January 2017 Newsletter

Nature has undoubtedly mastered the art of winter gardening and even the most experienced gardener can learn from the unrestrained beauty around them.

- Vincent A. Simeone

Re-using Your Tree After Christmas

By Larry Hodgson

When the holidays come to an end, there isn't much left to do but take down the garlands and decorations and toss the Christmas tree into the trash… or at least that's what so many people seem to think. Actually, though, there are several ways of reusing a cut Christmas tree.

Here are a few of them:

• Stand it up outdoors as a decorative bird shelter.

• Stand the tree up outside for the remainder of winter. You could leave it in its stand or stick it in a snowbank, for example. Not only will it look great for the rest of the cold season, but it will serve as a shelter for birds during periods of intense cold.

• Bonify your "bird tree-shelter" by hanging balls of suet covered in bird seeds or other foods birds like to eat from its branches. That way it will serve not only as a shelter but also as full-service bird hotel.

• Use the branches as a protective mulch. Cut off its branches and use them to cover the more fragile plants in your flower bed, perhaps those of borderline hardiness or ones recently planted. The branches will act as a winter mulch to help to protect the plant against the cold of January and from alternating bouts of freezing and thawing (often more harmful to plants than extreme cold alone) and also to help catch more snow: snow offers excellent insulation against cold.

• Cut the trunk into sections for use as firewood.

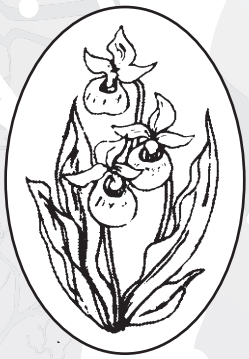
• If you have access to a chipper/shredder, reduce the branches and trunk to chips and use them as mulch.

• If you decide to dispose of the tree, at least make sure that it is properly recycled, a service offered by most municipalities. If yours does not recycle Christmas trees left out on pickup days, find out where you can bring your tree so it can be recycled into mulch or compost.

There you go! When you apply the three Rs (reduce, reuse, recycle) to your Christmas tree, it's good for your immediate environment… and for the whole planet!

Mail Order Savvy

It's important to know the reputation of a mail-order plant seller that you plan to patronize. Are its plants in good health? Is its customer service up to par? Does it deliver on its promises? Luckily, there is an online resource where you can check on a nursery's standing and post rat-



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ings of your own. Visit the Garden Watchdog (http://davesgarden.com/products/gwd), a feature of Dave's Garden online gardening community where gardeners share their opinions on which companies really deliver on quality, price and service. The Internet is a wonderful thing.

Fresh Herbs

Judith Cox
Master Gardener of Ottawa Carleton

Nothing brings taste and freshness to your meals and to your senses like fresh herbs. The scent that greets you as you walk past bushes of lavender or rub the top leaves of basil adds a further level to the joy of gardening.

Herbs have been an important part of the garden for hundreds of years perhaps first cultivated in apothecary gardens maintained by monks who studied them and discovered their uses. The study of the medical use of herbs continues to this day in non-traditional medicine. Most of the herbs we use today in our cooking were first used to treat various ailments.

Sage is an important medicinal herb and it adds a wonderful flavour to chicken and other main dishes. Make a sage tea with fresh sage leaves and honey to help with the symptoms of a cold or flu.

Use lavender with sugar and sprinkle it on cakes; while its sweet smell can ease stress.

The parsley that is used in cooking can prevent flatulence and bad breath. The possibilities are endless.

Growing herbs in amongst the flowers adds extra excitement to your garden. A hedge of lavender or lemon thyme while used for cooking also brings in a variety of pollinators that will visit your flowers and vegetables. If you are blessed with a hot area that has poor soil a herb garden will bring you great satisfaction. Many of the woody herbs such as sage, rosemary, thyme and lavender will thrive in less than perfect conditions. Herb gardens can be swaths of plants running one into another or they can be highly structured like Victorian knot gardens.

Another way to enjoy fresh herbs is from a container. Containers are wonderful alternatives for those who do not have the space for a large garden. Try putting a planter beside the barbecue this summer. A large barrel of herbs such as basil, thyme, rosemary, sage and parsley will add flair to all of your summer recipes. Put a few nasturtiums in as well since the peppery leaves and flowers enhance a summer salad.

If you have a sunny window, why not try a few herbs through the winter. Chives are well suited to this along with rosemary and thyme. Nothing fancy is required; good potting soil, light and water. Harvest your herbs as you need them. If you have a plant stand or an area with a grow light you can experiment with growing fresh herbs all winter long.

