



High on the Desert Cochise County Master Gardener Newsletter

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The University of Arizona and U.S. Department of Agriculture Cooperating

The Virtual Gardener—Ashes to Ashes

The other day a friend of mine asked me if she should use wood ashes as a soil amendment in her garden. She had collected several buckets full of ashes from her fireplace so far this winter and didn't want them to go to waste. Another gardener whom she had asked had given her an equivocal answer. My immediate and unequivocal answer to her question was, "No! Don't use them in your garden."

Why would I say that? Many gardening books recommend wood ashes as an amendment. Let's take a closer look at the reasoning behind my answer. First, what are wood ashes?

According to a [definition](#) given by the Cooperative Extension of the University of Georgia, wood ash is the inorganic and organic residue remaining after combustion of wood or unbleached wood fiber. Hardwoods usually produce more ashes than softwoods, leaving on average 6 to 10 percent ashes.

As trees grow, they take up minerals from the soil and many of the essential macro- and micronutrients required for plant growth are left behind in the ash, including the macronutrients calcium,

potassium, aluminum, magnesium, iron, phosphorus, manganese, sodium, and nitrogen, as well as a host of micronutrients. In addition to this rich smorgasbord of nutrients, the ashes also ought to loosen the soil and improve its texture and water-holding capabilities. So far, sounds good.

The problem is the nature of our soils here in the high desert. They are alkaline.

Many of those gardening books that recommend the use of wood ashes as a soil amendment are written for gardeners who live in the eastern United States, that is, east of the magical 100th meridian. As first noted in 1879 by the head of the U.S. Geological Survey, John Wesley Powell—yes, the same guy who first boated through the Grand Canyon—the 100th meridian roughly divides the continent into two climate regimes. In general, the continent east of that line receives sufficient rainfall to grow crops without irrigation. West of that line the rainfall is lower and crops must be irrigated. You can read about this in more detail in a Wikipedia [article](#).

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COLLEGE OF AGRICULTURE
AND LIFE SCIENCES
COOPERATIVE EXTENSION
Cochise County

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Areas east of the line generally have acidic soils because there is sufficient rainfall to leach calcium carbonate (CaCO_3) out of the upper layers of the soil. This reduces the pH of the soil, *i.e.*, makes it more acidic. In addition the higher level of rainfall results in more vegetation and higher microbial activity which in turn results in the addition of humus to the soil that further acidifies it.

Areas to the west of the line receive, on average, less than 20 inches of rainfall a year and have higher rates of evaporation. The predominant movement of water in the soil is upward rather than downward, and calcium carbonate is concentrated in the upper layers of the soil. Vegetation is less dense and microbial activity is lower. There is little, if any, accumulation of humus in the soil. All of this adds up to higher soil pH, *i.e.*, the soil becomes alkaline. For a more extensive discussion of soil and moisture regimes check out this [web page](#) from the University of Nebraska at Lincoln.

We in the high desert generally have soils that range in pH from about 7 (neutral) to 8.5 (highly alkaline). Wood ashes are not recommended for alkaline soils. And why is that, you ask?

Calcium carbonate makes up about 25 percent of the weight of wood ashes. That alone would be a strong argument against using ashes as a soil amendment since we already suffer a superabundance of calcium carbonate in our High Desert soils. But wait...it gets even worse.

Potash—potassium carbonate (K_2CO_3)—makes up about 10 percent of the weight of wood ashes. And guess what happens when you leach potash out of

ashes with water? You get lye, that very caustic, very alkaline stuff that our pioneer forefathers used to make soap. In fact, the word “potash” comes from the old practice of creating powdered potassium carbonate by leaching wood ashes with water, collecting the leachate in a pot, and allowing the water to evaporate leaving potassium carbonate (“pot ash”) as a residue.

