come out and play' ... but that is a story for another day.

WANTED! THE KHAN CLAN

Believed to be hiding in Dundurn Park



Despacito – disturbing the peace, practicing his line dancing late at night to very loud music with his partner Claudette (who was not caught on camera)



Friederich - Existential Squirrel chewing through the the works of Nietzsche (and other items left in the garden)



Scout – checking out best bird feeders to raid



Genghis – leader of the gang/horde



Teaser – caught in the act of taunting Dumb Dog

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Question of the Month - Curing Clematis Pruning Anxiety!

By Halton Master Gardener Claudette Sims

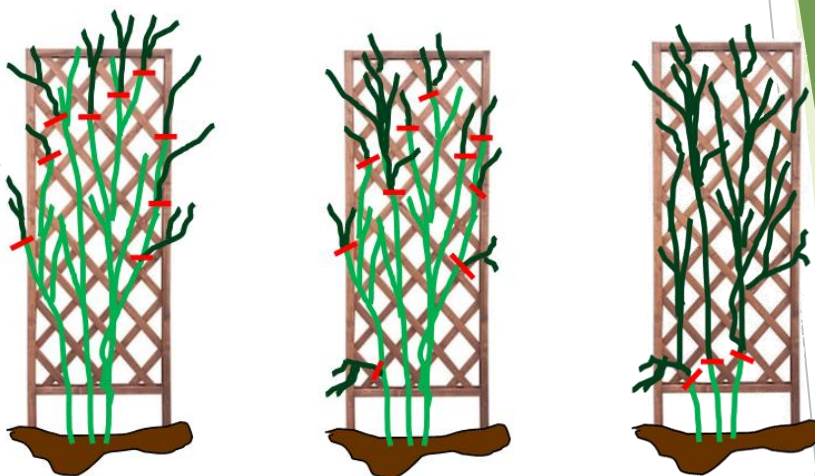
When do I prune my clematis? I don't get the Group 1, 2 and 3 thing!

The information about pruning clematis can be overwhelming. They are usually divided into 3 groups for pruning purposes, but this isn't very helpful if you've lost the plant tag or can't figure out what group of clematis you have. The easiest answer is that clematis should be pruned either in May, or in March, depending on the group.

The most common group is Group 2, which are also the hardiest and can be very lightly trimmed in March, before new growth appears. The least common group in your garden is the Group 1 clematis-most grow in warmer zones 6 & 7 and need very little pruning. That leaves Group 3, whose leaves and stems grow from the ground each year. They can be trimmed back to about 12 inches in early March.

Notice that Group 1 is barely pruned, while Group 3 is pruned to about 15 cm from the ground.

Here's a quick summary about each group in table format!



	Group 1	Group 2	Group 3
How to ID different groups	<ul style="list-style-type: none"> • "If it blooms before June, don't prune" • <u>Typically small flowered</u>, very long vine (+20 ft) 	<ul style="list-style-type: none"> • Most common form in Canada • Large flowered varieties that bloom June/July and sometimes a 2nd time in later summer 	<ul style="list-style-type: none"> • Stems die back in winter and grow new each spring from the ground
Bloom information	<ul style="list-style-type: none"> • Blooms on OLD wood from buds formed on previous year stems • Early spring –before June 	<ul style="list-style-type: none"> • Blooms on OLD and NEW wood • Blooms June/July on OLD wood from buds formed the previous year • Reblooms later in summer or fall from NEW wood & buds formed the current growing year 	<ul style="list-style-type: none"> • Blooms on NEW wood formed that year • Summer and fall until the frost
Stems & Leaves	<ul style="list-style-type: none"> • Do not die back in winter (new leaves will grow from stems) 	<ul style="list-style-type: none"> • Do not die back in winter (new leaves will grow from stems) 	<ul style="list-style-type: none"> • Stems die to the ground over winter • New stems/leaves grow each spring from the ground
Pruning Time	<ul style="list-style-type: none"> • Generally in May • Immediately after flowering, and only if you have to 	<ul style="list-style-type: none"> • In March, before new growth appears • Lightly prune flowers after first flush to encourage more growth 	<ul style="list-style-type: none"> • Early March, or before new growth appears

Continued on next page...



