



# Colorado Master Gardener's Garden Gate

The Newsletter of Adams & Broomfield Master Gardeners -- March 2023

## Welcome! by Cassey Anderson, Horticultural Specialist, Adams County

We are Adams and Broomfield County Colorado Master Gardeners.

With this newsletter we aim to provide simple, concise, and beautiful resources for you to help improve your plant related landscape, whether it be a porch with several pots or a large backyard with both vegetable and ornamental beds, or anything in between.  
We look forward to your readership!

If you have specific topics you'd love to see, please give us some feedback. This newsletter will be released quarterly, and we'll send it through email, post it on our website as well as through our social media networks, so you'll have ample ways to engage.

### Annie Costakis: An Introduction

My name is Annie Costakis and I'm thrilled to be the new CMG coordinator for Broomfield County! I come to CSU Extension from the world of elementary education. In 2017, I moved from Chicago to Denver to attend graduate school at the University of Denver, where I received a master's degree in Curriculum and Instruction. After a year of student-teaching in Denver Public Schools, I worked as a third grade teacher at an international school in Denver for two years. From 2020-2022, I taught third grade and kindergarten in St. Vrain Valley School District. I am passionate about education and connecting the community to research-based information. While I'm newer to horticulture, I'm very excited to learn all that I can about gardening. In my free time, I love hiking, cycling and birding. I look forward to meeting all of you and working together this year!

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**World of Roses**  
**In the Beginning There is Spring**  
**by Barbara Carvalho**

Rose growing season begins in April. Pruning and first feeding is done between April 15th and 30th. Owing to the onset of much warmer weather in spring, some rosarians are extending the pruning time frame to the first week in May.

Before you start pruning, remember to clean the ground around the rose thoroughly, removing all leaf debris. Diseases such as molds and fungi can overwinter on the previous year's leaves. Thinning the new growth from the base of the rose can prevent diseases such as rust.

Pruning is done in three stages. First, cut away all dead, dying and desiccated canes. Second, remove all spindly, broken or fragile canes, in addition to canes with evidence of insect and disease damage. These canes do not serve the vitality of the rose. Finally, prune the largest and strongest canes by cutting them on the diagonal, ¼ of an inch above an outward facing bud and away from the bud union. See attached photo courtesy of UC Agriculture and Natural Resources out of California.

Use rose, wood or water-soluble glue to seal the freshly cut ends of the canes. This prevents infestation by wood boring bees and other insects. The holes that result from the invasion of these insects are not only unsightly, but can cause harm to the rose. Cane death will occur as the holes develop. Danger to the life of the rose can result if insects enter too near the crown or graft of the shrub.

A first feeding of your preferred rose food should then be administered. Remember to follow the directions on your fertilizer. Roses should be watered well before and after feeding.



## Meet Pasque Flower

*Pulsatilla Vulgaris*  
 by Ruth Vazquez



This beauty is one of the first herbaceous perennials to greet us in the Spring! Thrives in a full sun xeric garden, growing to a soft mound about 10" high by 14" wide. (Shown here mixed with low Spruce branches.)

State Flower of South Dakota, hardy in zones 4-8. Can be found in blossom colors in a range of reds and even white "Alba" said to bloom later than the reds, and "Papageno", a mix of white/pink/dark red/violet and blue, with flowers that are fringed and semi-doubled.

Blooms keep coming out on this low mounding plant for a few weeks. Blooms go to seed as feathery pale fluffs that sway in the wind. Its light gray-green foliage is covered with soft, silvery hairs and has a presence in the garden until late fall. Come see this in the Xeric Garden, Section 9 at Riverdale Park & Fairgrounds.

What's not to like? OH. Do know that if you eat any parts of this plant, you will get a stomach ache. So don't eat it! Just enjoy looking at it!