Many grocery stores are selling small pots of herbs such as basil, rosemary and thyme throughout the winter season, allowing you to experiment with new and exciting taste sensations. If the grey days get you down, nurseries often have small pots of lavender and other aromatic herbs that can help dissolve the winter blues. Fresh herbs can add flavour to your cooking and happiness to your senses.

AAS Flower Winners 2017

Dr. Leonard Perry, Horticulture Professor Emeritus
University of Vermont

Each year the best of the new annual flowers (those that only live for one year) are judged, and the winners given the All-America Selections (AAS) designation. In the past these have all been grown from seeds, but starting in 2015 those grown "vegetative" from cuttings were included as well. This year's annual flower winners, grown from seeds, include a celosia, a dianthus, two vincas, and a zinnia. The two vegetative annual flower winners include a geranium and verbena. All prefer full sun, average well-drained soil, and regular fertilizer.

To be an AAS winner, flowers must show improvements over any similar existing cultivars (cultivated varieties). If grown from seeds, as most are, they must bloom that same year as when sown. So a few perennials that bloom the first year from sowing have won as well, such as the penstemon winner for this year.

In the past, the winners only were those that were deemed worthy across much of North America. While there are still these "national" winners, there are now regional winners as well — those performing particularly well in a particular region.

Celosia Asian Garden is a spiked type of cockscomb, two feet or more high, having bunches of narrow rose-pink flower spikes. It grows well in containers or garden beds, and is attractive to pollinators. Other benefits to this flower are its tolerance to drought, and use as a cut or dried

flower.

Dianthus Supra Pink joins its sister winner from 2006, Supra Purple. The unusual flowers, mottled in various shades of pink, have quite frilled petal tips. Flowers cover the bushy plant through the season on plants under one foot high. Although grown as an annual, it may overwinter in warmer regions.

Geranium Calliope Medium Dark Red forms a mounded, semi-spreading habit with velvety deep red flowers. It would be a good choice for landscape beds, containers, and hanging baskets. This is one of the two winners this year you'll need to buy as a small plant, not as seeds.

Penstemon Twizzle Purple is a perennial in zones 5 (-10 to -20F winter average minimum) and warmer, but will bloom in mid- to late summer the first year when grown from seeds. Sow in cell-packs or small pots six to eight weeks before the last frost and planting them outside. This native plant has one-inch tubular purple flowers on slender stalks, almost three feet high, which are attractive to pollinators. Although a winner this year in the Great Lakes and Southeast regions, it will grow elsewhere too.

Verbena Endurascape Pink Bicolor is another flower winner you'll need to buy as small plants, not seeds. Flowers are lighter pink at the tips, getting darker towards the centers. The habit is spreading, and 8 to 12 inches high. It tolerates not only drought and heat, but temperatures in fall into the low teens. Use it in masses, along walks, or in containers.

There are two vinca or annual periwinkle AAS winners this year—Mega Bloom Orchid Halo and Mega Bloom Pink. While the former has rich purple flowers with white "eyes" or centers, the latter has soft pink flowers with white centers. Plants keep a compact, dense habit one foot or so high, and begin flowering earlier than many vincas.

Zinnia Profusion Red is the fourth color to win the AAS award in this series. Profusion zinnias are notable for their compact form only one foot or so high, disease resistance, early and continuous bloom, and easy culture. The single flowers, up to two or more inches wide, are attractive to some pollinators.

Each year, the last five years of winners are displayed in about 200 official All-America Selections gardens across North America. If traveling this summer, make sure to look up which gardens may be near your route (all-americaselections.org/visit-an-aas-display-garden/). On the AAS website you'll also find the vegetable winners and their details.

Are Citrus Going The Way Of The Dodo?

By Larry Hodgson, The Laidback Gardener

World citrus production is under serious threat by a disease, citrus greening, also known as huánglóngbìng or HLB (the Chinese name means yellow dragon disease). It's caused by one of three closely-related bacteria, Candidatus Liberibacter asiaticus, C. L. africanus and C. L. americanus. If not controlled, citrus greening may well wipe out citrus production on a planetary scale.

It affects not only orange trees, but all citrus, including lemons, grapefruits and clementines, just to mention the best known. In fact, other plants of the citrus family, the Rutaceae, can also be infected and may even serve as a secondary host for the disease.

Bacteria can't spread from plant to plant on their own, however: they need a vector. In the case of citrus greening, it's a small jumping insect called the citrus psyllid. There are two species: the Asian citrus psyllid (Diaphorina citri) is prevalent in Asia, America and Oceania while the African citrus psyllid (Trioza erytreae) is most current in Africa. A secondary source of infestation comes from grafting a healthy citrus onto an infected one.

