

Summer 2009

Issue 2

www.ext.colostate.edu/sam

Wind	Energy
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By Jennifer Cook, Front Range Small Acreage Management Coordinator

Energy costs are expected to increase 50% in the next 10 years and many Americans are looking at wind energy as a way to produce their own energy. The wind supply in the United States is so abundant that it could generate enough electricity to run every home and business in the country. However, wind speed is the crucial element and many places in Colorado are well suited for wind energy development, in fact, Colorado is ranked 11th in the country for its wind potential.

Wind energy is the process of converting wind power into mechanical energy used for specific tasks such as pumping water, or the energy can be converted to electricity using a generator. Basically, a wind turbine is like a fan, but instead of an electrical cord powering the fan, the wind turns the turbine and creates power. All wind systems consist of a wind turbine, a tower, wiring, and balance of system components (controllers, inverters, and/or batteries).

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FARMERS MARKETS



Fresh Ideas

By Judy Crummett Woodland Park Farmers Market Manager

Most people today know that a farmers market is somewhere you can go to find fresh fruits and vegetables, usually in the open air. But unless you have been to one, you might not know the great atmosphere generated by these events, or the surprising number of other things you can find at a farmers market.

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Front Range Small Acreage Newsletter is edited and published by Jennifer Cook, Small Acreage Management Coordinator, NRCS/CSU Extension, 57 West Bromley Lane, Brighton, CO 80601 303-659-7004 ext.3 jennifer.cook@colostate.edu

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Wind Energy from page 1

The average size of a residential use small scale



wind tower is 130 feet in height with a 25 feet diameter rotor.

Wind energy is measured in kilowatt hours (kW), a measure of electric power which is equal to 1,000 watts. Small wind is a term used for turbines producing 10 kW or less. For example, a 10 kW turbine can generate

about 10,000 kWh annually at a site with wind speeds averaging 12 miles per hour, enough to power a typical household.

Wind turbines can be used as a stand alone system off the grid, or can be connected to a utility grid. Because wind doesn't always blow when electricity is needed and wind energy can only be stored with batteries, many people prefer to hook into a grid. When connected to a utility grid, the energy produced onsite is net metered, in which an electricity meter records the energy contributed in to the system, as well as the energy used. The excess, if any, is banked, and settled usually annually.

Wind energy is renewable, meaning the energy is a clean fuel source which doesn't pollute the air, and is naturally replenished. The initial cost of wind power has decreased in the past 10 years, but initial investments are still high. Despite this, wind energy is one of the lowest priced forms of renewable energy today. Many incentives, rebates, and grants are available to offset initial

costs of wind energy. Colorado is expected to receive nearly \$50 million in the next three years through the State Energy Program for a wide range of initiatives, such as project financing, rebates, and incentives for renewable energy.

Investing in a wind system can be complicated because there are many factors to consider. The following steps will help you think through the process. Allow yourself plenty of time to do research and learn all you can before you invest.

- 1. Evaluate Wind Resource Determine the feasibility of wind energy at your site. Refer to the Colorado Wind Resource map at CSU's Clean Energy website http://www.ext.colostate.edu/energy/wind.html You may also want to use a wind anemometer to measure wind parameters.
- **2. Energy Audit** Find out how much energy your household or operation uses. Upgrade to energy efficient appliances, and ensure your house is well insulated. Making these upgrades will reduce the initial cost of a wind system by reducing the total kW needed to power your household or operation.
- **3. Select Turbine Size** As with any large purchase, shop around. Compare consultants, and select an appropriately sized turbine for your energy needs.
- **4. Incentives** There are many federal, state, and local incentives available which can save you money
- **5. Zoning and Building Permits** Check with your local planning commission for any applicable zoning rules and building permits required.
- **6. Utility Interconnection** Talk with your utility company to find out what your options are for connecting to their grid.