# The Science of Gardening

## To Amend or Not to Amend By Kristin A. Moore, Ph.D.

As we move towards spring, many of us are starting to think about putting new green additions into our landscapes. The canonical wisdom has always been to dig your hole, place your plant, and back fill with amended (or “good”) soil. The logic behind this suggestion is that backfilling with amended soil will allow for robust root growth, especially in our often less than ideal Colorado soils, whether they are clay or sand. However, when planting perennial flowers, shrubs, or trees, the research on amending backfill tells a different story. Studies dating back to the 1960s have indicated that backfilling planting holes with amended soils, regardless of amendment type, either has no effect or negatively impacts plant establishment in the environment. Current best practices now recommend refilling planting holes with the native soil that was dug up to make the planting hole.

While this updated advice may seem counterintuitive to anyone who has tried to grow plants in Colorado soils, the science behind it is robust. There are several reasons why amended soils should be left to annual flower beds and vegetable gardens and away from your trees and shrubs. First, it’s not wrong to think that roots will grow better in better soil; they do. However, for perennial plants that can be a problem because the roots of the plant never leave the planting hole with the amended soil. This can lead to circling roots and shallowly rooted plants, which are more likely to fall over in our gusty Colorado winds. For a plant to establish it must have roots in the native soil. Second, anytime there is a change in soil type in our landscapes (termed a soil interface), it results in water not flowing efficiently from one soil type to the other. In planting holes this can result in either too much water being retained in the backfilled area or not enough entering the backfill from the native soil. Either situation can lead to a water-stressed plant. Lastly, some amendments can even restrict certain nutrients from plants, which then requires additional amending to replace the lost nutrients. All of these outcomes can make it harder, not easier, to establish perennial plants in our landscapes.

Soil amendments can be useful tools for integrating nutrients and organic compounds into soil, especially in planting areas that are continually being depleted of nutrients such as annual flower beds and vegetable gardens. However, the evidence doesn’t support their use when planting perennials, trees, and shrubs. The most important aspects of plant establishment are picking the correct plant for the selected location, utilizing effective planting strategies, and employing consistent irrigation (see resources below to learn more). Planting perennials can be hard enough, so save yourself that hassle and expense of amending your backfill and stick to our native clayey and sandy soils when planting those trees and shrubs.



[Recommended Tree List for the Front Range](#)

[Native Shrubs for Colorado Landscapes](#)

[Tree planting guidelines](#)

# Planning & Planting

## Spring Planting by Kim Poland

Spring is just around the corner, and it's time to awaken your inner gardener. Even if it's too soon to start planting in the ground, it's never too early to plan. Planning your garden is crucial to its success, and there are several factors to consider. First, think about where you want to plant your garden. Vegetables require at least six hours of sunlight a day, and they prefer early morning sunlight to the harsh afternoon sun. Other factors to consider include water runoff, wind, and pests. Check out this great Plant Talk on garden placement for more information: [Vegetable site tips](#)

Now that you've chosen the perfect spot for your garden, it's time to decide what to plant. Consider what you and your family like to eat and what you want to grow just for fun. You can start your plants from seed or purchase starters. If you choose to start from seed, make sure to buy them from a reputable supplier.

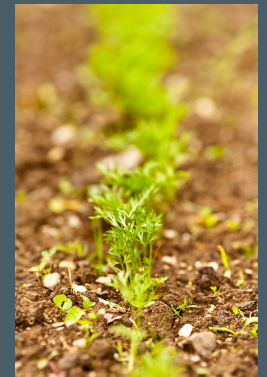
If you're interested in planting cool-season crops, the time is coming soon. Broccoli, peas, lettuce, onions, radishes, and others can survive a bit of frost and don't require a high soil temperature to germinate. You can direct sow them 2-4 weeks before the last frost, when the soil temperature is between 40-50 degrees Fahrenheit.

Starting seeds indoors is a great way to extend your growing season, but some crops prefer to be directly sowed into the garden. Tomatoes, broccoli, Brussels sprouts, onions, and peppers are examples of plants that need a longer growing season and benefit from starting indoors. Different plants require varying amounts of time indoors before the last frost until they are hardened off. Check out this helpful fact sheet to determine which plants to start indoors when, based on the last frost date for your area.

