

The magazine of modern homesteading

# COUNTRYSIDE

*& Small Stock Journal*

Volume 105 • Number 4  
JULY/AUGUST 2021

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GOOD FIT FOR A  
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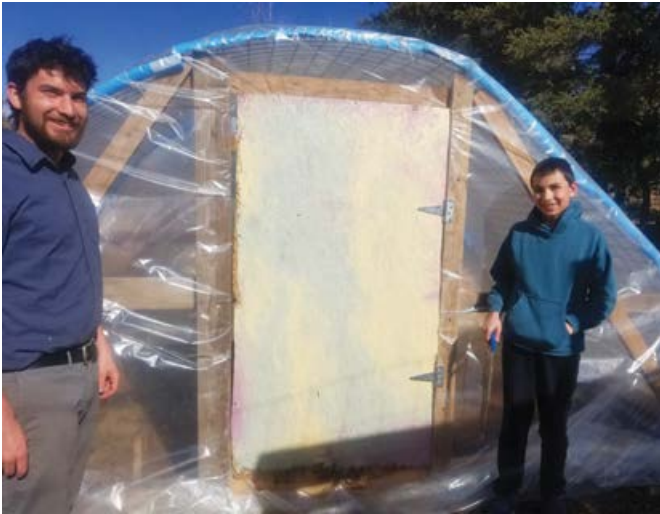
# I AM COUNTRYSIDE

FLYING PIG FARM — MANITOU SPRINGS, COLORADO





Our mission is to recall and reclaim relationships between people, plants, and the planet.



**F**LYING PIG FARM IS A ONE-ACRE educational urban farm in Manitou Springs, Colorado. We learn and grow on land on the unceded territories of the Ute people at the base of a mountain called Tava or Tavakiev in Ute languages. Our mission is to recall and reclaim relationships between people, plants, and the planet. We are a 501c3 fiscally sponsored project of Pikes Peak Permaculture, cultivating food and community since 2014.

Our main programs include educational farm visits, hosting community garden plots, community composting, a seed library, and a donation-based produce stand.

Our educational programming works with students and learners of all ages and, in the last year, welcomed an average of 45 students every week. Covid-19 forced us to focus on giving smaller groups of students more in-depth experiences rather than trying to reach a

greater quantity of students. At Flying Pig Farm (FPF), students participate in an agricultural-based curriculum and gain school credit while building tangible skills in food production, cooking, construction, and the arts. We currently host regular, twice-weekly field trips from two classes at Manitou Springs Middle School and one class at Community Prep School (an alternative, credit-recovery high school). We also host groups from CPCD Head Start preschools, Fort Carson's Warrior Recovery Center, the Colorado Springs Senior Center, and nearby schools and community groups.

We invite you to learn and grow with us! 🌱

Follow Flying Pig Farm at  
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**Previous Page Top Left:** Getting to know personalities of chickens, ducks, and goats bring us all so much joy.

**Previous Page Top Right:** Honey harvesting is always exciting!

**Previous Page Bottom:** Students transplanting wheat on the edge of the garlic bed learn about companion planting.

**This Page Left:** A middle school student and our educational director, Mr. Barak, put some finishing touches on a hoop house built 100% by students using 100% recycled materials.

**This Page Right:** Students learn to love fresh produce when they cook it themselves. According to these students, the King Trumpet mushrooms "taste like pizza!"

At Flying Pig Farm, students participate in an agricultural-based curriculum and gain school credit while building tangible skills in food production, cooking, construction, and the arts.



We partner with local artists to host fiber arts workshops using the dye garden at Flying Pig Farm.



Agricultural Arts After-School students observing and drawing a chicken.



In addition to growing produce, FPF is a pollinator haven in Manitou Springs, Colorado.

Learn and grow with us at  
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Our students build skills and gain work experience and confidence as they march toward graduation. At FPF, they learn to build, cook, plant, harvest, and care for animals.



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Our I Am Countryside photo essay turns the spotlight on notable homesteads, farms, and educational institutions across the country. Interested in being featured or nominating someone?

**Reach out to us at: [editor@countrysidemag.com](mailto:editor@countrysidemag.com)  
or write to us: P.O. Box 566, Medford, WI 54551.**

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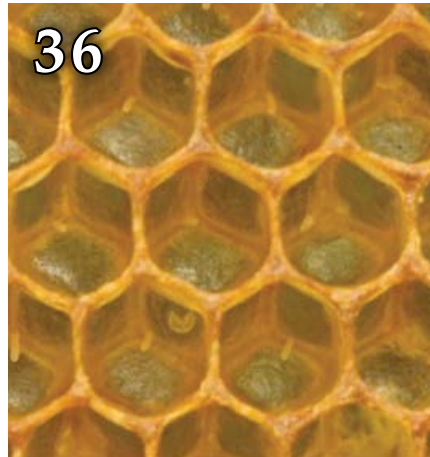
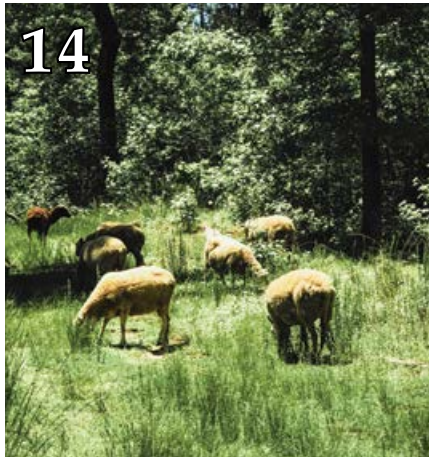
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**ON THE COVER** | Our two-year-old Silkied Serama, Mitchell. We live on a 20-acre piece of land in Upstate New York.  
— Jenny Coleman @lipstick\_and\_chickens (Instagram)

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# COUNTRYSIDE & Small Stock Journal

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## Our Philosophy

At *CountrySide*, our purpose is to inspire self-reliant living on any level.

We acknowledge that the path to self-sufficiency is as unique as the person who accepts the journey.

We strive to strengthen the homesteading movement by sharing the diverse voices and knowledge of today's practioners.

We teach our readers how to grow and raise their own food; build, fix, and craft with their own two hands; and walk as gently on this planet as possible.

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## FROM THE EDITOR

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*The note of the whippoorwill borne over the fields is the voice with which the woods and moonlight woo me. – Henry David Thoreau, American writer*

**W**ARM, CALM, CLEAR summer nights are the best in my book. After a busy day, I enjoy lighting up a campfire. The sight, sounds, and smell of a campfire are so relaxing to me.

