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[www.ext.colostate.edu/sam](http://www.ext.colostate.edu/sam)

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## Caution on Compost . . . Can It Be Too Much of a Good Thing?

By Patti O'Neal, Jefferson County Extension Horticulture & Master Gardener Program Coordinator

Amend, amend, and amend. It is the mantra we all chant when managing our Colorado soils. We here at CSU are constantly recommending that you add organic materials to your soils to improve water and nutrient holding capacity if you garden in sandy, gravelly or decomposed granite soils and to improve soil structure, drainage and filtration of water and nutrients in clay soils. Improving the soil

is still important for good plant growth and production of fruit and flowers.

But can you have too much of a good thing? Much is being made, and justifiably so, of phosphates these days and their adverse effect on our ground-water supplies. As a result many states are adopting laws to prevent the addition of phosphates to many products for household and outdoor use.

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## Caution on Compost continued from page 1

It is very likely that one day we will see the content of our fertilizers change as a result of these laws, and hopefully the labeling of our compost products so we know what we are getting. As with all gardening products, look for the OMRI seal. The Organic Materials Review Institute is a non-profit organization that certifies gardening products as being truly organic. The exception is seeds, which become food, so are under the auspices of USDA and therefore will have the USDA Certified Organic symbol on them.

First of all, let's clarify what landscape soils on the Front Range contain, for the most part. Though varied in textures, our soils have a good mineral and plant available nutrient content. Plant available nitrogen and iron are the only properties that we lack in sufficient quantities. With that said, let's look at the results of a recent study performed at CSU through the Department of Horticulture and Landscape Architecture and the Soil, Water and Plant Testing Laboratory. The study used randomly selected bagged compost products which were analyzed for plant based nutrients.

Here are some of the significant results of the study and recommendations for how we should use them. The results of this study do not reflect either an endorsement or a condemnation of any particular product.

\*Chemical properties of a given product may vary from bag to bag, both within a season and from year to year. The analysis represents just a "snap shot" in time, and does not represent a definitive assessment of any particular product.

\*Composted manure products tend to be very salty, and often contain high concentrations of plant available nutrients.

\*Nearly all the products analyzed, both plant and animal based, contained 2-15 times more plant-available phosphorous and 3 to 110 times

more plant available potassium, than are needed for good plant growth.

\*Plant available nitrogen contents were highly variable in the products analyzed. Some contained nitrogen in nearly entirely organic form and contained little if any plant available nitrogen while others contained very high to excessive plant available nitrogen in ammonium and nitrate forms.

The moral of the story is that you may be doing something you believe to be wonderful for your soil, when in fact, you are not. You may believe you are gardening completely organically, when in fact, you are not.

Oh great, you say? So now what am I supposed to do? The good news is that there are several things you can do.

\*First, be conservative in the amount of organic amendment you apply.

No more than 2-3" of plant based compost mixed into the top 6-8" of soil or 1" of manure based compost worked into 8" of soil (especially if the salinity of the product is not known).

\*Leach an organic product before use to help lower salinity.

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## Caution on Compost continued from page 1

\*Use mulch as directed to conserve organic matter by lessening irrigation needed. The more you conserve, the less you need to add in subsequent years.

\*Try using green manure instead (cover crops like buckwheat, winter rye or vetch) to improve the organic matter in areas where it is practical to do so like the vegetable garden.

\*Make sure that there is a certified organic seal on any organic product that you purchase to insure that the contents are genuinely organic.

Probably the single best thing you can do is to make your own homemade plant based compost. This way you are assured of what goes in and what will come out. Amendments are a good thing if used with discretion. Until the labels are legally mandated, use caution and good sense for best results.

More info on composting at  
[www.ext.colostate.edu/mg/gardennotes/246.html](http://www.ext.colostate.edu/mg/gardennotes/246.html)

## Annual Farm Fresh Directory Available Now!

By Wendy White, Colorado Department of Agriculture

The sights, sounds and smells of summer are here as is the annual Colorado Farm Fresh Directory. The Colorado Department of Agriculture publication helps consumers find farmers' markets, roadside stands, u-picks, wineries and agritourism activities. Farm Fresh includes farms that offer tours, restaurants using local ingredients, corn mazes, pumpkin patches and farm and ranch vacations. In addition, the free directory includes county fairs, a crop calendar, food and agricultural festivals and tips for picking Colorado produce.