Additional Wind Energy Resources:

Colorado State University Extension - wind energy resources http://www.ext.colostate.edu/energy/wind.html
US Department of Energy - wind energy basics http://www1.eere.energy.gov/windandhydro/wind_technologies.html

Colorado Governor's Energy Office - financial incentives and partnership programs http://www.colorado.gov/energy/index.php?/renewable/financial-incentives

Home Power Magazine -review of wind energy technology http://www.homepower.com/basics/wind/

Farmers Markets continued from page 2

Farmers markets provide an incredible sensory experience. At our last market (Woodland Park), I remember the aroma of newly baked bread and

freshly brewed coffee in the early morning. The roasting chilies had arrived, bringing with them a reminder that autumn is on its way. Many shoppers, bags in both arms, strode through the market, while others paused at each stall enjoying everything with great interest. Friends swapped stories of what they had just bought, and smiled as the didgeridoo player mesmerized their children. In great character, Couscous the Goose, the famous market

mascot, allowed people to stroke his feathers as he mingled.

Markets started hundreds of years ago, when communities would come together in a "market town", to buy and sell food and handmade goods. "Local" was as far as you could travel in one day, either on foot or by horse. There were also those who came from further afield, looking for customers outside their own area.

Today, "locally grown produce" can be defined very differently. Some markets in Colorado advertise that all their vendors farm within a radius of 30 miles, 50 miles or 100, and so on. Those of us in mountain areas, we are happy if all our vendors come from within the state of Colorado. Our growing season is so limited, that most truly local produce is not harvested before the end of July, and only continues until September, when the first killing frost usually happens. So we market managers are always looking for more farmers/ranchers/growers, to provide the variety which people expect, and which is available, if we know where to look.

In Woodland Park (elevation 8,600 ft), a very small group of enthusiasts held the first farmers market in 1991 with the primary mission of providing a direct market for growers, and encour-

aging small-scale farming and gardening. Our local extension agent, who gave us \$100 to get started, had laughed at us thinking a farmers market wouldn't work in our ranching county. However, so successful were we, that the city eventually moved us to another part of town "to revitalize that area." Today, we have over seventy agricultural, food, crafts, and public information vendors, including special interests like balloon art, music,



Couscous the Goose, Woodland Park Farmers Market mascot

and pet items.

Farmers markets support and enhance a community, help local businesses, and encourage us to eat healthy and locally. At the Woodland Park Farmers Market, our local animal shelters have found the market a great place to bring animals for adoption. A local nursery owner has told us that the market is directly responsible for saving her business. Through the market's Young Entrepreneurs program, three boys managed to make an astonishing \$400/day selling excellent birdhouses which they had made under Grandpa's direction. Two young girls are selling home-baked dog biscuits and solid maple cutting boards.

Farmers markets are enjoying huge popularity at the moment, as more people discover the sheer fun of what we like to call our annual summer party. If you haven't been, take time to find your nearest market, and savor the taste of really fresh produce, as well as the sights and sounds of these gatherings. Come and join the party!

Additional Farmers Market Resources:

Woodland Park Farmers Market http://www.woodlandparkfarmersmarket.com/
Find a market at Colorado Farmers Market Association http://www.coloradofarmers.org/

What's In Your Garden: Weed or Wonderful?

Invasive plants are weeds!

Many spread aggressively, overtaking vast areas of pristine Colorado land, eventually degrading our natural ecosystems impacting land values, agricultural production, and wildlife habitats. Don't be fooled, often invasive plants have attractive flowers.



Weed: Dame's Rocket Hesperis matronalis A biennial or short-lived perennial forb which blooms white, purple, or pink flowers beginning in May. Dame's rocket is aggressive in riparian areas, steep slopes, and untended gardens.



Weed: Scentless Chamomile Matricaria perforate
An annual plant with prolific seeds. Leaves are spoon-shaped and coarsely toothed. A very similar plant, mayweed chamomile (anthemis cotula), distinguished by its pungent smell, is also a noxious weed.

Native plants are wonderful!

They are well adapted to Colorado climate and have evolved in our local ecology. There are many beautiful colors, shapes, and sizes of native plants.

Native:

Globemallow
Sphaeralcea munroana or S. coccinea
Perennial with orange flowers,
which resemble
miniature hollyhocks, and graygreen leaves.



Native: Rocky Mountain Bee Plant

Cleome serrulata
Fast growing annual which attracts
butterflies, and
humming birds.
Seeds provide food
for songbirds.