One of my fondest memories of sitting by the fire at night was hearing the song of the whippoorwill. The whippoorwill is a nocturnal bird that sometimes repeats its chant for up to several hours at a time. For those who have never heard their call, they are basically saying their name ... whip-poor-will, whip-poor-will, whip-poor-will. It's a rather sad, lonely call and it's been said that hearing one close to your home can mean death or at least very bad luck.

When I was a kid, my family would take a couple of weekends during the summer to spend time at my grandparents' hunting cabin in northern Wisconsin. As my family and I were enjoying the song of the night bird and the dancing flames of the campfire, we all thought it had started to rain. But the sky was full

of brightly shining stars so it could not possibly be raining.

After a few moments, we realized that it was not rain at all. It turned out to be armyworms that were falling from the leaves of the trees above us. They would get too warm from the heat of the fire and drop to the ground or in our hair, etc. YUCK! I suddenly realized it was passed my bedtime and went inside. What a way to end a very enjoyable night. Maybe the whippoorwill was trying to warn us!



Ann Tom  
Editor, *Countryside*

**HAVE AN IDEA OR STORY TO SHARE, A QUESTION TO ASK, PERHAPS AN ANSWER TO A QUESTION? WE WANT TO HEAR FROM YOU!**

*Countryside* Editor Letter  
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# Country Conversation & Feedback

Contact us at: P.O. Box 566, Medford, WI 54451; editor@countysidemag.com

## Gardening Tip for Making Straight, Even Rows

Here is a tip that we have found to be very helpful in marking and keeping the rows straight when planting.

We made a row marker by taking two pieces of metal or wood, the longest being about 30 inches long, and the other about eight inches long. Fasten them together like a cross with the short piece being four to six inches from the top. Place a mark on the long piece to measure the width between the rows. You will need two of these row markers. Wind enough bailing twine just below the short piece to reach the length of your desired row. Push the long end of one stake down into the soil and unwind the twine as you walk to the other end of the row and push that stake down into the soil. After the row is marked and planted, lay the long stake down and place the mark where you remove the stake. The top end of the stake will be where the next row is to be started. Unwind the twine as you go to the other end of the row and place that stake in the new row's width.

We wind twice the length of twine on our stakes so we can just pull up one end and measure over to the next row without rewinding the twine each time. Makes for straight rows, the same width apart.

— Gene and Myrna Grasser, Idaho

## In Response to May/June Question of the Month: What Are Your Favorite Wild Foods?

When I was young, Grandma Klingler and I would go out hunting for morel mushrooms. Since then, she has passed away, but I still look for those mushrooms. I am married now and have my own woods to hunt for them in. I also had my mother-in-law to take those walks with. She always wore a dress and one day while mushroom hunting, she looked around and noticed there were mushrooms everywhere. She started picking them and putting them in her skirt until it was getting so full she had to stop.

After dropping off her delicious edibles at the house, she grabbed me and off we went again to get the rest. I never saw so many morel mushrooms in my life. We hit the jackpot!

My mother-in-law and I did everything together, from hunting mushrooms and picking black raspberries to helping on the farm. Those days are gone now, too. I lost my mother-in-law and father-in-law.

My two sons, Soda Pop and River, help me now. We ride our dirt bikes back to the woods, carrying our mesh potato sack to collect mushrooms. When using a potato sack, any morel spores that drop to the ground will produce morels next year.

— Diana Johnson, Lima, Ohio

## Did You Know?

I recently discovered I could ripen pears by putting them in a canning jar with a lid. This hastened the "ready to eat" process and avoided gnats looking for a place to perch.

— Julia, California

## Lemon Loaf

I just made this and it tasted very good. With summer coming, I think this would go good with a tall glass of lemonade.

1 box of lemon cake mix  
4 eggs  
¾ cup water  
⅔ cup vegetable oil  
1 package of instant lemon pudding

Mix all together, mixing well. Heat oven to 325 degrees F. Grease two loaf pans. Divide batter into both pans. Bake 1 hour.

### Icing

2 ½ cups of powdered sugar  
3 Tbsp lemon juice  
Mix together until smooth. Drizzle over breads.

This makes a lot of icing so I made half and it was just the right amount. If you like lots of icing, then make the whole batch.

— Diana Johnson, Lima, Ohio

## July/August Question of the Month

**There are so many ways that homesteaders can make money off their land. Whether it's from animals, crafts, garden goods, etc., we want to know what you do to earn extra spending money.**

**What do you grow, make, raise, and sell on your homestead?**

*Share with us at:*

Countryside Editor,  
P.O. Box 566,  
Medford, WI 54451

Or email to:  
[editor@countrysidemag.com](mailto:editor@countrysidemag.com)

When I open the mailbox and see *Countryside*, it's the highlight of the day!

— Brian Wruck, Minnesota

## Lamb

I wanted to share these pictures with you and your readers. We had a baby ewe lamb born three days ago and nothing says spring is here like a baby born. She is five pounds as of today, and 12 inches tall. A tiny baby, even for a Shetland. Her name is Spring.

