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Canning 101

By Laura Krause, Pueblo County Extension

When done properly, home food preservation can be a fun and rewarding project. Here are a few basic tips to get started:

Why can foods?

Canning is a safe and economical way to preserve food at home. It gives you complete control of what goes into your food, creating an

often times more nutritious product than store bought versions. There are recipes for low/no sodium, low/no sugar, as well as other dietary options. The preservatives are also all natural, rather than some chemical compound you can't even pronounce! Canning is also a good option if you have an overflowing garden, and want to preserve those fresh fruits and veggies for the entire year. **Continued on page 2**

Colorado Sustainable Small Acreage News is published and edited by Jennifer Cook,
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What are the different canning methods?

There are 2 basic canning methods: water-bath canning and pressure canning. The method that should be used is dependent upon the acidity in the food you are processing. Water-bath canning is acceptable for acidic foods, such as fruits, pickles and jams and jellies. The acidity naturally present or added to the recipe creates an environment where bacteria, specifically botulinum, cannot grow. Low acid foods, such as vegetables and meats, must be pressure canned to ensure they will be safe.



Where can you find reliable recipes?

It is always recommended that you use a tested recipe, meaning that they have been through extensive testing at the university or corporate level to ensure that they will produce safe and shelf stable food. Be cautious of recipes found online. They are likely not properly tested and adjusted for altitude, which is a particularly important factor in Colorado.

Tested recipes can be found from the following sources:

- Any university extension program
- The National Center for Home Food Preservation
- The Ball Blue Book
- The Ball Complete Book of Home Preserving
- Any website ending in “.edu” or “.org”

What now?

Now that you have the proper canning device and a tested recipe, it's time to hit the kitchen! Make sure you follow the recipe precisely. Do not double batch sizes, or add or substitute ingredients. It is okay to add a little extra spice if you have a favorite, but don't change the fruit or vegetable or create a mixture if the recipe doesn't call for it. This will change the volume and consistency, and the processing time may no longer be accurate.

If you have any questions, please contact your local extension office for more information.



Additional Reading

[Canning Vegetables, CSU Extension fact sheet](#)

Not interested in canning?

Try making some pies with your harvest!

[Baking Classes in Montrose, CO](#)

[Pies—Oct 26](#)

[Festive Breads—Nov. 15](#)



COLORADO
Department of Agriculture
Inspection & Consumer Services Division



Colorado State University
EXTENSION

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SMALL FLOCK POULTRY PROCESSING

In May 2016, the Custom Processing Of Meat Animals Act (Meat Act) was changed to exempt small poultry producers who raise and process (no more than 1,000) of their own poultry from Colorado licensing and inspection requirements when selling processed poultry directly to individuals at venues such as farmers' markets, Community Supported Agriculture (CSA) organizations and/or "on farm" sales if certain conditions are met.

Exemption Conditions:

- They (producers) comply with recordkeeping and labeling requirements (see below).
- **The producer does not buy or sell poultry products other than those produced from poultry raised on the producer's own farm.**
- The poultry do not move in interstate commerce.
- The poultry are properly labeled as described below.
- The poultry are healthy when slaughtered and the slaughter and processing are conducted under sanitary standards, practices, and procedures that produce poultry products that are sound, clean and fit for food as human food when distributed (sold) by the producer.

Please be aware that the Colorado Department of Agriculture AND the United States Department of Agriculture (USDA) do not inspect these small poultry producers / processors.

Unlicensed Poultry processors (exempt producers / processors) who raise and process less than 1,000 birds **CANNOT** sell their non-inspected poultry to Food Handling Establishments such as restaurants and grocery stores, or institutions such as schools, hospitals, hotels.

Colorado does not differentiate between bird species when counting total birds processed as some states do. For example in Colorado: 249 chickens, 249 turkeys, 249 ducks, 249 geese = 996 birds processed.

Recordkeeping for EXEMPT Poultry Processors (for each transaction):

Records must be maintained for 2 years from the date of the transaction by the producer/processor:

- Date of slaughter
- Date of sale
- Name and address of the buyer
- Description of the meat or meat products processed, including species and quantity
- Name and address of the owner (producer)

Labeling requirements for EXEMPT (UNLICENSED) poultry processors that sell less than 1,000 birds:

- The statement "EXEMPT P.L. 90-492"
- Description of the meat or meat products, including species and quantity
- The statement "THIS POULTRY WAS PRODUCED IN A FACILITY THAT IS NOT SUBJECT TO LICENSURE OR INSPECTION. THIS PRODUCT IS NOT INTENDED FOR RESALE"
- Safe handling instructions (see below)
- Pack or processing date
- Name and address of the producer/processor