Additional Resources:

CSU Extension Native Plant Master Program

http://www.coopext.colostate.edu/jefferson/natural/native.htm

Colorado Native Plant Society

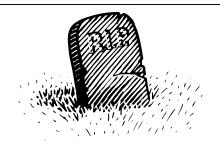
http://www.conps.org/conps.html

Colorado Department of Agriculture Noxious Weed Program http://www.colorado.gov/cs/Satellite/Agriculture-

Main/CDAG/1167928159176

Colorado Weed Management Association

http://www.cwma.org/



Animal Mortality Planning

By Jennifer Tucker, Small Acreage Specialist, Adams County Extension

As animal owners, we often have to recognize that we will likely outlive our animals. This is not a pleasant fact to think about, and it is often pushed in the back of our minds, in hopes that the day we need to deal with a dead animal is long in the future. However, planning for this issue can help reduce the stress and questions on that difficult day.

When planning your facility, some thought should be given to dealing with an animal that has passed. A place for a vet to safely euthanize an animal is important, but considerations for an animal that dies in its stall or pen should also be thought out. While a small animal like a sheep or goat, and many pigs, can be hauled by a person, or a few people, when dealing with a horse or cow, that chore becomes extreme. Usually large animals are best handled with a tractor or other equipment. Clearance for this task can be a challenge in some barns, and planning for this may include removable stall fronts or panels so a vehicle can accommodate sliding an animal through a large opening.

Next, what are you going to do with a dead animal? There are a few basic options:

Burial

This is probably the most common method of disposal. Most counties are regulated under Colorado Statute 25-1-612.

Specific requirements include:

 Burial must be at least 150 feet down-gradient from a well, standing water, or free flowing water.

- Bury all parts of the animal with a minimum of 24" of soil cover.
- Do not bury in a low-lying area, gully, ditch at the base of a hill, or in an area prone to flooding.
- The bottom of the burial pit must not be closer than five feet to the groundwater table.
- Please check with your county's Department of Health and Environment for specific county regulations.

Incineration

This method is biologically the safest. However, it is slow, requires fuel and expensive equipment, and can stir up complaints about air pollution. Specialized businesses may provide this service, but they are usually limited to smaller animals.

Composting

Composting can recycle livestock carcasses into a useable product, full of nutrients for a crop or other area that needs soil improvement. The following publications are a good source of general and technical data. You will be able to determine if this process is an option for you. Please check with your county health department regarding regulations that might modify or limit this practice in your area.

"Composting Dead Livestock: A New Solution to an Old Problem," Iowa State University of Science and Technology Cooperative Extension,

Ames, IA. 1999.

"Composting Dead Sheep," Maryland Cooperative Extension, College Park, MD.

"Disposing of Dead Goats," Maryland Cooperative Extension, College Park, MD. 1998.

"The Bare Bones of Carcass Composting", Environmental Livestock

Animal Mortality Planning continued from page 5

Landfill Disposal

Another option is disposal at a local landfill. Landfills vary in their pricing for carcass disposal, from \$31.25 to several hundred dollars per animal. Pricing is also seen by the pound. Typically the owner will need to load and secure the animal to an appropriate vehicle for transport, and then the animal is hauled to the landfill. Costs are usually paid in cash, and the animal is buried at the landfill. Owners can also opt to haul the animal to a rendering company for disposal, these often have similar charges as the landfill, and sometimes they will provide pick up service for an additional charge.

Some Colorado landfills allow disposal of dead animals, some do not. Be sure to contact landfills in your area before transporting mortalities to determine if they are accepting dead animals, the cost per unit for disposal, and any other restrictions (covered cargo requirements, etc.).

Full Service Disposal

Often, owners opt for a convenient method of disposal. This is usually provided by a company who picks up the carcass and disposes of it in an agreed upon manner. These services usually start around \$150 and can increase based on the location of pick up, and the owner's wishes of disposal method. Some methods include cremation, burial, and other special handling of the dead animal.

Fall Pasture Management

By Jennifer Cook Small Acreage Management Coordinator CSU Extension/NRCS

Although many areas of Colorado only receive 12 inches or less of precipitation per year, productive and weed-free pastures are possible without irrigation. Weeds are indicators of overgrazing. Rather than accepting that weeds are inevitable, we can change our management practices. The trick is to understand how grass plants grow, and plan animal grazing accordingly.