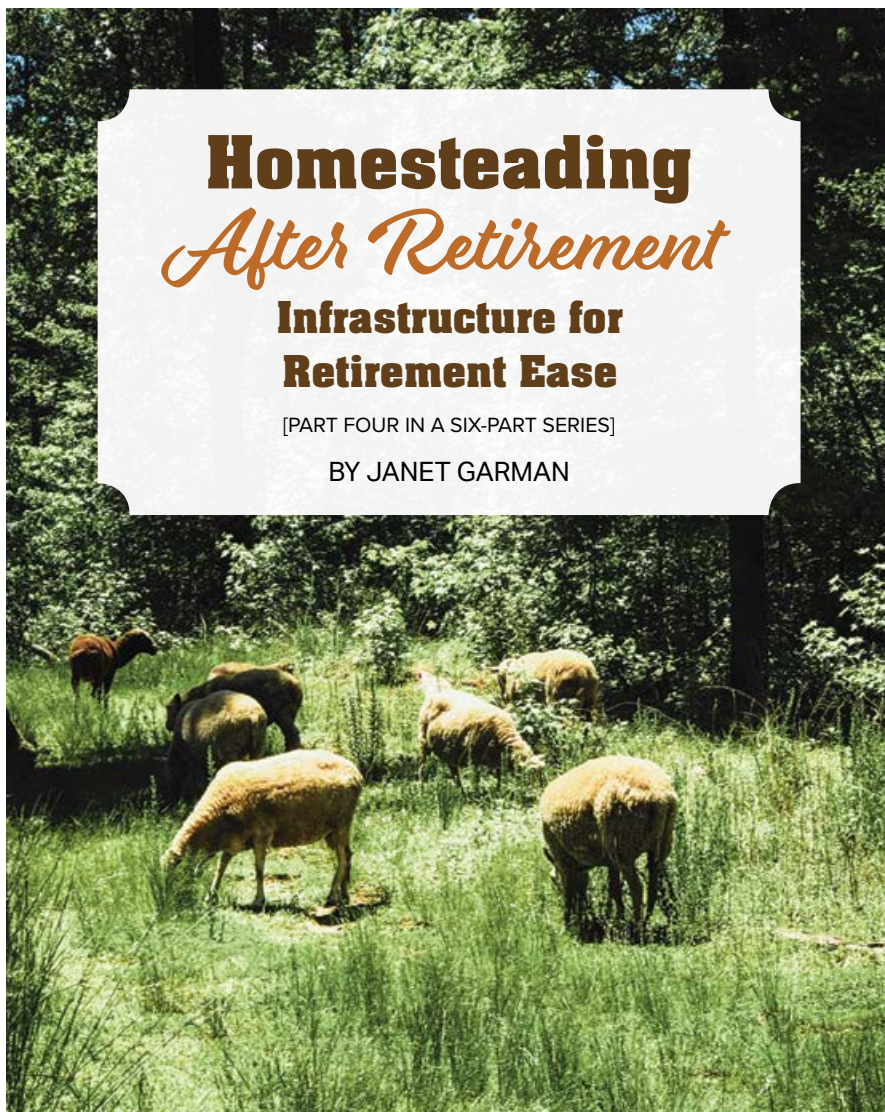


— Laura Thomas, Montana

# Homesteading *After Retirement* Infrastructure for Retirement Ease

[PART FOUR IN A SIX-PART SERIES]

BY JANET GARMAN



**W**HEN WE FIRST BEGAN homesteading, I had zero thoughts about infrastructure for retirement in the future. Later when we first brought sheep to the farm, I had no idea what would help me manage the flock. At first, we kept the sheep in a paddock attached to the barn. As I saw the beauty that was created from their fleece each year, my desire for more sheep increased. This was when the thought of infrastructure first entered my mind.

Having a bigger flock meant either more cleaning of the stall and paddock or letting them out. We had one partially fenced field

in disrepair, and lots of open space, before the property became heavily wooded. How hard could it be right? I'm the shepherd. I will tell them where to go. Easy enough. Except it wasn't. The free-range sheep, as I nicknamed them, took me on a daily romp through our rather large property. It only takes one sheep to go rogue and you've lost the battle! Sometimes they would end up where I wanted. Many days I considered sending them to sheep boarding school.

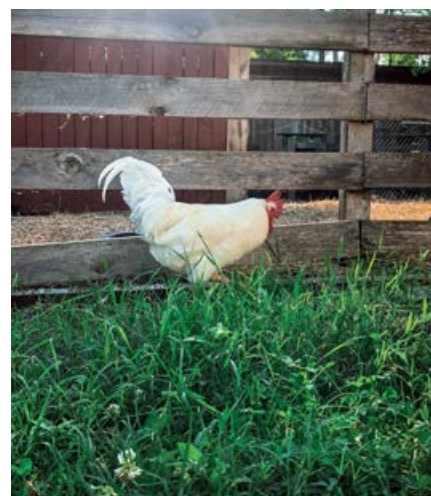
At the point we started with a larger flock of sheep, I was also having knee issues. Which of course would react badly to any romp through the woods following the

flock. Hey, wait, I thought I was the leader!

So here is my point: homesteading after retirement can be physically demanding even if you don't see it coming. I talked with a fellow shepherd about her setup of paddocks, gates, and shelters. In our talk, she stressed the importance of a well-thought-out infrastructure. Keeping a flock or herd on regenerative pasture requires the animals be moved often. How will you manage that? She stressed to me that infrastructure was the only way she could manage her flock of sheep, the breeding season, and sheep that need to be kept separate from the main flock. I took her advice to heart.

We began to plan and install fencing and gates that helped me move the sheep without the daily hike through the property. These types of aids remove the frustration and exhausting problems that can come with moving livestock.

Poultry can also cause infrastructure problems. Chicken tractors are a wonderful method of raising pastured poultry both for meat and eggs. Make sure that the chicken tractor you choose allows you to move the poultry easily. Some of the chicken tractor plans end with a structure that needs to be moved with a tractor. That is great if you have one!



Small coops are the perfect size for a small backyard flock of chickens. Check that you can easily clean the coop without twisting your entire body into a pretzel! Kneeling to clean the small coop can be painful in our golden years. Adapt the design by building the coop higher off the ground to eliminate so much bending and kneeling. With slight modifications, poultry can be part of your homestead for many years!

You are starting homesteading at a great point in your life. Unlike the younger me, you know what you need at this point in life. You can start strong with a good infrastructure for a retirement plan.

Whether you plan to garden, raise livestock, or keep poultry, you have a lifetime of experience to draw from.

**Here are a few tips that will help you start strong:**

1. Visit other farmers and homesteaders doing what you plan to do. Nothing beats seeing a good plan in action. I like to ask people what they would change about their current setup if they had the time and resources.
2. Review stocking rates: the number of animals recommended for a set amount of property to avoid overgrazing and parasites.
3. Start slow. Instead of purchasing a flock or herd of 50, start smaller and work up. It's easier to disband a small number of animals if you need to move on to another choice of livestock.
4. Are you interested in breeding? Are you familiar with all of the elements that go into this choice? Are you physically able to crawl around on the barn floor on cold winter nights, assisting an animal in

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labor if necessary? I am not saying you are not capable. I am saying this is something to think long and hard about. We stopped breeding here because I was no longer willing to deal with the consequences to my body from nights sitting in the barn during kidding or lambing season. We are all different and age differently. We now raise strictly for fiber/fleece, which suits my abilities. When I want to increase the flock, I find respected shepherds

that are selling lambs with good fleece qualities.

If animal husbandry is all new to you, you are fortunate in today's world. Resources in the form of books, websites, and online classes are bountiful. Don't overlook the old-fashioned phone call to your local agriculture extension service and your neighbor who is living your dream.

We continue to adapt and strengthen infrastructure on

our farm. Every week I notice something that could be made easier with a small adaptation or adjustment. I firmly believe that very few of us need to give up on our homesteading after retirement dream due to physical limits. I hope to be farming actively for many years to come. With the right infrastructure, equipment, attitude, and continued good health, it should be a piece of cake (along with the Tylenol arthritis formula for the not-so-good days). Homesteading after retirement is a dream of many people. I believe that with the right plan, you can make it work for you, too. 🌱



Read the first three installments of this series at:

- [iamcountryside.com/homesteading/homesteading-after-retirement-part-1/](http://iamcountryside.com/homesteading/homesteading-after-retirement-part-1/)
- [iamcountryside.com/homesteading/homesteading-after-retirement-part-2/](http://iamcountryside.com/homesteading/homesteading-after-retirement-part-2/)
- [iamcountryside.com/homesteading/homesteading-after-retirement-part-3/](http://iamcountryside.com/homesteading/homesteading-after-retirement-part-3/)



**JANET GARMAN** is a farmer, writer, instructor, and fiber artist living in central Maryland on the family's farm. She loves all subjects related to small farms and homesteading. Raising chickens, ducks, sheep, and fiber goats led her to write her most recent books, *50 Do-It-Yourself Projects for Keeping Chickens*, (Skyhorse Publishing 2018), *The Good Living Guide to Raising Sheep and Other Fiber Animals*, (Skyhorse Publishing 2019), and *50 Do-It-Yourself Projects for Keeping Goats* (Skyhorse Publishing 2020).

