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Ag Tour to Spain November 26th thru December 8th

Join Pueblo County Extension Director Michael Fisher and Horticulture Coordinator Sherie Caffey as they explore both the agriculture and the history of Spain's Andalusian region. They have planned a diverse tour with stops ranging from seed and grafting propagation to greenhouse vegetable production. You'll learn about olive oil production and marketing, avocado exports, and fruit production in Spain. Our group will have the opportunity to look at how a cotton cooperative has spread their risk by di-

versifying into tomato concentrate production and the cut flower business, marketing over 70 million carnations annually. Some of Spain's famous equine and cattle operations are going to open their gates & barns for our group to learn about livestock production in the region. And of course our travel group will have the opportunity to experience the tastes of the region both through our meals and planned stops where we will learn about cheese, honey, and wine

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production. In addition to all of this, our group will be exposed to Spain's culture and history with visits ranging from gardens to architecture, cathedrals to palaces, and fountains to a Flamenco show.

The group will fly out of Denver on November 26, 2017 and return to Denver on December 8, 2017. Cost of the trip is \$3,865 per person, based on double occupancy. (This price includes airfare, lodging, ground transportation in Spain, English speaking tour guide, and part of your meals.) On the trip's website there is pricing for those wanting to add a supplement for a single room and those who wish to make their own airfare arrangements.

The planned itinerary, details about what is included in the trip, and a contact form for registering for the trip can be found online at <http://worldwide.on.ca/pueblo2017/>.

This is a unique opportunity to get to see and learn about agricultural production in another country, while also being able to experience some of the historic landmarks and culture that has survived for centuries in Spain. The tour group size is limited to twenty-four participants, so get signed up for this ag and history tour of Southern Spain now.



New Small Acreage Specialist for San Luis and Arkansas Valleys

Kara Harders is our newest small acreage management coordinator. Kara is located in Cañon City and will support small acreage landowners in the San Luis and Arkansas Valleys. Originally from Colorado, she is very excited to be back. In the past Kara has done farming and ranching work, primarily with field crops, pastures, cattle, and horses. She also has experience raising poultry, goats, sheep, pigs, and rabbits. Contact Kara at kara.harders@colostate.edu or 970-219-9903.





Follow Us on Instagram @co_sam_team

The Small Acreage Management team has created an Instagram account to share the everyday topics that are effecting the properties we work with and on. We will be posting everything from seasonal task reminders to weed identification and animal care tips. We hope you all get a chance to use the account and see what we are up to!

Follow us at @co_sam_team.

If you don't have an Instagram account you can download the app from the Play Store (Android) or the App Store (iPhone).



co_sam_team Found some Spiny sowthistle today! This is a non-native weed, and a summer annual.

Sustainable Landscaping Can Save Money and Time

By Barbara Doe Fahey, Natural Resources Agent, Jefferson County Extension Agent and founder of Native Plant Master® program

The challenge of gardening in Colorado is finding plant materials that are adapted to the state's droughts, clay or alkaline soils, unseasonal snows and winds. Native plants are excellent choices because they are naturally adapted to these challenging conditions.

Natives offer gardeners and designers the opportunity to create a colorful addition to their landscape that can be durable and require less water and maintenance.

The trick to saving money and time with natives is to site them in conditions that approximate where they occur in their natural habitat. For example, planting the native ponderosa pine on a property in the Foothills where they occur naturally will be a sustainable choice because once established, the pine will need no additional water. However, if the native Colorado blue spruce is planted on a property on the High Plains where it doesn't occur in nature, it will require additional water throughout its life.

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Another benefit of using natives in the landscape is they provide habitat for native wildlife and pollinators. Many people enjoy attracting such Colorado icons as native hummingbirds, bees and butterflies to their garden.

Besides being beautiful, native birds and insects play the critical role of pollination in native ecosystems. By providing habitat for native pollinators, gardeners are supporting the natural landscapes that are a big reason many residents love our state. According to Irene Shonle, CSU Extension native plant expert, "To support a range of these flying beauties, plant a variety of native plants across many families (sunflower, parsley, milkweed, willow, etc.)."

Create Your Own Model Native Plant Garden Webinar September 17, 2017

This webinar will be presented by Deryn Davidson, CSU Horticulture agent. Register for the webinar and other classes offered by the Metro to Mountain Native Plant Master program at <http://npm.eventbrite.com>.