Many factors affect how much a plant grows, rainfall, temperature, soil, and topography. But the only factor affecting grass growth that is totally in your control is the maintenance of the size of the leaf area. Grasses need leaf area in order to photosynthesize, produce carbohydrates, and grow. The effect of leaf defoliation on plant development has been studied many times. In general, there's agreement that grass production is substantially reduced when more than half the leaf volume is removed.



The above photograph clearly illustrates that different pasture management strategies will affect grass growth. The landowner on the left side of the fence allows animals to graze continuously, while the landowner on the right side of the fence limits the amount of grazing time to shorter intervals, and allows many days for the grass to regrow without grazing pressure.

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Monitor leaf area by keeping track of the height of your grasses before and after animals graze it, using a yard stick or ruler. A good rule of thumb is to wait until grasses are 6 to 8 inches in height before allowing grazing. Then, remove the animals when they've eaten the grasses down to 3 inches in height. By using this simple strategy, you'll preserve leaf area and will eventually discover your grasses become more productive.

With limited turnout time, it is ideal to designate a sacrifice area, pen, corral, dry lot, or stall run, where animals can spend most of their time. This area is being "sacrificed" to spare your pasture from overgrazing.

Realize that the downside of good pasture management is that our animals may not be allowed on pasture as much as they, or we, would like it. But the benefits are significant, including improved weed control, improved grass productivity and forage supply, reduced soil erosion, improved water quantity and quality, and good land stewardship.

Late Summer and Fall pasture management should include stockpiling your grasses. This is a strategy in which grasses are allowed to grow at least 5 to 8 inches in height by minimizing grazing before dormancy. Benefits of stockpiling are:

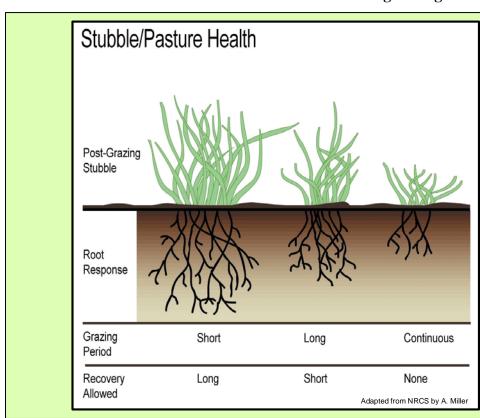
- Insulation Leaving grass litter will insulate and protect the plants in the winter.
- Water Management Grass stubble will catch and hold snow over the winter which will provide water for your grasses when it melts.
- Winter Grazing Dead grasses are low in protein but still provide energy to animals in the winter. But remember to keep animals off the pasture when it's wet, or wait until the ground is frozen to reduce soil compaction.

For more information on Pasture Management visit the CSU Small Acreage Management website www.ext.colostate.edu/sam/pasture.html

The diagram below shows how various grazing strategies affect grass health. Grazing

period is the length of time animals are allowed to graze an area. Recovery period is the length of time allowed for grasses to regrow with no grazing pressure. An optimal management system allows for short grazing periods and longer recovery periods.

Notice also that post-grazing stubble affects root health. The more leaf area remaining to produce food for the plant, the healthier the plant.



Living Soil

By Sharon Bokan, Small Acreage Coordinator, Boulder County CSU Extension

At the core of a small acreage, and the critical element for plant growth, is the soil. Let's take a look at what makes up typical soils in Colorado.

Soils store and release nutrients and water to plants for growth, and secure plant roots. Soils are generated by rock decomposition or erosion into various particle sizes and types. Soils also contain organic material (decaying organisms), air, and water. Colorado soils are about half mineral, with the remaining half divided between air and water, and a small percentage of organic material. The mineral portion is made of clay, silt, sands, and gravel/rock particles. The proportion of each determines many things about your soil, such as water holding capability and tendency to compact. We tend to think of Colorado soils as strictly clay but there are regions that are sandy (eastern Boulder County and eastern plains) or rocky with very little soil (mountains and foothills).