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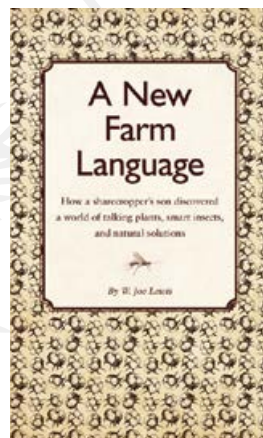


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# SALVAGE YOUR DROUGHT-AFFECTED CORN

BY DOROTHY RIEKE



**F**OR FIVE LONG SUMMER days, the relentless sun blazed, penetrating and drying out corn tassels. An unceasing wind drove away what moisture was available in the air. How would this weather affect the corn's yield? There are few things in farming more terrifying than lack of rain.

Nearly every year, we hear of some farmers discovering that their corn crops have been affected by the lack of rain. In this case, farmers need to determine how drought conditions have affected their crops and how this damage will affect the yields. They must also take steps to obtain major benefits from that damaged crop.

## LACK OF MOISTURE AFFECTS CORN

Lack of moisture during any period of growth generally results in a lower corn yield because the nutrient availability, uptake, and transport are affected without the

needed water. Also, corn plants, weakened by lack of moisture, are vulnerable to disease and insects.

Unfortunately, a period of four or five days of dry weather and hot sun often reduces yields by five to 10%. Also, the timing of the lack of water has great significance. During pollination or "silking," a period of that same length can mean reducing yields 40% to 50%.

Moisture stress causes a lack of synchronization between the shedding of pollen and silking during pollination. Because pollen grains are not visible, silking may be delayed.

Also, another problem arises with the lack of moisture. Drought-damaged corn contains nitrates in the bottom six to eight inches of the stalk. Cattle losses may result if this lower part of the stalk is fed to them.

## DETERMINING SUCCESSFUL FERTILIZATION

It is possible to determine successful fertilization within one to three days after silk is pollinated.

After successful pollination, silk will detach from the kernel. Carefully remove the leaves from the ear shoot, shake the cob, and determine the degree of successful fertilization by noticing how many silks shake loose from the cob.

There are other methods to determine whether stressed corn plants have been pollinated and fertilized. Look for the small white blisters on the ears six to 10 days after the pollen shed. To locate blisters, break several ears in half. Dig out some kernels on each ear. If there are kernels resembling blisters on ears, fertilization has occurred.

If still in doubt as to fertilization, wait five to eight days. At that time, if fertilization has occurred, those blisters should be larger. If the fertilization did not happen, the kernels show no change in size.

Another method to check for fertilization is to slice a few kernels lengthwise to see the young embryos. If the corn has no embryos, the kernels have not

been fertilized. If the corn plant has tasseled and shed pollen but has no blisters, chances are, there will be no kernels.

Also, other damage may occur without adequate moisture. In some cases, ears have barren tips, an indication that the tip kernels were not pollinated or were aborted after pollination.

Lack of moisture before the appearance of tassel and silk may mean smaller ears, a reduced number of kernels, aborted kernels, and poor fill resulting in low test weight and reduced yield.

If the corn crop has not been pollinated and kernels are not fertilized (no blisters), farmers have several options. One is to feed the stalks to cattle as silage. Another is to plow up the crop and plant wheat or late grains, sorghum, or soybeans. Another option is leaving the corn in the field and later using that area as pasture.

### INSURANCE FOR DROUGHT-AFFECTED CORN

If farmers have federal crop insurance or private insurance companies, the drought-affected crop should be examined before harvesting. This inspection determines what needs to be considered to be sure that the crop can be used as forage and still receive the insurance for the difference between the anticipated yield and the amount covered by the policy.

### WAYS TO USE DAMAGED CORN

A drought-damaged cornfield can be salvaged in several ways. The silage option is better for stressed corn than grazing because of the potential nitrate problems. Harvesting the drought-damaged cornfield as silage reduces nitrates by 30% to 60%. Nitrate poisoning is generally eliminated during fermentation. Allowing the silage to go through the 21-day fermentation process before feeding often reduces the nitrate problem.

The corn can be tested for nitrates after being made into silage.

There are certain solutions for this nitrate problem. One is diluting feed with high nitrate content with low nitrate grain or hay. Raising the cutter to leave a foot of the corn stalk may help as nitrate accumulation is generally in the lower portion of the corn stalk. Another solution is feeding the drought-stressed corn slowly so the rumen bacteria will adapt to it.

### TESTING FOR MOISTURE

It is difficult to determine when to cut damaged corn for silage. Always test the moisture percentage before chopping corn for silage. Just looking at seemingly dry leaves, moisture content can be up to 90% water which is too wet for fermentation. Try this quick method for checking moisture: Select a few stalks and chop them

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Drought-damaged corn contains nitrates in the bottom six to eight inches of the stalk. Cattle losses may result if this lower part of the stalk is fed to them.



into pieces about the same size as the silage chopper would. If the sample doesn't drip juice from squeezing and the stalk pieces remain compacted, the moisture is acceptable for silage. If your hand is not wet and the material falls apart, the crop is too dry for silage. Delay cutting if moisture is high. Proper time is when some green leaf and stalks remain and the black layer is not on the kernels.

Harvesting the crop for silage at the proper time is important. If the silage is too wet at about 80% moisture, excessive seeping and spoilage will prevent fermentation. If the silage is too dry, it will be difficult to pack in the silo, and dryness interrupts the fermentation process.

Some farmers windrow the crop, letting it wilt in the field until it reaches the desired moisture level.

### DANGERS TO FARMERS

There is also the danger of certain nitrogen gases from high-nitrate forage. Do not enter the silo during the first four weeks after loading it. If one needs to enter, run the blower for at least 15 to 20 minutes. Open the hatch door while using the blower. Also, a self-contained breathing apparatus should be worn.