The bacteria is introduced into the plant when the psyllid pierces its young leaves and shoots. It then multiples and is carried throughout the tree via its vascular system, right down to its roots. Infested trees begin to produce branches with chlorotic leaves (yellow with green veins), a symptom that could easily be mistaken for a deficiency in iron or some other mineral. The tree's flowering also becomes sporadic and more flowers than usual abort.

Any fruits produced are small or deformed and don't ripen equally, often leaving a green section, hence the name citrus greening disease. To top things off, the fruits have a bitter taste. That means that not only are fruits unsaleable because of their appearance, but they can't even be used to make juice!

Detected for the first time in China in 1943, citrus greening disease has since spread all over the world. It was discovered in South Africa in 1947,

in Brazil in 2004, in Florida in 2005, in Mexico in 2009 and so on. It is now found all the continents except Antarctica. The first citrus greening infested tree was found in California in 2012. Citrus greening is now prevalent in every part of the world where citrus grow commercially except mainland Japan.

There is currently no treatment for a tree infested with citrus greening other than to destroy it (generally it is pulled out by heavy machinery, as the roots also have to be extracted, then the whole tree is burned).

Florida orange groves, once carpeted with symmetrical green plantings as far as the eye could see, now look like a patchwork mix of dead and dying trees, still green trees, and bare patches. More than 65,640 hectares of citrus production have been infected in Florida alone and orange production has fallen by almost two-thirds, from 242 million boxes in 2007 to an expected 89 million boxes in 2016 (the info count is not yet in). 75,000 Floridian citrus workers are out of a job. The price of oranges has skyrocketed, as has that of lemons, and grapefruits… and the price is expected to continue to climb over the years as more or more citrus trees are bulldozed and burned.

Since nothing can presently be done once a citrus tree is infected other than destroy it, treatment so far has mostly been limited to prevention and that means spraying insecticides to kill the psyllids that transmit the disease before they reach disease-free trees. As a result, the number of annual insecticide treatments needed to produce citrus fruit has increased from 3 to 8 in Floridian orange groves. Despite these treatments, the disease continues to spread (it takes only one psyllid that escapes treatment to start a new infestation), thus citrus production continues to plummet.

Of great concern are home gardeners with a citrus tree or two in their yard, a commonenough situation in most citrus-growing areas. They are less likely to notice the first symptoms of the disease and also less likely to want to destroy a tree that still seems fairly healthy. Home gardens thus become a reservoir for both psyllids and citrus greening disease.

Obviously, there is a lot of money is being invested in finding a cure for citrus greening.

A parasitic wasp, Tamarixa radiata, originally from Pakistan, has been found capable of controlling disease-carrying psyllids. In California, where the disease is not yet well established, more than one million of these wasps are released annually in an effort to nip infestation in the bud. Other predatory or parasitic insects are also being tested.

Researchers are also actively looking for any specimens of citrus that are naturally resistant to citrus greening disease. For years, none had been seen anywhere in the world, but the University of Florida's Citrus Research and Education Center announced in April 2016 that researcher Jude Grosser had found, among the thousands of conventional crosses he made, a single orange tree that appears citrus greening-resistant. Although infected with the bacteria for 5 years now, it has remained green and healthy and continues to produce abundantly. Seedlings grown from this "mother tree" have also been found to be resistant to the disease.

Other scientists are working on ways to effectively inject antibiotics (including penicillin) into affected trees, since citrus greening is a bacterial disease and bacteria are sensitive to antibiotics. One method being tested uses lasers to puncture mini-holes in the leaves through which the product can be injected.

It's already possible to genetically modify citrus trees by inserting into them a gene from another plant (to date, spinach and arabidopsis genes have been found effective), a treatment that provides strong resistance to the disease. Researchers are however concerned the public will not accept this kind of genetic manipulation, since the fear of GMOs (genetically modified organisms) is widespread, notably in Europe.

Another possibility would be to "switch off" the gene that causes the fatal reaction of citrus trees to the presence of citrus greening bacteria, thus giving a tree that would grow healthily despite the presence of the disease. This is done by genetic engineering and the concern is therefore that the population will consider such a plant a GMO and therefore unacceptable even though no gene transfer had taken place.

In conclusion, the citrus industry is in serious trouble and consumers are already being affected. You simply will not be able to find citrus fruits as readily in a few years, or if so, only at exorbitant prices, because even if an "effective solution" is found, it will take 20 years or more to implement.

Make sure you enjoy your next glass of orange juice: it may be your last!