In addition to the labeling requirements above, **ALL** poultry producers must provide the following Safe Handling Instructions on their label:

- Some Food Products May Contain Bacteria That Could Cause Illness If The Product Is Mishandled Or Cooked Improperly. For Your Protection, Follow These Safe Handling Instructions.
- Keep Refrigerated Or Frozen.
- Thaw in Refrigerator or Microwave.
- Keep Raw Meat And Poultry Separate From Other Foods.
- Wash Working Surfaces (Including Cutting Boards), Utensils, and Hands after Touching Raw Meat or Poultry.
- Cook Thoroughly To 165° F Internal Temperature.
- Keep Hot Foods Hot. Refrigerate Leftovers Immediately Or Discard

FREQUENTLY ASKED QUESTIONS

Q: What types of birds does this act apply to?

A: **Poultry means:** any domesticated bird: including chickens, turkeys, ducks, geese, guineas, or squabs. Poultry refers to both live at the time of processing and any processed poultry.

Q: How about hand raised quail, dove or pheasant?

A: Quail, dove, and pheasant are not listed in the law/rules as poultry, therefore they are not exempt from inspection.

Q: May I sell birds by the cut? May I sell birds by the pound?

A: The law intends the birds (poultry) to be sold whole not cut into pieces. If you sell by the pound, you must be in compliance with additional measurement standards requirements.

Q: Does the slaughter facility have to be located on my property? May birds be slaughtered outside or should it all be done inside a building?

A: The law/rules do not specify that the processing must take place on the farms where the birds were raised. A condition of the exemption is that: "the slaughter and processing are conducted under sanitary standards, practices, and procedures that produce poultry products that are sound, clean and fit for food as human food when distributed (sold) by the producer."

Q: Are producers required to buy product liability insurance? Is it recommended?

A: The law does not require producers to obtain liability insurance. Because there are food borne illness risks associated with the sale of raw chicken meat the producer determines if liability insurance is needed for their farm.

Please contact the program manager if you have any additional questions:

Steven Blunt - CDA Meat Program Manager

Phone: 303-867-9237

Email: steve.blunt@state.co.us

A CDA License is required to raise/process/sell 1,000 or more and less than 20,000 poultry directly to individuals at venues such as farmers' markets and/or "on farm" sales. If you have any questions about this requirement, please contact the Program Manager, Steve Blunt, at (303) 867-9237.

Additional Resources

Food Safety Information: [Chicken and Other Poultry Regulations:](#)

[Meat Program Website](#)

[Link to Laws and Regulations](#)

[Overview of Colorado Poultry Processing Rules:](#)

[USDA/FSIS Guidance For Determining Whether A Poultry Slaughter Or Processing Operation Is Exempt From PPIA Inspection](#)



Small-Scale Poultry Workshop

November 4, 2017 (8:30 am – 1:45 pm)
Island Grove Park, Events Center, Room C
Greeley, CO

We will cover important aspects of poultry feeding and harvesting. Expert knowledge and local resources will be presented. Topics include health, nutrition, and food safety before and after harvest. Lunch is included.

\$20 per person

Register online by October 31, 2017
or contact Jennifer.cook@colostate.edu

Conservation in the Kitchen

By Cary Weiner, CSU Extension Energy Specialist

For those of us with big gardens, August and September are the heart of canning and preserving season. My wife puts up dozens and dozens of jars of raspberry jam, pickles, pickled beets, and other assorted vegetables. We also freeze lots of veggies to enjoy the bounty of our garden during the frozen days of winter. Which leads to the question (for us energy geeks): how much energy do we use in the kitchen?

For most of us, cooking makes up a pretty small portion of a home's energy use. On a heavy canning day, when our home might use an electric stovetop for 5 hours (or more), we are looking at somewhere around \$0.75 in cooking expenses (this figure would be lower for gas ranges).

Over the course of year, a home that uses an electric range and electric oven for an average of 2.5 hours/week each plus a microwave and toaster for an average of 1 hour/week each will use about 600 kilowatt-hours (kWh) in total. In Colorado, this would cost a little over \$60. With current low natural gas prices, using a gas oven in place of an electric one could save this home about \$20/year.

Refrigerators offer bigger opportunities for savings. New fridges can use less than 400 kWh per year (costing less than \$40), whereas older fridges can use 2,000 kWh/year (costing \$200)! Older stand-alone freezers can use more energy than new refrigerators.

From the environmental standpoint, each kWh we consume in Colorado emits about 1 pound of CO₂ equivalent. Therefore in an all-electric cooking household, cooking emits about 600 pounds of CO₂e per year. For perspective, a study of people on various diets in the United Kingdom found that the diet



of meat eaters is responsible for 5,700 lbs. of CO₂e/year, while vegetarians are responsible for 3,059 lbs. of CO₂e/year. It would take not cooking for 4 years to equal the emissions reductions from a single year of vegetarianism. So when it comes to your environmental impact, it's not so much how you cook it, but what you eat!