### [Growing Plants from Seed](#)

The *Grow and Give* program is an excellent way to share your harvest with those in need and make the most of your extra growing space. Connect with backyard and community gardeners and help those in our community who struggle with food insecurity. Visit [www.GrowAndGiveColorado.org](http://www.GrowAndGiveColorado.org) to learn more about the program and register your garden.

Stay tuned for our next newsletter when we get our hands dirty in the garden!





# Spring Pruning

## IT'S TREE PRUNING TIME!

by Ruth Vazquez



Prune to shape up trees now while they are in relative dormancy. If it's a big tree, get an Arborist: [Trees are Good](#) (official site of ISA - International Society of Arboriculture.) If you have a small tree, like a fruit tree or a young shade tree, why not try your hand at it! You know what they say, "when all else fails, read the directions!" So be wise and read this first: [Training & Pruning Fruit Trees](#)

**DON'T** do what I did! First tree I tried pruning, Apple tree, bare root, whip, planted beside a deck about four feet off the ground. Going to be so wonderful, apples ready for picking by just walking out onto the deck and plucking from over hanging branches. Little sapling began to put out branches. Yes! But wait –branches are too low! They will grow under the deck, or into the railings. I will prune. This branch has to go ... that one's not good ... soon all that was left was a single whip. Amazingly, the tree grew, putting out new growth at the top.



I love pruning and seeing a tree take shape over the years. But now I do it more wisely: Basically, shade trees and apple trees like having a central leader with side branches occurring 12" or more apart. As the tree grows, so will this interval between branches. Begin with taking out dead, broken or rubbing together branches. CSU Extension publications show how to cut a branch so that the wound heals itself and how to look at a tree with an eye to shaping it for a balance of branches around the tree. [Pruning Shade Trees](#) is what you want to read for best information about shade tree pruning. Good to know whether you or someone hired is pruning.

Can you prune after tree leaf-out? Well yes, sort of. You can take out obviously dead branches (see above publications for best way to make the cut.) You can always snip off small shoots to keep main branches looking clean and well defined. But don't take off main branches; leave those for winter dormancy work. And keep to the general rule of 25–30 % that can be safely pruned from a healthy tree.



If your tree has signs of disease, read these publications from CSU: [Fire Blight in Ornamental Trees & Shrubs](#) and [Cytospora Canker](#) .

For specific tree questions contact your local Extension office to talk to a Master Gardener. You can also email your local Extension Office to send photos with questions about your trees. See our last page for our local office information. You can also email CMGs may suggest scheduling a site visit from Master Gardeners to identify the tree and what may be the problem. \$25 to check out two trees.

Are your small trees still dormant when you read this? Then COURAGE! Grab your loppers and hand pruners and have fun shaping your trees to help them be the best and healthiest possible!

# Sustainability

By Betty Emanuele

The CMG State Program Coordinator & Director sent a survey to the general public last year, and sustainability was a topic of importance to those who responded.

So what is sustainability? When I searched the internet for definitions, what popped up first was that there were "about" 2,850,000,000 of them. And if you look at the statements on the right, it's obvious that its meaning changes depending on the word itself, what organization is using it, and the focus of the organizations.

I decided to conduct a very unscientific survey, asking people for their definition. A few are involved with CSU Extension, but the majority are not. Here's a sampling of their responses:

- To continuously keep doing something, but not especially endure, maintain, or grit teeth. There is some aspect that becomes more effortless...easier.
- Being kind to the earth.
- To keep going without additional resources, monitoring changes over time.
- Living within your means and preparing for the future.
- Energy must be applied to have sustain, and when that dissipates the sustain is gone.
- Maintaining a good balance between insects, plants, animals.
- Lowering environmental impact.
- By practicing something over time, we learn to sustain, but eventually it takes on a life of its own. I suppose that whatever is undertaken could take less effort but will always need support or oversight.
- It is difficult to separate "sustainability" in the context of self-sufficient production of quality nutritional food sources from that of nurturing one's physical and emotional well-being. In our world today, it is but a far off distant dream.
- Every given situation is going to have limits on sustainability. Environmental, people responsible, type of plants, etc.
- Not using pesticides to kill insects. Instead, plant flowers to entice them to come into your gardens.
- Using water wisely.