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Question of the Month - Clematis Pruning (continued)

Additional Pruning Info	<ul style="list-style-type: none"> • Prune only when needed & sparingly • Clear out dead or damaged wood • Cutting too early or late may cost you flowers 	<ul style="list-style-type: none"> • More forgiving if you prune too harshly in March as there is a late season bloom • Remove dead wood and cut back 6 to 8 inches from remaining stems 	<ul style="list-style-type: none"> • Prune all stems back to a set of buds about 12 inches from soil
General Description	<ul style="list-style-type: none"> • Lots of small single or double pink or white flowers • Vanilla scented blossoms • Resistant to clematis wilt • Vigorous, can reach 20-40 ft. • Well drained soil in full sun to part shade • Typically from horticultural growing zones 6 & 7 	<ul style="list-style-type: none"> • Usually bloom twice in season • Large flowered hybrids, some semi-double and others fully double flowering • Most common group in Canada • Usually horticultural Zone 4 rated Clematis 	<ul style="list-style-type: none"> • Comprises clematis that are usually horticultural Zones 5 and 6
Species /Cultivars	<ul style="list-style-type: none"> • <i>Clematis alpina</i> • <i>Clematis armandii</i> • <i>Clematis cirrhosa</i> • <i>Clematis macropetala</i> • <i>Clematis montana</i> 	<ul style="list-style-type: none"> • <i>Clematis florida</i> • <i>Clematis patens</i> hybrids: • Bees Jubilee • Vyvyan Pennell • Perle D'Azur • The President • Henryi • Ramona 	<ul style="list-style-type: none"> • Etoile Voilette • Jackmanii • Western Virgin's Bower • Niobe • Polish Spirit • Princess Diana • Rhapsody • Ville de Lyon • Taiga

Simplified Pruning Method (Adapted from Cathy Kavassalis)

Be ready to prune once the new growth appears in late winter. You may find a tangled mess of vines with live and dead growth interwoven. The stems of live and dead wood look alike, but leafy growth from the buds indicates a vine is alive. Start at the top of the plant and work down, cutting out the deadwood on each vine of the plant. Keep cutting down each vine until you find a live bud or growth. Once you find it, stop! Continue to prune all the vines until each is either pruned back to a new growth or to the ground if that shoot is dead. Once this is complete, secure each of the vines to the trellis and move on to the next plant.

Want to learn more?

- [Clematis Pruning Made Simple](#)
- [Tips for Pruning Clematis Vines](#)
- [Types of Clematis & How to Identify Yours](#)
- [Clematis on the Web \(database\)](#)
- [International Clematis Society \(Pruning\)](#)
- [Native or Invasive Clematis? Check the leaves!](#)
- [Virgin's Bower Native Clematis](#)
- [Invasive Sweet Autumn Clematis Distribution](#)



Halton Master Gardener Claudette Sims

Our native clematis, Virgin's Bower or "Old Man's Beard" (*Clematis virginiana*)
Photo: A Cultivated Art FB post

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"What's Growing On"

Halton Master Gardener Meetings continue to be held **virtually** until further notice. We are still accepting new members! Our next meeting will be Wednesday, March 2nd. Interested? Email us! Check our website for more [Events](#) and past issues of our [newsletter](#).



ROYAL BOTANICAL GARDENS PRESENTS *UNDER THE CANOPY*

- Enter the rain forest and hang out with a sloth
- A timed-ticket exhibition
- Pre-registration required

[Royal Botanical Gardens](#)



**March
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Gardening Events Are Virtually Here!

Guelph Master Gardeners
invite you to attend virtual presentations

- [Fruits for Small Gardens](#), by [Lee Reich](#) March 10
- [The Bombus Among Us - Bumble Bee Basics](#), by [Heather Holm](#) March 24
- [Worming Your Way to Healthy Soils and Plants](#), by [Rhonda Sherman](#) March 30
- [Fun Facts About Plants](#), by [Robert Pavlis](#) March 31



Mississauga Seed Library Virtual Workshops & Seed Library Launch
Events from Tuesday, March 1 to Saturday, March 5

Contact: Maria Pakulnicka, seed.library@mississauga.ca



Don't forget!

We are still answering your garden questions!
Contact us at HaltonMasterGardeners@Gmail.com
And we have lots more information on our website
at haltonmastergardeners.com



First Day of Spring is
March 20th