### CHOPPING SILAGE

Another option for salvaging a drought-ridden cornfield is to green chop. In this case, daily chop and feed the corn. Again, the cut must be at least eight inches high to avoid the nitrates in the base of the stalk. Another warning is, do not let the chopped corn heat in a wagon. In this case, nitrates will be converted to nitrites which are more toxic than nitrates. Always watch the cattle carefully if feeding green chop.

### BALING SILAGE

Damaged corn can also be utilized as hay. Be sure that the bottom eight inches of stalks are eliminated. The corn must be dried down enough to make a good bale. Crimping the stems assists the drying process.

### GRAZING THE DAMAGED CORNFIELD

Grazing seasons can be extended with corn that has suffered drought conditions. Always feed hay before letting cattle eat the damaged corn. This helps to alleviate digestive problems. It is good to limit access to the drought-affected field by feeding hay alternately to letting the cattle graze.

### WINDROW GRAZING

Another option is to windrow the damaged corn leaving the windrows in the field for winter grazing. Always be aware of the nitrate problem. It helps to windrow leaving an eight-inch stubble. This allows air to circulate for drying. Also, it is best to feed the cattle hay before letting them graze in the cornfield. Access should be limited depending on the amount of ear development and grain that is being fed.

### REDUCING RISKS OF DROUGHT

There are several strategies for avoiding drought-stricken corn. One is to plant early so pollination is completed before the hottest and driest part of the summer. Fertilization helps by promoting growth and efficient utilization of moisture. Planting several hybrids with varying maturities may lower the risk of all corn being affected. Controlling weeds that compete with the crop will provide more moisture for the corn plants, and maintaining a cover of residue or no-till, reduces the amount of evaporation leaving more water for the crop.

Today's farmers live for raising crops to their full potential. In doing this, they meet many challenges. A majority of those challenges are weather-related. The lack of rain is a dark reminder of the exposure farmers have to Mother Nature's impulses. It is the informed farmer that meets those challenges successfully to gain a profit while working with all kinds of weather-related happenings. The farmers of today take seriously their obligations as Americans — to provide food not just for themselves, but for all. 🌱

**DOROTHY RIEKE**, living in southeast Nebraska, is married to Kenneth and has one daughter. She has lived on farms all her life and has raised both chickens and turkeys.

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# CEDAR APPLE RUST

## *A Disturbing Discovery*

BY MARK M. HALL

**M**Y FAMILY AND I RETURNED home from church on a rainy Sunday in May. It had been pouring for hours, but just as I pulled into the driveway, the rain stopped, and the sun shone brightly through a break in the clouds. I drove the car slowly along our gravel lane, while we soaked in the beauty of God's Creation. Everywhere wildflowers were blooming in a variety of colors, and the grass had turned a vibrant green. Water droplets sparkled as they fell from the trees that lined the way.

Yes, all the familiar signs of spring were indeed there to admire and appreciate. Mesmerized, I leaned forward, arms resting on top of the steering wheel, when I noticed something hideous above us, in the cedar tree. I was so horrified by what I saw that I felt the hair on the back of my neck stand up. Stuck to its branches were brown, dimpled orbs about two inches in diameter from which slimy, orange tentacles extended in every direction. It looked as though we had been invaded by some alien life form. "What in the world was that?" we asked in disbelief. We had never seen anything like it!

Wasting no time parking the car, we ran straight back to the cedar for another look. "What could this possibly be?" we still wondered aloud while examining the gooey weirdness clinging to our tree. "Some kind of fungus, maybe?" It was quite possibly the strangest thing we had ever seen. Filled with curiosity, we were determined to identify the freaky-looking things. Immediately, my wife went inside the house to do some research, while I checked the side yard for any crop circles.

We discovered that this was a sticky fungal growth

indicative of *Gymnosporangium juniperi-virginianae*, a tree disease otherwise known as cedar apple rust. Its many gelatinous appendages, called telial horns, produce spores that are released by wind or rain. Two specific types of trees are required to complete the life cycle of the fungus, and its spores cycle back and forth between those two types. On one side of this rotation is a juniper, often an eastern redcedar, like ours, and on the other side is an apple, a crabapple, a hawthorn, or a quince. These spores can reach a tree several miles away, but most infections develop within several hundred feet. Unfortunately, our apple tree stood right across the driveway from our poor cedar.

After more study, we examined our apple tree, where we saw the telltale yellowish-orange spots beginning to form on its leaves. Before long, the fungus would grow down through each leaf and create brown, hollow bumps on the bottom surface of each one. There, more spores would be produced and blown back to the cedar tree, where the infection would spread, weakening and potentially killing the cedar.

Later that summer, the leaves prematurely fell from the apple tree and the fruit itself showed signs of the disease. The apples were spotted with yellowish-orange discoloration that was similar to the spots on the leaves, most of the apples were misshapen and smaller than usual, and many of the apples dropped off the tree before ripening completely.

Fortunately, there is a measure of good news. If the nasty galls have not spread all over the cedar, the infestation may be controlled without tearing down the tree. In late winter or early spring, each infected cedar branch should be cut off four to six inches below

the gall. The pruning shears must be disinfected with bleach between cuttings to limit the spread of the infection.

Both the cedar tree and the apple tree must be treated with a fungicide or biofungicide — specifically a product that is effective against rust. Some of these products are approved for organic farming, and some of them are non-toxic to bees and other beneficial insects as well. When treating the apple tree, it is essential to use a product that is approved for use on fruit trees.

The apple tree must be treated every one to two weeks for a total of three to four applications each spring. These treatments need to be started just before the apple blossoms open and continue until the petals begin to drop. The cedar tree must be repeatedly treated from mid-summer through the end of summer, following the product label instructions. These treatments minimize the disease, but they are unable to eliminate the infection. Therefore, treatments will need to be continued every year unless one tree type or the other is removed.

We were not so fortunate. You see, the galls were



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spread all over our cedar. Sadly, this was not a surprise, for we had learned that the fungus spreads rapidly during an especially rainy spring. We love harvesting fresh, juicy apples from our backyard each fall, so we decided to remove the extensively infected cedar. Highly disappointed, I fired up the chain saw, and soon the tree was no more.