Resources for Landscaping Your CO Property

[Native Trees for CO Landscapes](#)

[Native Herbaceous Perennials for CO Landscapes](#)

[Native Shrubs for CO Landscapes](#)



Rocky Mountain penstemon

The Tao of Mow

By Cary Weiner, CSU Extension Energy Specialist

Grass growing – and mowing – season is here. And with that comes the pesky question of how to mow efficiently and effectively. While gas-powered and corded (electric) mower technology has remained fairly static, cordless (battery-powered) mower technology seems to grow with each coming of the spring.

Plenty of articles have discussed the pros and cons of gas, corded, and cordless mowers from a performance standpoint. To summarize, cordless mowers are quiet and emission-free (on-site), but are best for smaller lots with manageable grass to avoid excess time spent recharging batteries. Corded mowers don't pollute at the source, are quiet, and cost less than their cordless counterparts. They also avoid concerns about recharging and can handle tougher grass conditions, but cords must be managed properly throughout the mow and even extension cords limit their reach. Gas mowers provide tons of power and can go anywhere, but pollute, are noisy, and require the most maintenance.

But you knew all that already. What's harder to pin down is a good apples-to-apples comparison of financial and environmental operating costs. Let's compare some "typical" units of each kind, noting that advances in battery technology have allowed for recharges in as little as 1 hour.

Assumptions:

- 10 cents/kilowatt-hour for electricity
- \$2.50/gallon for gas
- ½ acre cut per charge and per tank
- Corded mower cuts 1.5 times as fast as the cordless
- Mow ½ acre 12 times per year

Typical gas: 4 horsepower, 0.25 gallon capacity gas
While these differences may seem like penny- (or emissions-) pinching, they add up quickly when

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considering that there are 2 million homes in Colorado. The difference between all homes using typical gas mowers versus the cordless mower in the example equates to almost 54,000 tons of CO₂, or the emissions of close to 11,500 passenger cars (U.S. EPA). And in addition to CO₂, most gas mowers emit smog-forming hydrocarbons and particulate matter that can have adverse impacts on human health.

All this isn't to say that one should never use a gas mower. For most people, their mower choice will balance practicality, cost, and environmental benefits. Plus, gas mowers can be used in early mornings, late afternoons, or not at all on high ozone days to minimize the effect of pollutants. We just hope we've provided the information you need to achieve your personal balance – the Tao of Mow.

P.S. Shout out to manual push (reel) mowers, which avoid any emissions altogether and are totally free to operate (except for an occasional sharpening)!

Seasonal costs and carbon dioxide emissions of mower types

Mower type	Seasonal cost per half acre lot	CO2 emissions (lbs.)
Ego 21" cordless	\$0.50	5.04
Black and Decker 20" corded	\$1.25	12.48
Typical gas	\$7.50	58.92



Varroa Mites

By Kara Harders, Small Acreage Specialist, NRCS/CSU Extension



Varroa destructor

Do you have honeybees? Have you checked them for Varroa mites? Beekeepers face a host of issues when it comes to keeping their bees happy and healthy. While pesticides from other sources can kill bees, they are far less common than the problems which plague bees due to poor management

from their keepers. According to the Colorado Professional Beekeeping Association, colonies left unattended will face a 50-60% loss with no contributing, human-based issues. It is up to the beekeeper to ensure no pests have infested the hive, regularly feed hives, and more. One of the most common issues affecting bees today is the Varroa mite, which is increasingly widespread and difficult to control.

The full name of the parasite is Varroa destructor, and it didn't get the last part of the name by chance. The Varroa mite is a major cause and contributor to premature honey bee death, as well as hive die-out. These mites attach to the outside of the bee and suck blood from adult bees, and their developing larva. When mite-affected larva emerge

they may be deformed; missing legs or wings due to the mite. Early detection is

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Varroa mites attach to the back of bees and their larvae.

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crucial. Varroa mites can be seen by the naked eye on adult bees as well as on the white pupae when pulled from their cells. Professional beekeepers (officially known as Apiarists) recommend thoroughly checking each hive once a week during the active season for signs of stressed bees. Due to the rapid reproduction abilities of Varroa mites, if 100 bees are collected and mites are found on eight bees, the infestation level is considered lethal.

If you find mites in your hive, you can help try to save your bees by hanging Apistan strips in the brood nest area of the hive for four weeks at a time. A bee gate is also available, the gate is a small set of holes at the entrance of the hive where a newly infected bee comes in contact with mite poison when the bee enters the hive, killing the mite. Most hives will naturally become infected with Varroa, proactive use of these pesticides is recommended. Pesticides for the Varroa mite should only be used when the mite is present in a hive **Always read and follow label directions for safe use of any pesticide!**

If you are new to beekeeping or are thinking of getting into it, research the endeavor well. Bees often need more food than what they can collect by pollen, especially when their honey is being harvested. Producers suggest replacing queens every year since young queens lay more eggs, and checking hives for leaks helps prevent water from entering the hive and causing mold.