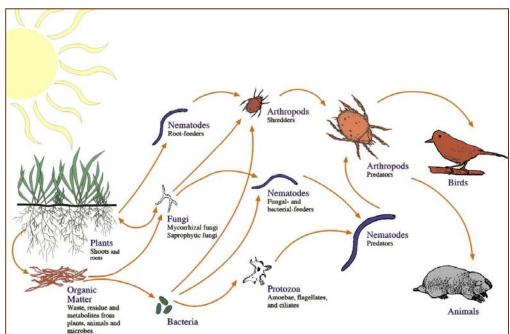
A typical Colorado soil is some combination of all three of these particle sizes, sand, silt, and clay. Sand particles, due to their larger size (when compared to clay particles), allow for more air spaces, "We know more about the movement of celestial bodies than about the soil underfoot." Leonardo DaVinci

do not compact readily, and do not hold water as well as other soils. Silt is the next size smaller in soil particles. Silty soils have smaller air pockets and hold water better than sandy soils. Clay particles are the smallest particles. Due to their small size, clay soils more readily compact, driving oxygen out of the soil. While most people understand that plant foliage uses carbon dioxide and gives off oxygen, many do not realize that plant roots also require oxygen. If the soil is compacted, there is less oxygen for the roots, and plants will be stressed and vulnerable to diseases. Compacted soils do not allow good water infiltration or root growth.

So why not just add sand to clay soils or clay to sandy soils to prevent compaction or improve water holding capability? Doing either of these will produce one of the earliest known building materials, adobe bricks. The best amendment to our soils, either sandy or clay, is organic matter, which helps the water holding capability of sandy soils and prevents compaction in clay soils.

The basic physical structure and mineral content of soil is only part of what makes up our soils. The organic material consists of decaying plant and ani-

> mal life. There is a whole system of vertebrates, invertebrates, insects, arthropods, bacteria, fungi, protozoa and other microorganisms that call the soil their home and support plant life. Within one teaspoon of soil you might find 62,000 algae; 72,000 protozoa; 111,000 fungi; 2,920,000 actinomycetes; 25,280,000 bacteria; and 50 nematodes. This doesn't even count the earthworms, insects, and larger mammals such as prairie dogs and gophers.



Living Soil continued from page 8

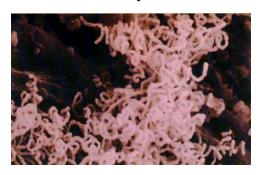
We think that downtown Denver is a busy place; it can't hold a candle to the soil. So what do all these organisms do? The vertebrates mix the soil, moving subsoil to the surface and mixing it with topsoil. Insects and arthropods help mix the soil, ingest some of the organic material, and contribute organic material via their waste and dead bodies. Earthworms mix and aerate the soil and ingest some of the organic matter. When they expel the matter, it is only partially digested making nutrients available to plants. Worm castings, as they are called, are well known for their qualities as soil amendments.

Algae cycle water and nutrients by producing organic acids that help make nutrients available to other plants and organisms. Algae do not decompose organic matter but their growth produces additional organic matter (their dead bodies).

Fungi actively decompose organic matter. Fungi can also form relationships with plants. The plants provide fungi with food and the fungi enhance the availability of various plant nutrients (P, Zn, Ca, Mg, Mn, Fe and Cu).

Bacteria are critical in altering the chemical makeup of the soil. Autotrophic (self-nourishing) bacteria transform carbon dioxide and other inorganic minerals and chemicals in the soil from either unavailable or toxic chemicals to nutrients available to plants. Heterotrophic (other nourishing) bacteria rely on organic material in the soil for their own nutrition that they then transform into nutrients for plants. Protozoa control the bacteria population in soils.

Actinomycetes



Actinomycetes are a special bacteria with features that, like fungi, assist in the decomposition of organic matter and the release of nutrients to plants. Some even form a symbiotic relationship with plant roots to assist with nitrogen fixation. Other actinomycetes are important antibiotics such as Streptomycin.



Rhizobium bacteria nodules on a soybean plant roots. These bcteria help the plant fix nitrogen.



Most nematodes in the soil are not plant parasites. Beneficial nematodes help control disease and cycle nutrients.

So next time you go walking or riding in your pasture, think about the life that is taking place in what appears to be lifeless particles of decayed rock, your soil.