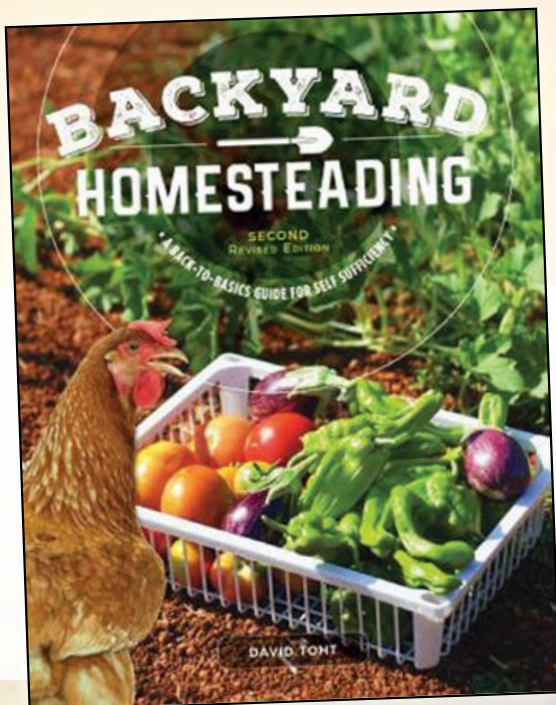
Obviously, our story did not have a fairy tale ending. We miss our cedar, with its stringy, reddish-brown bark, the dense network of branches, and pretty, blue, berry-like cones. If we ever plant another juniper or apple tree, we will certainly investigate the rust-

resistant varieties that are available at many nurseries. However, I am glad to report that our apple tree has made a comeback in production ... and that we were not visited by extra-terrestrials! 🍷

**MARK M. HALL** lives with his wife, their three daughters, and numerous pets on a four-acre slice of paradise in rural Ohio. Mark is a veteran small-scale chicken farmer and an avid observer of nature. As a freelance writer, he endeavors to share his life experiences in a manner that is both informative and entertaining.

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# THE AGING HOMESTEADER

## *To Grow Or Not To Grow?*

BY JOHN G. MOORE



### The questions that need to be asked before expanding a homestead ...

ONE WARM EVENING on our back porch in 2004, I was sharing a conversation with a neighbor. My wife was in the house giving attention to the produce she'd picked from the garden that day.

Suddenly, my neighbor changed the subject from whatever it was we were discussing to the fact that the back part of my pasture appeared to be on fire.

East Texas summers can have long dry spells, and hay fields are easily ignited. I didn't want what he said to be true, but the flames made the situation undeniable.

It was faint at five acres away, but there was obviously a fire.

I grabbed a large fire extinguisher and hopped in my truck. Nearing the flames, it became clear that the blaze wasn't on my property; it was on the other side of the fence and property line and carefully tended by the landowner.

Having lived at our place for only a little over a year at the time, I hadn't met the man who owned the land.

I apologized for my hurried arrival and explained what I had thought was happening. I offered him the use of my fire extinguisher, which he accepted. After visiting a bit, I asked him a question: How much property did he own and would he consider selling it? I was still in my 40s then and felt at the top of my game. I wanted more homestead. The more, the better.

The owner said he had just shy of five acres, but he didn't see himself ever being interested in selling. I asked if he ever changed his mind, would he give me the first shot at buying it?

He said, "Sure."

Sixteen years passed. Our doorbell rang. There stood the property owner. He asked if I remembered my request about the land. I said I did.

He had changed his mind. He was older and no longer wanted the responsibility of the land, which like ours, had been in hay production for decades.

But, the same number of years that had passed for him had passed



for us. I was no longer in my 40s, had dealt with a health issue, and was eyeing retirement.

We needed to think this through.

I told him that we were still interested and I asked if my wife and I could discuss it and get back to him. He agreed and left.

This was the first time that my age had entered into any equation related to our homestead — or honestly, anything else I'd ever considered taking on. Nearing 60, I'm not old, but in not so many years, I will be. So the question arose, "Were we too old to expand our homestead?"

It was a valid question.

A list of other questions also came to mind.

1. Did we really want to expand our homestead?
2. Could we physically handle more?
3. Would the expense of the land and added operational expenses delay retirement?
4. How much homestead is enough?
5. Were there other considerations?

After a short discussion, my wife and I agreed that land is always a good investment. Also, since our property and his were connected, it would make our place more desirable for a buyer when that day comes. We agreed that, yes, we wanted to expand.

Physically handling the property that we had could be tiring but not difficult. However, I have thought on more than one occasion, "What would we do when the day came that we could no longer take care of everything?" Adding more property just made that question even more important.

As for our health, my wife is in great shape. She exercises daily, keeps her weight in check, and eats very healthy. I, on the other hand, need to improve in that area. But, all things considered, yes, our health is holding and we could physically handle more property, now and into the foreseeable future.



Cost is always a consideration, especially when a couple is at or nearing retirement. A financial advisor told me that in your 50s and 60s, you should be saving far more than you are spending. So, buying the land at our age went against that advice. We would definitely have to take the money from savings (borrowing isn't something we do), so this could delay my retirement. I'd have to work longer to put the money back. I decided that I was okay with that.

The next question was how much is enough? For almost two decades, our five-acre homestead had been plenty.

By our own estimate, my wife grows approximately 80% of our vegetables and some of our fruits and nuts. Adding the land wouldn't change the size of our gardens, so physically, a few more hours using a brush hog and dealing with hay was what we were adding to our plate.

Mowing is the same issue that people who live in cities and subdivisions deal with, but the difference is, in the city, it's easy to find a teenager to mow your postage stamp yard on the weekend. Someone to fertilize, brush hog, and bale 10 acres of hay is another matter.

But, personal want, physical demands, and the cost of the land acquisition weren't the only considerations.

When we first moved to our place, we were in the country. But Texas, especially East Texas, is growing fast, and we live in a desirable school district.

Like many areas in the country, development is taking hold.

I consulted a friend who is a real estate agent and she told us that if we didn't buy the land now, the odds we'd ever have another opportunity to get it were slim. And if we didn't purchase the land, the odds that a developer would, was high.

The property was cleared, beautiful, and has road and utility access. There was a great likelihood that if we didn't purchase it, 20 new houses would pop up there. Encroachment on our little piece of paradise hadn't been an issue in 2004, but now it was.

We made the deal and purchased the land.

Cutting an opening in the fence between the two pieces of property felt good. It was symbolic. We had faith in ourselves. We had asked and answered yes to what we felt are all the right questions.

Every homesteader's situation is different. The questions we needed to ask included basic ones, but one was unique for us. If you're headed into your golden years and the opportunity to expand your homestead presents itself, seek the right questions for yourself, but don't be afraid to grow. ©

**JOHN G. MOORE** is a native of Arkansas, but he has called East Texas home for over 30 years. He is the owner of One Moore Production, a recording studio where he voices books for Audible. His weekly column, Moore Thoughts, appears in a dozen newspapers in Arkansas, Texas, and Louisiana. John is the author of two books - *Write of Passage: A Southerner's View of Then and Now* - Volumes 1 and 2. You can reach him at [John@TheCountryWriter.com](mailto:John@TheCountryWriter.com).

# Urban Foraging

## My Favorite Wild Foods

BY CHRISTOPHER NYERGES

I STARTED FORAGING FOR WILD FOODS around age 10 and found it fascinating that nearly all of the foods that sustained the indigenous peoples of the past still grew everywhere.