Now it's your turn. Please send **your** definitions of sustainability to Cassey Anderson at [cmanderson@adcogov.org](mailto:cmanderson@adcogov.org). Please put the word "**Sustainability**" in the subject line, so she will forward them to me. Your responses will remain anonymous, but I will share excerpts in my next article. Thank you in advance!

## Sustainability What is it?

The ability to be maintained at a certain rate or level.

Avoidance of the depletion of natural resources in order to maintain an ecological balance.

**Oxford Dictionary of English**

Sustainability is the balance between the environment, equity, and economy

**UCLA**

To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony to support present and future generations.

**US EPA**

Meeting the needs of the present without compromising the ability of future generations to meet their own needs.

**United Nations**

Sustainability is often thought of as a long-term goal (i.e. a more sustainable world), while sustainable development refers to the many processes and pathways to achieve it.

**UNESCO**

The quality of causing little or no damage to the environment and therefore able to continue for a long time.

The idea that goods and services should be produced in ways that do not use resources that cannot be replaced and that do not damage the environment.

**Cambridge Dictionary**

What does the term 'sustainable landscaping' mean? There are varying definitions but sustainable landscaping should include an attractive environment that is in balance with the local climate and requires minimal resource inputs, such as fertilizer, pesticides, gasoline, time, and water. Sustainable landscaping begins with an appropriate design that includes functional, cost efficient, visually pleasing, environmentally friendly and maintainable areas.

**CSU Extension**



# Meet the Newsletter Staff



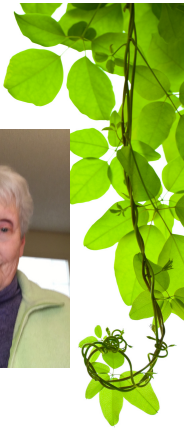
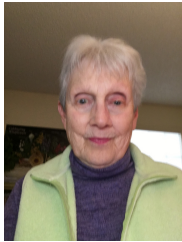
Hi there, I'm Kim Poland! I've been a part of the CSU Master Gardener program for seven years now! I actually joined the program on a whim with a friend because we both loved gardening and learning, and we thought, "Why not?" But little did I know, the program has given me much more than I anticipated. One of the best things about the program is the phenomenal knowledge I gain from my continuing education, but the most rewarding aspect for me is the community outreach.



Annie Costakis



Cassey Anderson has worked for CSU Extension for 10 years helping homeowners with their yard and garden issues. In her spare time she escapes to the mountains.



Ruth Vazquez, CMG since 2008. Landscape Designer first in Tennessee, now in Colorado. Avid learner of xeric gardening especially through working in our CMG Xeric Demonstration Garden.

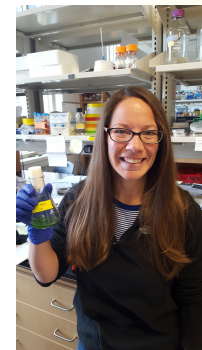


Barbara Carvallo has been a Master Gardener for 7 years. She is a founding member of the Adams County Master Gardener Rose Squad and a Consulting Rosarian for the American Rose Society. "There is simply the rose; it is perfect in every moment of its existence." Ralph Waldo Emerson



I've been a Master Gardener since 2014 and the best part is working with people at booths and clinics within the community. Horses, reading, and sewing are my other passions.  
Betty Emanuele

I am a second-year master gardener, who loves the science behind how plants grow and what makes them thrive. In my day job, I teach cell biology at the University of Colorado. I'm excited to be sharing the research behind the recommendations to Colorado gardeners through this newsletter.  
Kristin Moore



# Contact Information

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Ask a Master Gardener

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To become a Colorado Master Gardener:  
<https://cmg.extension.colostate.edu/>



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