Tips to reduce your energy use in the kitchen:

- Set refrigerator temperatures at 36-40 F
- Set freezer temperatures at 0 F
- Minimize opening the oven/toaster during cooking
- Right size pans to burners
- Use microwaves and toasters in place of ovens and ranges when appropriate
- Don't "overclean" with self-cleaning ovens
- Preheat only when necessary
- Use the residual heat after an electric stovetop is turned off to complete your cooking
- If you're looking to replace a large appliance such as an oven or dishwasher, look for discounts on "previous year" models in September and October!
- Borrow a [Home Energy Audit Loan \(HEAL\) kit](#) from a local Extension office to test your appliance electricity use, measure your fridge/freezer temperatures, and more.

Fall Small Acreage Q & A

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

I want to reseed my pasture, how should I do it and what seed mix should I use?

It depends on where you live and the soil conditions of the property. But there are general guidelines and steps to work it out based on your specific circumstances.

1. If you currently have a pasture or rangeland in poor condition, before thinking about re-planting first consider invigorating your land with the grazing management guidelines listed above and weed control. The average cost for reseeding is \$200-\$400 per acre so it pays to adjust management practices first.
2. [General Guidelines for Reseeding on Small Acreages in Colorado](#).
3. Contact your local NRCS and CSU Extension office to determine the appropriate seed mixtures and seeding methods for your area and soil type. You can also find seed mixes listed in [Appendix A of the Colorado Forage Guide](#)
4. Find local contractors and seed dealers on the [Small Acreage Services Database](#).
5. A comprehensive guide for reseeding with native vegetation—[Native Plant Revegetation Guide for Colorado](#). Colorado Natural Areas Program

My pasture has a lot of weeds. What are some control options?

Management options depend on the type of weed. So the first step is to identify the weeds you want to deter. A good reference guide which contains images and descriptions, is [Weeds of the West](#).

Once identified, read about the plant's life cycle. Is it an annual, biennial, or perennial? What time of year does it begin to grow?

Generally speaking, annuals are easier to manage. They can be pulled, tilled, often grazed, or sprayed when they are young seedlings. Kochia, Russian thistle, and cheatgrass are examples of annual weeds.

Biennials can be treated the same as annuals when they are young. They often develop a taproot making them hard to pull. Biennials produce seed in their second year. Common Mullein is an example of a biennial.

Perennials are the hardest type of weeds to manage because they are reproducing by roots and by seed. Canada thistle and Field Bindweed are examples of perennial weeds.

A good reference guide for control options of some of Colorado's weeds is the [Weed Management Reference Guide](#), by Larimer County Weed District. Also check to see if you have a local County Weed District who may be able to offer resources or assistance.

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Common Mullein is a biennial, which means it completes its life cycle in two years. Look for rosettes, they are easiest to control by digging or spraying. After it produces seeds, the plant will die. At this stage, it is best to cut off the seed heads and bag them.



Left image: rosette

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Once you know about the plants you want to manage, you can establish a sound weed management plan. Monitor your property regularly. It usually takes 3-5 years of persistent weed management to get an infestation under control. Don't forget to plant something desirable in the place of any weeds you have eliminated. Find a good seed mix to have on hand for this purpose.

- Minimize traffic or grazing when the soil is wet. This will reduce soil compaction. Soil compaction can reduce air, water, and nutrient flow, and inhibit root growth.

Check out this cool NRCS 8-part video series, [The Hope in Healthy Soil](#), to learn more about implementing healthy soils principles on your small acreage.

Interested in learning more about soil health?
Attend a soil health workshop!

[The Soil Revolution - Digging Deeper](#)

Dec. 14, 2017, Longmont, CO

[Western Colorado Soil Health Conference](#)

Feb 22-23, 2018, Delta, CO



Leafy Spurge (left). Leafy spurge at peak of fall coloring (right).

Leafy spurge is a perennial noxious weed. Mowing, grazing, and fall/spring herbicide treatment are effective management options. Several species of flea beetles can work but effectiveness can vary from year to year on site conditions. Read [Leafy Spurge Identification and Management](#) for more information.

I'm interested in soil health. What can I do to improve my soil?

General soil health practices include:

- Maintain ground cover with vegetation or mulch to limit soil erosion. Plant roots also help hold soil water and increase organic matter.
- Reduce or eliminate tillage. Tillage disrupts soil microorganisms, releases carbon, and opens the ground to erosion.



Musk thistle is a biennial.
Bottom right shows rosette stage.