The directory is available for free at participating libraries, chambers of commerce, welcome centers, visitor centers, CSU Extension offices and other businesses as well as online at

[www.colorado.gov/cs/Satellite/ag\\_Markets/CBON/1251599403767](http://www.colorado.gov/cs/Satellite/ag_Markets/CBON/1251599403767)



**Vetch cover crop can be grown to improve soil organic matter.**

Photo source: [www.mnn.com](http://www.mnn.com)



## Pollinators: Everyone Needs a Home

By The Xerces Society

After adding nectar and pollen sources to our landscapes, we can turn our attention to homes for bees and food for larval butterflies.

Bees nest in a myriad of places that most people simply overlook. Ground-nesting bees will be digging into soils on south-facing slopes and yards, where the sun helps warm and dry the soil. Tunnel-nesting bees may be burrowing their way into broken pithy stems of elderberry or raspberry, not to mention seeking out abandoned beetle tunnels in dead branches or hollow tomato stakes in your garden. Bumble bees may appear unexpectedly in lawns or under rock piles where small rodents once nested. All of these natural gems are worth looking for as you walk through your neighborhood, or across your farm.

However, you can give these same pollinators a leg up by taking a few simple steps. If you are growing plants -- especially shrubs -- with pithy stems, cut them back a bit to reveal the soft pith of the stems and then watch over the next year or two for the pith to be removed, a sign of bees moving in.

You can also bundle stems for other tunnel-nesting bees, drill holes in a block of lumber, or build brush piles or rock piles where bumble bees and other wild-



**Some bees build nests in pithy stems.**

Photo source: [www.Xercessociety.org](http://www.Xercessociety.org)

life may take up residence.

There are many easy and fun ideas for how you can create nest sites for bees at [www.xerces.org/providing-nest-sites-for-pollinators/](http://www.xerces.org/providing-nest-sites-for-pollinators/)

And, don't forget egg-laying opportunities for our butterflies. The butterfly experts we work with are concerned about the declines that they have seen in even common butterflies over the past few years.



**Milkweed is the host plant for Monarch butterflies and also provides nectar for bees, butterflies, and other beneficial insects.**

Photo source: [www.Xercessociety.org](http://www.Xercessociety.org)

Plant flowers that both you and the butterflies would love to have in your garden.

*Host Plants for Butterflies* is a fact sheet that gives simple information about butterfly gardening at [www.xerces.org/wp-content/uploads/2008/11/butterfly\\_gardening\\_fact\\_sheet\\_xerces\\_society.pdf](http://www.xerces.org/wp-content/uploads/2008/11/butterfly_gardening_fact_sheet_xerces_society.pdf)

For a list of plants in which bees will make nests visit [www.wildflower.org/collections/collection.php?collection=xerces\\_nesting](http://www.wildflower.org/collections/collection.php?collection=xerces_nesting)

To discover more ways to support pollinators, including ideas for creating a bee garden in your own community, visit [www.xerces.org/bringbackthepollinators/](http://www.xerces.org/bringbackthepollinators/)

## Animal Welfare Approved Label

By Beth Spitler

Demand for high-welfare, sustainable food is at an all-time high, as consumers seek meat, eggs and dairy products that are not only healthful, but produced with animal welfare and the environment in mind.



**Ming Adams' Canyon of the Ancients Ranch in Cortez, CO is Animal Welfare Approved.**

Established in 2006, Animal Welfare Approved (AWA) is an independent, nonprofit farm certification program. AWA audits, certifies, and supports farmers across the U.S. and Canada who raise livestock outdoors on pasture or range, using truly sustainable agriculture methods.

The AWA program is only open to independent family farmers who own their animals and who are responsible for their day-to-day management and care. Unlike most farm certifications, AWA doesn't charge farmers a single cent to participate in the program.

AWA's trained auditors visit every farm in the program at least once a year to verify the farm is meeting their standards. The audit involves a detailed review of farm records and a physical assessment of the welfare and condition of the animals and the farm environment. AWA is one of only two

certifiers in the U.S. to require audited, high-welfare slaughter practices, and the *only* label to require pasture access for all animals. Once approved, farmers can use the AWA logo to add value and differentiate their products in the marketplace.

If you're an independent family farm and you care about animal welfare, human health and the planet, read our farm standards to insure they are consistent with your practices and values—then get in touch. Your AWA regional contact is Beth Spitler:

call **(510) 250-0916** or email

**[beth.spitler@animalwelfareapproved.org](mailto:beth.spitler@animalwelfareapproved.org)**.

For more information, visit

**[AnimalWelfareApproved.org](http://AnimalWelfareApproved.org)**

### **AWA's Good Husbandry Grants:**

AWA offers grants of up to \$5,000 for projects to improve animal welfare. Applications are typically open to AWA farmers and those who have applied to join the program, as well as slaughter plants working with or seeking to work with AWA farmers. Farmers can submit a grant application and AWA farm application at the same time.