Additional Soil Resources:

NRCS Soil Biology Primer

http://soils.usda.gov/sqi/concepts/soil_biology/biology.html

BLM National Science & Technology Center Soil Biology Communities http://www.blm.gov/nstc/soil/index.html



Canning Classes

September 12, 2009 Longmont, CO

Come and learn the basics of home canning jams, jellies, fruits, tomato products, salsas and pickles at our high altitude. Anyone can come - no matter your age or experience with food preservation.

Two Opportunities!

- Saturday, September 12th from 9:00 to Noon, Boulder County Extension Office, 9595 Nelson Rd., Longmont, CO
- Saturday, September 19th from 9:00 to Noon, Boulder County Extension Office, 9595 Nelson Rd., Longmont, CO

Cost: \$20.00 / person; includes fact sheets, safe tested canning recipes and a jar of peach jam. * Master Gardeners and 4H volunteers cost is \$15/person. Workshop will include the opportunity to actually make your own jar of peach jam. *Pre-registration is required due to space. September 12th registrations are due Thursday, September 10th. September 19th registrations are due Thursday, September 17th. (If you have a disability for which you seek an accommodation, please notify the Extension Office when you register). For more information please contact Ann Zander azander@bouldercounty.org 303-678-6238

Home Scale Food Production Classes

September 14 through October 19 Longmont, CO

This series has been designed to give you the skills and knowledge needed to produce a significant amount of food in the space you have. Whether you have a small yard, a huge yard or a community garden plot, this series of classes is for you! Classes will be taught by specialists from C.S.U. Extension, as well as expert professionals from the local community.

It is possible to register for single classes or the entire 11-class series (discount for full series registration). The series runs from September 14 through October 19, with classes on Monday and Wednesday evenings from 6-8pm.

- Sept. 14 Planning, Crop Succession, Variety Selection
- Sept. 16 Weed ID and Management
- Sept. 21 Identifying and Managing Insect Pests
- Sept. 23 Identifying and Managing Plant Diseases
- Sept. 28 Soils and Fertility
- Sept. 30 Season Extension and Cultural Practices
- Oct. 5 Growing Tree Fruits and Berries
- Oct. 7 Designing and Managing Irrigation
- Oct. 12 Harvest and Post-Harvest Storage
- Oct. 14 Techniques and Recipes for Drying and Eating your Harvest
- Oct. 19—Raising Chickens and Rabbits for the Table

Contact Boulder County Extension office at (303) 678-6238 or jreich@bouldercounty.org

5th National Small Farm Conference

September 15-17, 2009

Springfield, IL

"Roadmap to Success for Small Farmers and Ranchers" will be held September 15-17, 2009, at the Hilton Springfield and the Prairie Capital Convention Center in Springfield, Illinois. The conference will provide you with an opportunity to share new ideas in research, extension and outreach and to strengthen collaboration and partnership among your colleagues that are working to support small farmers and ranchers. Learn more and register for the conference online at

http://www.conferences.uiuc.edu/smallfarm



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Mountain Pine Beetle: What Does the Future **Hold for Colorado's Forests**

September 16, 2009 (7-9pm)

Denver, CO

Join a panel of Colorado State University experts to hear about the impact of the mountain pine beetle (Dendroctonus ponderosae) on Colorado's forests today and in the years ahead.

- How has this native insect become such a problem
- Why is it such an effective killer of pines
- Is its presence a natural part of the forest lifecycle
- -What does the future hold for the health of Colorado's forests and outdoor recreation?

The panel will be moderated by Tom Wardle, Assistant State Forester, CO State Forest Service. Panelists will include:

- -Tony Cheng, director of the Colorado Forest **Restoration Institute**
- -Tom Thompson '68, retired Deputy Chief of the U.S. Forest Service, Rocky Mountain Re-
- -Irene Shonle, Director/Agent, CSU Extension, Gilpin County
- -Bob Sturtevant, Extension Forestry Specialist Join the panel after the presentation for light refreshments provided by the Colorado State University Alumni Association. Event Contact: Tiana Nelson can be reached at 303-376-2613

Small Acreage Workshop

September 19, 2009 (9am-2:30pm)