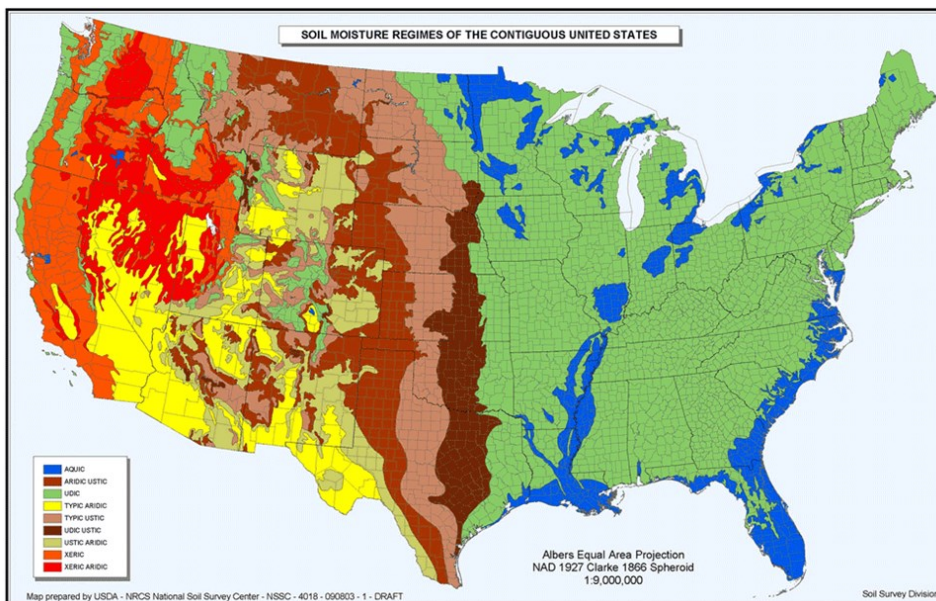
In fact, in the late 18th and early 19th centuries, potash production was a major cottage industry among early settlers. Clearing land for farms generated huge

numbers of cut trees to be disposed of. The easiest way to do this was to burn them and use the ashes to make lye which could either be used to make soap or dried into potash and sold. If you're interested, [Wikipedia](#) has more information on this topic.

So there you have it. Our soils in the High Desert of Southeast Arizona are generally highly alkaline. Wood ashes are also highly alkaline. Adding wood ashes to our soils only makes the problem worse.

Until next time, happy surfing.

Gary Gruenhagen, Master Gardener
virtualgardener@cox.net



U.S. soil moisture regimes, yellow/pale yellow/red/orange/orange brown = low moisture, peach/dark brown = moderate moisture, green/blue = high moisture. From [Univ of Nebraska, Lincoln](#).

2015 Master Gardener Class
begins January 28 from 10:00 AM—1:00 PM weekly.

**The Master Gardener
Program is first and fore-
most about education and
volunteer service.**



Cochise County Master
Gardener Newsletter Editor
Carolyn Gruenhagen

This Month In the High Desert Garden

There is Still Time Left For Yard Work (Aren't you Glad!)

(Editor's note: This article written by Bill Schulze was adapted from a February 2012 article published in the *Sierra Vista Herald*.)

First off, don't forget that the 22nd annual High Desert Gardening and Landscaping Conference is coming up on March 12 and 13, 2015 at Cochise College, Sierra Vista, AZ. Registration is available online on our website under Events. You can also call 520 458-8278, x 2141 for more information. This conference is a great place to learn about gardening, landscaping, and the environment, plus you'll meet many fellow gardening enthusiasts.

OK, so it's February and you still haven't finished your yard maintenance yet? Shame, shame, shame! Well, I guess I can't be too critical, my yard work isn't done, either—my motto: Always put off until tomorrow everything that you can. The good news, though, is that there is still time to get things done while the weather remains cool. You need to weigh the sweet joy of procrastination against the reality of doing heavy duty yard work in the heat of June and July. In that light, appropriate tasks for this month would include clearing weeds and other garden and yard debris and performing routine maintenance on yard tools and machines. That means changing oil, sharpening blades, repairing or replacing broken tools, and repairing leaky or plugged irrigation lines. Also, improve your garden or raised bed soil for spring planting, install irrigation systems, and remove old mulches and replace them with fresh mulch. The list is endless, eh? But it'll be great when it's done!

February is a good time to prune trees since the key to successful pruning is to do it while the trees are dormant. For a good discussion of proper pruning techniques for fruit trees, see this website: <http://ag.arizona.edu/pubs/garden/mg/pruning/fruit.html>. For instructions on pruning landscape trees, check out this link: <http://ag.arizona.edu/pubs/garden/az1139.pdf>.

A good general rule for pruning guidance is to always remove a limb or twig all the way back to its source at a branch or the tree's trunk. If you've ever seen a mulberry tree that had its large branches cut back to one or two foot stubs and now looks like Medusa's head, you can understand why partially shortening limbs is not a good pruning technique.