**Details and application information for the 2014-2015 grants cycle will be announced this summer.** Interested? Sign up for our free monthly e-news briefing to stay posted.

For more information, visit

**[www.AnimalWelfareApproved.org/farmers/grants-for-farmers](http://www.AnimalWelfareApproved.org/farmers/grants-for-farmers)** or contact AWA's Grants Coordinator, Emily Lancaster Moose, at **(202) 618-4497** or

**[Emily@AnimalWelfareApproved.org](mailto:Emily@AnimalWelfareApproved.org)**.





## Goats For Weed Control

By Jennifer Cook, Small Acreage Management Coordinator, NRCS/CSU Extension

Goats eat a wide variety of weeds, forbs, shrubs, and use their nimble legs to reach up to 6 feet to eat vegetation from trees. Using goats for weed bio-control can be a more sustainable alternative than the use of chemicals, but the timing and management of grazing must be done properly. Without good fencing and good management, goats can be a disaster rather than a helpful tool.

I recently spoke with the owner of Ewe4ic Ecological Services, Lani Maimberg, who has a herd of 1,500 cashmere goats which she uses for weed control projects. Lani mentioned using goats for weed control is a very goal-oriented approach. Prescribed grazing utilizes grazing animals, in this case goats, to manipulate forage in such a way that we can accomplish a set of objectives such as controlling noxious weeds, reducing wildfire hazard, rangeland improvement, riparian management, and/or improving wildlife habitat.

Goats are browsers and eat many non-grass plants. When managing for weed control in an area, goats can graze the flowers and leaves of weeds. After being grazed, a weed becomes stressed and is forced to use its root carbohydrate reserves. With repeated defoliation (grazings), the plant is unable to photosynthesize or produce seed, and chances for mortality greatly increase. Plus, while goats are grazing, they enhance the soil because everything they eat is then recycled as fertilizer back on to the soil.

Proper timing of grazing and often multiple years of grazing are needed in order for goats to control brush and weeds. Some perennial noxious weeds like Canada thistle or leafy spurge may take multiple grazings per year, over multiple years, to reduce the weed infestation.

Many factors affect whether a goat will eat the targeted weed or plant species. Goats will eat different plant species at different times of the year and at

different locations. Young goats may prefer different plant species than older goats as well. A successful weed-eating goat herd must not be fussy about what they eat, and is made up of various sizes and ages. When there are fewer goats, fewer weeds will be consumed, so a high stocking rate for a short amount of time would be more effective.

Goats have also been successful when used to create fuelbreaks to reduce wildfire. Other studies have shown that grazing goats can effectively keep oak brush and Russian olive sprouts defoliated to clear



**Goats eating oak brush.**

Photo source: [www.livestockforlandscapes.com/goats.htm](http://www.livestockforlandscapes.com/goats.htm)

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## Goats Eat Weeds continued from page 6

an area for pasture, wildlife habitat, or better riparian management.

In a study by Utah State University, goats were confined to areas of dense oak brush (a.k.a. gamble oak or scrub oak) and were allowed to browse the low growing branches. A wildfire swept through the area the very next summer and the grazed area was left unburned, proving how effective the goats were.

Kathy Voth, owner of Livestock for Landscapes, has shown that goats may be effective in wildland urban interfaces and in pine forest and sagebrush communities, along with prescribed burning. She has produced a CD handbook that includes how to start and manage a herd, creating a fuel management plan, help in determining whether a particular area is a likely place for goat management, and more available at [www.livestockforlandscapes.com/](http://www.livestockforlandscapes.com/)

Although goats aren't the first tool we think of when faced with weed problems, when managed and timed well, goats can work wonders on weed infestations.

### Resources and More Information:

Goats for Vegetation Management, Langston University  
[www.luresext.edu/goats/training/vegetation.html#goatin](http://www.luresext.edu/goats/training/vegetation.html#goatin)

Successfully Controlling Noxious Weeds With Goats  
[http://www.beyondpesticides.org/weeds/publications/Goat\\_weed\\_management.pdf](http://www.beyondpesticides.org/weeds/publications/Goat_weed_management.pdf)

Sheep and Goats: Ecologic Tools for the 21<sup>st</sup> Century, Utah State University Extension  
[http://extension.usu.edu/files/publications/factsheet/AG\\_Sheep\\_2004-01.pdf](http://extension.usu.edu/files/publications/factsheet/AG_Sheep_2004-01.pdf)