I began teaching this art in 1974 and have since written about a dozen books strictly about foraging.

Here are some of my all-time favorite wild foods, ones that can be found just about anywhere.

### LAMB'S QUARTERS (*Chenopodium album* and related species)



In the center, young lamb's quarters plants.

Lamb's quarters is a spinach-type plant that was probably brought to North America intentionally. It's more likely to be found in the urban environment than in pure wilderness because it seems to prefer soils that have been turned and disturbed. This plant has a flavor like spinach, and the leaves can be used raw or cooked in any recipe where you'd use spinach. I once ate nothing but lamb's quarters for a week, prepared in different sorts of dishes of salad, soup, broth, pancakes, and stir fry. Yes, lamb's quarters can be prepared in many ways.

This plant is easily recognized by the roughly triangular leaves, the whitish coating on the leaves, and the red streaks in the stem.

### PURSLANE (*Portulaca oleracea*)



Bundled purslane, for sale at a Los Angeles farmers market.

Purslane is a sprawling succulent plant that generally appears a bit later than the common spring greens. In the wild, purslane is often found in the sandy soils along streams. But it also likes the urban landscape, often appearing in the soil under rose bushes and in vegetable gardens.

This one is originally from India where it has a long history as a food. The entire above-ground plant is a bit sour but tasty in salads, soups, or stir fries. The succulent stems are sometimes pickled. Eating purslane means you are eating your medicine, as it is a great source of omega-3 fatty acids, meaning that it, among other things, helps lower cholesterol levels.

The plant is recognized by its succulent round reddish stems and its paddle-shaped leaves.

### NETTLES (*Urtica spp.*)



Young nettle tops are washed, and ready to be added to soup.

Though there are some native nettles, the common stinging nettles come to us from Europe, and they are exceedingly common in both rural and urban areas. They produce a lot of seed and their patches seem to expand every year — unless obsessed urban gardeners make sure they are all pulled out.

Nettles have a long European history as a food and fiber source. For food, the leaves and tender tips must be boiled. These are never eaten raw because the fine little "needles" contain formic acid, that sting when they break off on your skin.

I collect and dry nettles to make an infused tea whenever I am feeling congested, such as in the spring when there is so much pollen in the air.

### CHICKWEED (*Stellaria media*)



Chickweed is a delicate, short-lived spring plant that's great in salads.

Chickweed is found widely in North America, in both wilderness and urban areas. After a wet winter, it's usually very common in backyards, gardens, and shady areas. It's easy to recognize from its opposite leaves that come to a point and its weak sprawling stem with the line of hairs along one side.

The entire above-ground plant can be picked, rinsed, and used as a primary salad ingredient. It's best in salad, though it can also be diced and added to soups. We've also dried chickweed, powdered it, and added it 50/50 to wheat flour, then ran it all through a pasta machine to create a tasty and unique pasta.

### PRICKLY PEAR CACTUS (*Opuntia sp.*)



The fruit of the prickly pear cactus.

I eat the tender parts of the pads of this cactus as well as the fruit. The pads must be cleaned of their spines and glochids. Then I typically dice them and add them to egg dishes. Sometimes I make a sautéed dish from these cactus pads along with potatoes and tofu. I also blend one pad with one apple and one orange along with water to make a drinkable cactus smoothie. The cactus is also excellent to deal with diabetes and high cholesterol, though I simply enjoy the drink.

Of course, the ripe fruits are edible, and I eat them as a snack or make them into juice.

**CHRISTOPHER NYERGES** has been conducting self-reliance and botany walks since 1974. He has authored nearly two dozen books, including *Foraging Edible Wild Plants of North America*, *Guide to Wild Foods*, *Foraging California*, *Nuts and Berries of California*, *Foraging Oregon*, *Foraging Washington*, *Foraging Idaho*, *Foraging Arizona*, *How to Survive Anywhere*, and others. He can be reached at [www.SchoolofSelf-Reliance.com](http://www.SchoolofSelf-Reliance.com).

### BLACKBERRIES (*Rubus spp.*)



Blackberry vines provide a good fence and produce excellent fruit in the summer.

Blackberries are widespread in North America and can be native or one of the popular introduced varieties. The spiny vines are excellent for borders where you don't want someone climbing into your yard. They grow with no care and usually produce prolific fruits every summer.

### ACORNS (*Quercus spp.*)



Acorns fall from the trees every autumn. Dozens of oak tree species are found throughout North America in urban areas, wooded rural areas, and wilderness.

Oak trees are common throughout nearly all urban areas. Yes, there are native oaks everywhere, and there are introduced oaks planted along many urban streets. In the fall, when the acorns mature and drop, edible acorns are quite common in most cities. And most residents regard this excellent food that sustained generations of Native Americans as trash! So, you need to get to these before the "gardeners" sweep them all up and toss them away.

Collect the acorns and if you're not going to use them right away, be sure to dry them. Drying is important to get rid of all moisture so that no mold or bugs develop. When thoroughly dried, acorns can last for years.

**NOTE:** Raw acorns contain tannins which can be toxic to humans and cause an unpleasant bitter taste. For more information: [woodlandtrust.org.uk/blog/2019/09/are-acorns-edible-and-other-acorn-facts/](http://woodlandtrust.org.uk/blog/2019/09/are-acorns-edible-and-other-acorn-facts/)

### Summary

This is by no means a complete list of the many wild foods that I eat, but these are some of the ones I eat the most often.

To learn these plants and how to prepare them, get to know a local botanist at a college or arboretum. Investigate local plant societies and Scout groups that offer regular field trips to assist you in learning to identify wild plants.

Remember: Collecting and eating wild plants is not without risk. Never eat any wild plant that you have not absolutely identified. If in doubt, do without. 🌿



## WHEN TO USE AN OUTYARD

STORY AND PHOTOS BY KRISTI COOK



TOP: Knowing the forage capabilities surrounding the potential outyard is crucial to a successful location. ABOVE: When selecting an outyard, determine just how much you and your bees can spread out as the apiary grows.

**Y**OU ENJOY WALKING TO your backyard and visiting your hives any time you'd like, right? They're close, accessible, and convenient. What more could you ask for? Well, maybe you're beginning to have issues with bees getting caught in your hair whenever you walk out the door. Or maybe your neighbor is suddenly deathly allergic to bee stings — you know that person! Whatever the situation, there often comes a time when many beekeepers realize they need to utilize an outside bee yard — or an outyard as many of us call it — further from the home front. But how to decide if it's time? How do you find one? Here are a few lessons I've learned along the way to determine if and when it's time to move my bees to another yard.