Don't forget to water your trees and shrubs periodically, say every four to six weeks during this cool weather. Pardon my repetitiousness, but remember the mantra—water low and slow. Water to a depth of two and a half to three feet for big trees and eighteen inches to two feet for shrubs and bushes. Water in the area of the drip line of the tree, not next to the trunk. The tree's absorbing roots are farther out from its trunk—from before the drip line where the tree sheds rainwater extending out sometimes as much as two times the size of the crown. Pick up a soil probe for just \$5 from the good folks at Water Wise so you'll be able to accurately judge just how deeply you've watered.

It's still a great time to plant all kinds of bare-root plants, from fruit and landscape trees to berries and roses. As for pruning roses, it's best to hold off on this until later in Feb-

ruary or even early March. Continue planting cool weather vegetables like beets, carrots, lettuces and other greens like kale and Swiss chard, radishes, broccoli, cauliflower, and cabbage. For annual flowers, petunias and pansies are still good choices. Pansy blossoms are edible and really perk up a green salad.

Winter is a good time to give some thought to plans for your garden and landscaping. Consider water use as a critical factor when selecting new plants. There is an excellent list of appropriate plants on our website at: <http://ag.arizona.edu/cochise/mg/PlantLists.htm>. It's entitled *Recommended Plants for Sierra Vista* and it's very extensive. It may say "Sierra Vista" in the title, but it's an appropriate guide for most of the high desert regions of Cochise County and the southwestern US. Give it a good look!

As many of you know by now, Sierra Vista has a community garden. If you are interested in helping with this project or if you'd like to garden in the community garden yourself, visit their web site at:

www.svcommunitygardens.com

It's fun, healthy, and rewarding to grow your own food!

Remember, if you need gardening help, see our website:

<http://ag.arizona.edu/cochise/mg/>.

You can read our monthly newsletter there and pick up a lot of great gardening tips and information. Ask a Master Gardener a question via the online link or call 520 458-8278, x 2176.

Happy Gardening!

Bill Schulze, Master Gardener

Cuttings 'N' Clippings

✿ No public meeting of CCMGA is currently scheduled.

✿ The next free Water Wise presentation will be **Saturday, February 14, 9:30-11:00 a.m.** as a *Do-It-Yourself Drip Irrigation Clinic*. This will be a hands-on practice with cutting pipe, inserting emitters, and connection parts and pieces. C-A-L Ranch Store will have special offers for clinic attendees! The Presenter will be Steve Poe, PhD. UA Extension Specialist and the **Location** will be the C-A-L Ranch Store, 678 Hwy 90 (in the old Walmart Store), Sierra Vista, AZ.

Watch for the Water Wise 2015 schedule on their web site:

waterwise.arizona.edu

For more information: (520) 458-8278, Ext 2141, or contact Valerie at:

valeriedavidson@email.arizona.edu

✿ The 22nd Annual High Desert Gardening & Landscaping Conference will be held at Cochise College, Sierra Vista. Mark your calendars for March 12 & 13 for a rewarding experience! Conference Agenda and Registration are now available on the Master Gardener web site.

February Reminders

- ♦ Winter prune
- ♦ Prune roses
- ♦ Cold-moist stratify seeds
- ♦ Plant bare-root trees
- ♦ Prepare spring planting beds
- ♦ Clean and repair drip irrigation systems
- ♦ Finalize spring garden plans
- ♦ Keep watering!



The Arizona Native Plant Society Cochise Chapter



Did You Know . . .

There is a Cochise County Chapter of the Arizona Native Plant Society? They meet monthly on the 3rd Friday of each month, from September through May, at 5:00 PM in the Cochise County Community Development Office conference room, 4001 Foothills Dr. (corner of Highway 92 and Foothills), Sierra Vista.

Friday, February 20, 2015: Steve Buckley, University of Arizona and the National Park Service, *Seed Collection in the Madrean Archipelago*.

Steve Buckley is involved with botanical research at the University of Arizona and the National Park Service. The collection of native seed to support restoration efforts is of increasing importance as numerous ecological stressors impact public lands. Widespread and systematic seed collection broadly samples the genetic diversity that is critical for effective restoration strategies, especially in the face of climate change. Crews across the Madrean Archipelago are collecting seed for restoration efforts on both agency and private lands with high conservation value. Seed collection directly translates into more flexibility for land managers in how they design restoration treatments because it expands the availability of plant materials.