For more information on beekeeping: [Integrated Hive Management for Colorado Beekeepers](#), produced by Colorado State University

Beecare.bayer.com/home has some great information on bee care and health.

Market Channel Assessment Project

Are you a specialty crop producer who wants to better understand the profitability of your different market channels? CSU has an on-going market channel assessment program where you will: 1) be paid \$100 to participate; 2) receive a customized farm report, including consulting with CSU agricultural economists, and 3) have the ability to compare your farm to statewide benchmarks.

Please contact Ellie Naasz (ejnaasz@rams.colostate.edu) if you would like more information and/or would like to participate. There is also additional information on our website: FoodSystems.ColoState.edu.



Colorado Small Acreage Services Database

The source for landowners to find contractors, equipment, and services.

<http://sam.ext.colostate.edu/>

Need help with weed control options?
Have a small pasture seeding project coming up?
Search the site today to find a local contractor!



This is a free service brought to you by NRCS/CSU Ext. and your local Conservation District

Organic Certification Cost Share Reimbursements

The Organic Certification Cost Share Program (OCCSP) provides cost share assistance to producers and handlers of agricultural products who are obtaining or renewing their certification under the National Organic Program (NOP). Limited funds are available for currently certified operations, which may receive up to 75 percent of their certification costs paid from Oct. 1, 2016, through Sept. 30, 2017, not to exceed \$750 per certification scope (crops, livestock, wild crops and handling). USDA will provide a uniform, streamlined process for organic producers and handlers to apply for organic cost share assistance.

Eligible producers include any certified producers or handlers who have paid organic or transitional certification fees to a USDA-accredited certifying agent. Application fees, inspection costs, fees related to equivalency agreement/ arrangement requirements, travel/per diem for inspectors, user fees, sales assessments and postage are all eligible for a cost share reimbursement from USDA. This announcement also adds transitional certification and state organic program fees as additional scopes. Ineligible costs include equipment, materials, supplies, transitional certification fees, late fees and inspections necessary to address National Organic Program regulatory violations.

Producers and handlers may submit OCCSP applications to FSA county offices or they may apply through participating state agencies, which will be listed at <https://www.fsa.usda.gov/programs-and-services/occsp/index> as their agreements to administer the program are finalized.

To learn more about organic certification cost share, please visit www.fsa.usda.gov/organic or contact a local FSA office by visiting <http://offices.usda.gov>.

The current program runs through Sept. 30, 2018.

Musings of a Novice Vermicomposter

By Jeanne-Marie Bakehouse, NRCS Earth Team Volunteer.

I found a For Sale posting for composting worms, better known as red wigglers. “Why not,” I thought to myself, and I bought the worms. They came in a bucket with some of their habitat, called castings, which I later found out is just the friendly term for “worm poop.”



I carefully placed my newly-acquired worms into a plastic storage container punched with lots of air holes ([download instructions here](#)). The worms settled in right away, quickly adapting to their new environment. They began chewing through their new home of damp newspaper and card-

board, and a mish mash of leftover fruit and veggie scraps from my morning smoothies. In just three months, they converted all the paper and food scraps into a rich amendment that I used for our houseplants. The houseplants have never looked better!

Some things I’ve learned about being a worm farmer:

- Having worms in your basement is fun! It’s a great conversation piece.
- Despite what you read about what the wigglers typically love to eat, they seem to be individually particular. For instance, my worms shun banana peels. What worm wouldn’t love a partially decomposed banana peel? Mine, apparently.
- Red wigglers don’t have teeth. They like it when you dice up their food, and freeze it first to start the decomposition process. But they like to

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- chew, so I don't puree their meals.
- I don't overfeed them, or put any meat or dairy into the bin. That will smell up the place pretty quickly.
 - Worms love corn meal. It gives them a boost of energy.
 - With Colorado's dry climate, I spritz the bin with water a couple of times a week to keep it at an ideal moisture level, which is just damp, not wet.
 - Being a novice, I fell into the trap of getting the bin too wet. This caused a population explosion of mites, which thrive in the wet conditions. They covered the food I was trying to give the worms, and with mites all over the food, the worms would not eat it.
 - Besides the mites, fruit flies and springtails seem to like the worm bin, too.
 - The wigglers reproduce like crazy. Finding cocoons for the first time was really exciting, and the baby worms are just so small and too cute. Yes, cute. A worm can be cute!
 - After a couple of months with the worms doing so well, I had to divide the population and put half of the worms into a new bin.
 - It's a trick to separate the worms from the castings once the bin is done and the castings are ready for use, but it's not impossible.
 - Oh, and that rumor of feeding the worms on just one side of your bin to migrate the herd,



Worms compost food waste in these tubs.