If removing mature Musk thistle plants with flowers this fall, it is important to bag the plant so seed does not spread. Herbicide works best in rosette stage in spring or fall and must be applied prior to late flowering stage or seed may still be produced. Manual removal of Musk thistle by pulling or digging is effective if done prior to seed production. [Read more about Musk Thistle.](#)

What is Your Role in Reducing Food Waste?

Colorado Fruit and Vegetable Growers Association

Food waste is a topic receiving a lot of attention currently. Since perishable produce is especially vulnerable to spoilage and, therefore, waste, the Colorado Fruit and Vegetable Growers Association (CFVGA) is working with its growers to offer options to reduce waste, which can occur for a number of reasons, including:

Labor shortages – A shortage or absence of a qualified labor force to harvest and process fresh produce not only deprives consumers of good fruits and vegetables, it is financially devastating to Colorado fruit and vegetable growers. Few local residents have the skills, desire and stamina to harvest produce or are willing to give up their full-time employment, making it necessary in most situations, to employ seasonal harvest crews. While there are plenty willing and able to travel to the United States to work as harvesters, U.S. immigration laws have made it very difficult for U.S. growers to comply with requirements of short-term labor programs, such as H2A. CFVGA is working with Western Growers to aggressively address these problems and call for foreign labor programs that are advantageous for employee and employer alike.

“Colorado produce growers are working hard to attract and retain a skilled agricultural labor force,” said CFVGA Labor Committee Chair Reid Fishing, Mountain Quality Sweet Corn, Montrose, Colo. “However, what we do will have little impact unless Washington politicians are willing to enact pro-



grams that allow for an orderly flow of temporary workers into our fields and orchards during the growing season.

Limited markets for “seconds” – Blemished, misshapen and wrong-sized produce can head to the rubbish bin, compost or, at best, to animal feed yards, depriving consumers of perfectly healthy food and growers of income. CFVGA is working to make growers aware of food banks, such as the Feeding Colorado network, as a sales and donations opportunity for seconds and secondary purchasers. Additionally, CFVGA informs growers about emerging secondary markets such as Food Maven, which finds markets for oversupply. CFVGA also supports organizations that organize gleaning fields and orchards for produce that would otherwise go unharvested.

“The five Feeding America food banks across the state known as Feeding Colorado work directly with producers through our purchasing program and by accepting donations,” said Karen McManus, Feeding Colorado. “Colorado producers play a vital part in our hunger relief efforts while keeping food waste to a minimum.”

Erratic and undependable markets – Community supported agriculture (CSA) models where consumers commit to farmers with their dollars prior to planting a crop help even out supply and demand and ensure growers income. However, growers

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ColoradoProduce.org

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selling to wholesale buyers are more vulnerable to the whims of the market, where supply, demand and pricing may fluctuate wildly and can negatively impact income. CFVGA is working through its [web-site grower directory](#) to put growers together with buyers to increase the likelihood produce enters the food system profitably.

“CFVGA’s goal is to increase produce grower profitability,” said CFVGA President Robert Sakata, Sakata Farms, Brighton, Colo. “One of the ways we do this is to provide a directory where buyers can see who is growing the produce item they wish to buy and providing them with contact information. It’s simple but not something that existed before CFVGA was formed in 2014.”

CFVGA continues to work on these and in other areas to reduce the waste of produce as well as to help growers be more profitable. CFVGA also encourages consumers to reduce food waste. Here are just a few tips:

Buy Colorado produce when possible. Learn about Colorado’s production cycle and what produce is available when. Then, plan your family’s menu’s based on what you can buy fresh. This helps utilize more of the harvest.

Eat some, preserve some. Freezing excess produce is easy. Your county Extension office can provide you with resources to freeze, can and dry excess produce.

Shop produce often. Find a favorite grocery store, produce stand or farmer and shop them often, so your produce

is fresh.

Plan your menus around produce shelf-life. Produce shelf-life varies greatly. Plan to eat green salads with more quickly perishable lettuces first, green salad with longer-lasting Romaine next, and cabbage salad with the best shelf-life following that.

“The Colorado Fruit and Vegetable Growers Association has recipes, buying information and a produce calendar, all designed to help both consumers and commercial produce buyers understand and best utilize Colorado produce,” said Marilyn Bay Drake, CFVGA executive director. “Check them out.”

To help Colorado consumers understand the Colorado produce season, CFVGA has published a [Colorado Produce Calendar](#), available to the public. This link also enables viewers to click on a produce item and go to detailed nutrition, purchasing, storage and preparation information for each produce item. In addition, [CFVGA’s Facebook page](#) features seasonal recipes.

[Watch a video on Colorado produce.](#)



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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United States Department of Agriculture
Natural Resources Conservation Service



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