For information contact Doug Ripley, President, Cochise Chapter, Arizona Native Plant Society, 520-909-3132 or <http://www.aznps.com/>

Ask a Master Gardener

Cochise County Master Gardeners are available to answer your gardening questions either by telephone call to the Cooperative Extension Office or on-line on our web site at:

<http://ag.arizona.edu/cochise/mg/question.htm>

At a Glance Box

It's a Bloomin' Cochise County Native Plant of the Month

Plant: Seedlings

Description: Weed or not? Newly emerging seedlings may be wildflowers!

Use: When positively identified, choose to keep it or not.

Culture: Let it live where it has seeded.

Learn more: Cochise County Herbarium, www.cochisecountyherbarium.org

For an in-depth article, see below.

Cado Daily

Water Resources Coordinator, Water Wise Program

University of Arizona Cochise County Cooperative Extension

Weed or Wildflower?

With this warm weather and longer days it is easy to think about spring coming soon. Some late-winter, early-spring plants are already starting to pop up such as the London Rocket mustard and Cheeseweed mallow. Right now, my *Dalea greggii* (Trailing indigobush) is blooming attracting a cloud of butterflies.



But what Cochise County native plant is blooming now? Nothing showy that I have seen

but it made me think about the bloomin' Cochise County plants to come—if we let them. This thought brings up the age-old question, “What is a weed?” My answer is, know before you pull. Time and time again, I have found a plant I thought might be a weed turned out to be something spectacular, like a brilliant white evening primrose or a pink devil's claw.

Certainly, there are plants to be pulled, but if you want to encourage wildflowers, take a close look at the immature plant before you decide to pull or not. Some immature plants look very similar such as the nasty puncture vine and the beautiful Arizona caltrop. Each are in the *Caltrop* family, *Zygophyllaceae*, and are prostrate plants with small leaves, but in the spring, the puncture vine will bloom with a ½” yellow flower well before the Arizona caltrop blooms out in the summer with its beautiful orange flowers.

Waiting before weeding is actually quite fun. It makes us pay more attention to what is happening in our landscapes and in the natural world around us. I live on the outskirts of town so I enjoy a natural landscape, but there is a spot in my yard where I allow “weeds” to grow until I know if it is something I want to encourage or not.

I tend to pull introduced plants that I know get out of hand like some of the mustards—the London Rocket (*Sisymbrium irio*) and pepperweed (*Lepidium spp.*). However, I am not a purest. Where there are few plants, I let whatever is there grow because they provide some food for insects, they break up the soil and reduce erosion. They can even serve as nursery plants for more desirable plants. I would rather have plants (preferably natives) provide habitat for wildlife than no plants at all. I do get very excited when I see around the base of last year's plant I allowed go to seed, some very tiny green leaves working their way out of the leaf litter.

Discriminate weeding also brings up a philosophy that Mimi Kamp (co-author of some of these Bloomin' articles) and I call a “corridor of conveyance.” This is simply allowing natural areas to exist that are connected so wildlife, whether it be bees, birds, mammals, and other animals can travel between places. With so many natural areas now populated with homes, we may not realize

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Economic Development & Extension, College of Agriculture and Life Sciences, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities.

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(Weed and Wildflowers continued from page 5)
that we have broken up habitats and interfered with the corridors that previously allowed wildlife to forage and find shelter as they move from place to place. If we can help, just a little bit, by allowing some wild plants to grow, bloom and go to seed, then we have become part of the habitat.

So let's have a bloomin' Cochise County plant extravaganza this year with the rich wildlife it supports, and take pause before we pull or spray—it may just be that the lovely desert zinnia you have been hoping to have, has finally taken root.

Cado Daily, M.A.
Water Resources Coordinator

High on the Desert

Register now for the 22nd
Annual High Desert
Gardening & Landscaping
Conference [here:](#)



**Cochise County Master Gardeners Association in Conjunction with
The University of Arizona Cooperative Extension presents . . .**



**The 22nd Annual
High Desert Gardening &
Landscaping Conference**

High on the Desert



**March 12 & 13, 2015
Cochise College
Sierra Vista, Arizona**

An educational experience for everyone with an interest in gardening. For information contact U of A Cooperative Extension 1140 N. Colombo, Sierra Vista, AZ (520) 458-8278, Ext. 2141. www.ag.arizona.edu/cochise/mg/events.htm A registration fee is required. The fee is \$65.00 for one day or \$100.00 for two days (\$125.00 after February 15), which includes a hot breakfast and lunch both days. Scholarships are available. Registration begins early January and ends March 6.