- therefore making it easier to separate them from the castings? Let's just say my worms did not fall for that trick.
- Being new to the hobby, I'm using only the single bin system right now. I plan to try out the worm condo tower system. I've heard the worms move up naturally through the levels of the tower, leaving worm-free castings in the bottom level. If true, that will save quite a bit of work when it comes time to harvest the castings.
- The castings make a fantastic soil amendment, but you can also mix 1 C castings with 1 g. water and let it sit for a week to make a "tea" that is beneficial to the houseplants or garden.

To start your own worm farm, check out the vermicomposting information on [CSU's Small Acreage Management page](#).

It's well worth it in my opinion. My new favorite early morning activity is taking my cup of coffee to the basement and checking on the worms. They really are fascinating, and I'm only just beginning to understand all the benefits of their castings.



Use vermicompost on your houseplants or in the garden.

Emerald Ash Borer App

To help Colorado homeowners determine whether trees on their property are susceptible to being killed by emerald ash borer (EAB), the Colorado State Forest Service and Colorado State University Extension released a free app that will allow anyone to use their mobile device to quickly ascertain whether a tree may be a potential target for the pest.

EAB is a highly destructive, non-native insect from Asia, first detected in Colorado in 2013, which is fatal to all infested ash trees unless the trees have been chemically treated.

“The most important thing Colorado communities can do now is prepare for emerald ash borer’s arrival by increasing their EAB awareness, sharing information about how to identify ash trees and learning the symptoms of this pest,” said Keith Wood, CSFS community forestry program manager.

The [EAB/Ash Tree ID app](#) can be downloaded on almost any modern Apple or Android-based device, and easily located in app stores by simply searching for “ash tree.” It offers a step-by-step process to determine if a given tree appears to be a true ash or not, and offers links and other information about EAB for users who suspect they might have an ash tree. The app is intended not just for homeowners, but also for business owners, school groups or anyone concerned about the potential impacts of this pest.

The app also is intended to prompt homeowners and other landowners to consider early management options for EAB. These may include replacing unhealthy trees before they die, treating high-value trees with the proper insecticides and planting new trees near ash that might ultimately succumb to the pest.

EAB, which is responsible for the death of tens of millions of ash trees in 30 states and two Canadian provinces, has only been detected in Boulder Coun-

ty within Colorado. Yet the pest has become a concern for communities all over the state because each year it can fly up to a half mile to infest new trees, and spread much faster through the human transport of firewood and other raw wood. An estimated 15 percent or more of all urban and community trees in the state are ash, which are susceptible to EAB.

EAB: What Coloradans Need to Know

Learn how to identify true ash trees:

- ⇒ compound leaves with 5 to 9 leaflets
- ⇒ leaflets, buds and branches growing directly opposite from one another
- ⇒ diamond-shaped bark ridges on mature trees

Know the signs of EAB infestation in ash trees:

- ⇒ thinning of leaves and upper branches and twigs
- ⇒ serpentine tunnels produced by larvae under the bark
- ⇒ D-shaped exit holes 1/8-inch wide
- ⇒ new sprouts on the lower trunk or lower branches
- ⇒ vertical splits in the bark
- ⇒ increased woodpecker activity

Multiple EAB management strategies exist for homeowners and communities, including monitoring trees for the early presence of the pest, removing and/or replacing ash trees, protecting trees with insecticides and planting different species of trees nearby in an effort to get them established before the arrival of EAB.

If hiring someone to apply pesticide treatments to protect ash trees, the applicator must be licensed by the Colorado Department of Agriculture as a Commercial Pesticide Applicator.

Never transport firewood or other products from ash trees, as this is the most likely method of accidental spread. A quarantine is now in place in Boulder County and surrounding areas to try and prevent the human-assisted spread of EAB.

If you think you have detected EAB in your ash trees, please contact the Colorado Department of Agriculture at 888-248-5535 or email CAPS.program@state.co.us.

Colorado Small Acreage Services Database

The source for landowners to find contractors, equipment, and services

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



Need help with weed control?
Have a small pasture seeding project?
Search the site today to find a local contractor!



This is a free service brought to you by USDA-NRCS, CSU Extension, and your local conservation district

For a list of upcoming events in your area visit CSU Extension Small Acreage Management website
sam.extension.colostate.edu/

Do you have a question about managing your small acreage?

Contact CSU Extension /NRCS Small Acreage Coordinators:

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