Glenwood Springs, CO

Bookcliff, Mount Sopris, and South Side Conservation Districts present this workshop for small acreage landowners. Topics include Preparing your Garden for Fall, Beer Brewing, Raising Small Animals, Renewable Energy, Elk Proofing your Yard, Honey Bee & Food Supplies, and Russian Knapweed Management. Lunch is included with the \$10 registration. This event is cosponsored by Garfield County CSU Extension and NRCS. For more information and registration details, contact Sharie Prow at 970-945-5494 or sharie.prow@co.usda.gov

10th Annual Sustainable Living Fair (SEI)

September 19 - 20

Fort Collins, CO

A hands-on, family oriented event designed to educate people of all ages and backgrounds about modern living practices, renewable energy solutions, environmental & social responsibility in their daily lives, green building, local economies and much more.

www.SustainableLivingFair.org

Livestock Grazing Behavior Basics

September 26, 2009 (8-5)

Kiowa, CO

Grazing behavior is a matter of influence and consequences. Workshop will feature BEHAVE principles. For more information and to preregister contact Kiowa Extension 303-621-3162.

Drying & Flavored Vinegars Class

September 26, 2009

Longmont, CO

Come and learn the basics of drying fruits, vegetables, and meat as well as how to make flavored vinegars with garden grown herbs & flowers. Saturday, September 26th, from 9:00 to Noon, Boulder County Extension Office, 9595 Nelson Rd., Longmont, CO

This workshop will combine DVDs, presentation and fact sheets. Due to time limitations "you" will not actually dry foods. Cost: \$20.00/person; includes fact sheets, safe tested recipes and the Drying publication from CSU. Please send check payable to Boulder County Extension to the Extension office address listed above.

*Master Gardener and 4H volunteers cost is \$15.00/person

*Pre-registration is required due to space. Preregister by Wednesday, September 23rd

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(If you have a disability for which you seek an accommodation, please notify the Extension Office when you register).

For more information please contact Ann Zander azander@bouldercounty.org 303-678-6238

Mountain Pine Beetle Workshop

October 4, 2009 (1-5pm) Nederland, CO

Free!

Representatives from Boulder County, Gilpin County, US Forest Service and Colorado State Forest Service will help you improve your skills at identifying recently hit trees and provide strategies that may reduce the impacts of bark beetles on your backyard forest. Fall is a great time to survey your backyard and cut newly infested trees. We will start with a short indoor session followed by a more hands-on outdoor session at the new Nederland Sort Yard site on Ridge Road. Bring water and dress for the outdoors; the event will take place rain or shine. Workshop will be held at the Nederland Community Center. Please RSVP to Ryan Ludlow at rludlow@bouldercounty.org or 720-564-2641

Small Acreage Management Workshop

November 7, 2009 (8:30-12:30) Greeley, CO

FREE event sponsored by West Greeley Conservation District. Topics include Windbreaks and Living Snow Fences, Planning and Planting Wildlife Thickets, and Mountain Pine Beetle. For more information & to RSVP contact Ellen Nelson, West Greeley Conservation District ellen.nelson@wgcd.org

Energy Educational Program

November 14, 2009 (9-12)

Castle Rock, CO

Location: Douglas County Fairgrounds Events

Event sponsored by Douglas and Arapahoe County Extension. Speakers to be announced. \$20 includes catered lunch. For more information contact Joe Julian jjulian@douglas.co.us 720-733-6951



CSU Small Acreage Management website www.ext.colostate.edu/sam/ Topics Include: Events, Frequently Asked Questions, Animals, Composting, Energy, Fencing, Pasture/Range, Soil, Trees and Woodlands, Water, Weeds, Wildlife, Windbreaks and

Do you want to learn more about a particular topic? Do you have a small acreage related **story or event to share?** Please let us know.

Living Snow Fences

Contact Jennifer Cook at Jennifer.cook@colostate.edu

We need your feedback! A VERY short survey about this e-newsletter and the CSU small acreage management website awaits your comments. Please help us improve our educational programs. Click the link to access the survey http://www.surveymonkey.com/s.aspx?sm=KhO8NFU4tBplkQtxCGE3cA 3d 3d









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.