Prevent or Reduce Fire with Goats  
[http://www.firescience.gov/projects/briefs/99-1-3-02\\_FSBrief34.pdf](http://www.firescience.gov/projects/briefs/99-1-3-02_FSBrief34.pdf)

Ewe4ic Ecological Services  
[www.goatseatweeds.com/](http://www.goatseatweeds.com/)

### Weeds Goats Like to Eat:

Canada thistle  
Cheat grass  
Common candy  
Common mullein  
Dalmatian toad flax  
Dandelions  
Downy brome  
Indian tobacco  
Knapweeds  
Larkspur  
Leafy spurge  
Loco weed  
Musk thistle  
Oxide daisy  
Plumeless thistle  
Poison hemlock  
Purple loostrife  
Scotch thistle  
Snapweed  
Sweet clover  
Yellow star thistle  
Yucca



**Leafy spurge**

## 'Faces of Energy' Photo Contest!

Colorado has it all! Sun, wind, water, oil, gas, coal, minerals and a rich cultural history associated with energy production and use. We'd like to capture our collective energy story in a series of photographs for a unique traveling exhibit. We are looking for visually intriguing snapshots of energy extraction, generation, transmission, infrastructure, workers, consumption, conservation, and more.

Photos must include at least one person - although people do not have to be the focal point. Be prepared to submit a brief description that explains the significance of the photo to either you, your family, your community, the region, the state, the nation, or the world. For more information visit [www.ext.colostate.edu/facesofenergy/index.html](http://www.ext.colostate.edu/facesofenergy/index.html)



### Livestock Disaster Training

**August 22**

**6:30 - 7:30 pm**

**Longmont, CO**

Join Extension agent Sharon Bokan, in the Natural Resources Building at the Boulder County Fairgrounds (9595 Nelson Rd., NE corner of Nelson and 95th) in learning how to be prepared during the next disaster with your livestock (fire, flood, drought, etc). This class is in conjunction with the Colorado Spirit Flood Recovery Group. Please RSVP to Sharon Bokan 303-678-6176 or [sbokan@bouldercounty.org](mailto:sbokan@bouldercounty.org)

### Douglas County Farm Tour

**August 23, 2014**

**8:30 am – 3 pm MT**

Participants will ride in vans to tour multiple farm locations:

- Soil pit will allow participants to see deep layers of soil below the ground as NRCS soil scientist, Andy Steinert, leads a talk about soils
- Rotational grazing system
- Established windbreak and talk about tree planting
- Grass seeding demonstration and seeding discussion

Lunch is included. Meeting location will be at the Douglas County Fairgrounds Extension building, 410 Fairgrounds Rd, Castle Rock, CO 80104

To register click here: [http://](http://www.ext.colostate.edu/sam/soil-program.html)

[www.ext.colostate.edu/sam/soil-program.html](http://www.ext.colostate.edu/sam/soil-program.html)

Contact Joe Julian at [jjulian@douglas.co.us](mailto:jjulian@douglas.co.us) 720-733-6951 or Pam Brewster

[pam.brewster@co.nacdn.net](mailto:pam.brewster@co.nacdn.net) 303-688-3042 ext.100





## Small Acreage Weed ID and Control Workshop

August 26, 2014

5:30 – 8:30 p.m.

Longmont, CO

*The focus of the workshop will be to address weed problems that currently exist on small acreage properties, not backyards.* This will include noxious and troublesome weeds that are common to small acreage properties. The goal of the workshop is to provide the landowner with the tools needed to develop an Integrated Weed Management Plan (IWMP) using sound integrated weed control strategies. Identifying the weed species is the first step in weed management. You are encouraged to bring your weed samples to the seminars for proper identification. Once a weed is identified, the 4 weed control strategies (cultural, biological, mechanical and chemical) can be tailored to your situation. The Weed Management Workshop is hosted by a partnership between Colorado State University Extension and Boulder County Parks and Open Space.

**Cost:** \$10/person/workshop

**Location:** Boulder County Fairgrounds, Natural Resources Bldg., 9595 Nelson Rd.

**Registration:** Register online at <http://csu-extension-boco-weeds.eventbrite.com>



For a list of upcoming events in your area  
visit CSU Extension Small Acreage  
Management website

[www.ext.colostate.edu/sam/](http://www.ext.colostate.edu/sam/)



Colorado State University Extension and U.S. Department of Agriculture programs are available to all without discrimination. Colorado State University Extension, U.S. Department of Agriculture and Colorado counties cooperating.