### **Bees are flying everywhere.**

If you have a single hive or two, chances are you won't ever have to move your colonies to an outyard. However, the first season I realized it may be time to move my bees was the spring my son and I were stung on the head every single time we walked out the door. If a bee saw us, she flew straight for us and crash-landed in our hair with her mighty sting. It. Was. Not. Fun. We knew we had too many bees flying in our front yard. They had to go.

### **Neighbors are complaining.**

If you begin to feel you need to inspect your hives under the cover of darkness just so your neighbors don't complain, you may need to move them. I once had a neighbor that hung out at her fence for nearly an hour waiting for me to finish my inspections before informing me that she had 12 bees hanging out at her pool's drain. AND she was deathly allergic to bee stings. Of course, when asked, she didn't carry an EPI pen for her allergy. She just "knew" she was allergic. So, the bees in that yard had to move.

### There's not enough forage.

When you see that your colonies are struggling just to bring in enough pollen and nectar to get by with little to no surplus for an entire honey flow season, the bees need to be moved. Not only is it expensive to constantly feed the bees, but bees by their very nature are designed to forage and not designed to eat sugar water every single day of the year. They need real honey and real pollen to thrive. So, if there's no surplus honey, they need to move.

### So now what?

Once you decide it's time to relocate your bees, start looking for possible outyards. This often takes time as you need to not only locate individuals or businesses that are bee-friendly, you also need to scout an area to see what forages are available throughout the bee season.

Experienced beekeepers are often the most accurate source of information on this matter as most of them know the forage for several counties around them. My mentor and other more experienced beekeepers gave me wise advice on the different areas to search as they not only knew the forage cycles and what was available in those areas, but they also were able to guide me away from the areas already populated by other beekeepers' colonies.

### Knock on doors and offer honey.

Once you have an area in mind, start knocking on doors. Most folks nowadays are hesitant when a stranger knocks on the door, so a nice business card can be helpful, as everyone loves a beekeeper. For some reason, folks think we're all super nice people that just need a place for our bees. And they often know that we tend to pay rent for their space in honey. Everyone's favorite sweetener.

So be sure, once you have a potential prospect, to offer the going rate in honey as rent. In our area, most of us pay with a case of honey, maybe two, depending on the area and how many hives we set out in one spot. Just ask around your local bee association for the going rate and be sure to comply. We need folks to continue thinking we are nice people with weird little pets. So be nice to them.

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### What's in the area?

Just like you did when you set up your first apiary, you need to scout your chosen spot for the best apiary layout you can manage. Is there room to spread out? Will your hives have room to grow? Is there water? Is there shade? What about pests like bears, raccoons, skunks, etc.? Will the owner allow bear fencing, if needed? How many hives can you set up without bees flying into the owner's hair? Is there a pool nearby? Look for potential problems prior to moving your bees to help avoid another move shortly down the road.

### Is it accessible?

It drives me crazy to discover that I can't get to my bees, whether it's for a basic bee inspection, mite treatments, or just because I'd like to check on them. Case in point: at one of my outyards, the caretaker decided a remote-controlled gate was a good idea for his driveway leading to the back acreage. Except he forgot to mention it to me. So, the day I went out at 5:30 in the morning to treat my bees for varroa mites, I couldn't get in. This threw

my treatments off schedule and messed up my entire day's schedule because I could not get him on the phone until the next day. (This was the same location with the neighbor and the pool — time to move the bees.)

Experienced  
beekeepers are  
often the most  
accurate source  
of information  
on this matter  
as most of  
them know  
the forage  
for several  
counties  
around them.

Other obstacles to look for include flooded pathways to the hives during heavy rains. If the location is to be used in the winter, can you get in there to feed or to check entrances during snow or freezing rain? Does the nearby pond flood the area you intend to set the hives? Is it in a wetland area that is flooded during duck season? Does farming equipment ever block the entrance? Before you select a spot, it is best to think worst-case scenario because when you don't, it very well may happen. And it takes a bit of effort to move bees in a rush. NO fun at all.

Deciding to move bees to an outyard can be a difficult decision at times. Knowing when and where to make the move takes time, thought, and effort. But by keeping a few key elements in mind, selecting an outyard could be the best thing you ever do for your bees to keep the peace on the home front. But don't wait until it's time to make the move. Plan ahead so the move goes as smoothly as possible and isn't a rushed endeavor. Your bees will thank you for it. 🍯



Bees must be checked even during bad weather, so ensure hives are accessible during the worst of weather for your area.

**KRISTI COOK** lives in Arkansas where every year brings something new to her family's journey for a more sustainable lifestyle. She keeps a flock of laying hens, dairy goats, a rapidly growing apiary, a large garden, and more. When she's not busy with the critters and veggies, you can find her sharing sustainable living skills through her workshops, articles, and blog at [tenderheartshomestead.com](http://tenderheartshomestead.com).



# THE INVASIVE SPOTTED LANTERNFLY

## A New Honey Bee Pest

BY RUSTY BURLEW

An adult invasive spotted lanternfly surrounded by several nymphs. USDA/ARS, public domain image.

**G**LOBAL TRADE HAS LANDED a wide selection of goods on our doorsteps, and people throughout the world have benefitted in ways unimaginable in decades past. But one detriment of increased trade is the movement of organisms into new environments. For beekeepers, some of the most unwelcome introductions into North America include varroa mites, small hive beetles, wax moths, tracheal mites, and Asian giant hornets.

Recently, another imported pest, the invasive spotted lanternfly, has pestered beekeepers in the northeastern states. Although the lanternfly is not a pest or parasite of *Apis mellifera* in particular, its presence is being felt in ever-increasing ways.

### A HANDSOME PEST

If you are not familiar with the spotted lanternfly, it is a strikingly beautiful leafhopper, having distinct black spots on wings of cream, crimson, and gray. Also known as *Lycorma delicatula*, it is native to southern China, Taiwan, and Vietnam. Because the adults lay egg masses on many smooth, vertical surfaces, it was likely imported into this country, undetected, on shipments of goods into one of the northeastern ports. Anything

from lumber and stones, to patio furniture and vehicles, could have carried the egg masses into North America.

Leafhoppers are so named because they do more jumping than flying. The spotted lanternfly was first discovered in Berk's County, Pennsylvania in 2014.

As of March 10, 2021, the insect has hopped into 34 Pennsylvania counties as well as parts of New Jersey, New York, Connecticut, Ohio, Maryland, Delaware, Virginia, and West Virginia.

With their sucking mouthparts, the nymphs pierce the leaves and stems of plants, ingesting large amounts of plant sap. They ingest enough sap to severely injure a plant, causing the leaves to curl and wilt. If too many leaves are damaged, the entire plant can languish or die.

### TREE-OF-HEAVEN PLAYS HOST

Because the lanternfly's favored host plant is the tree-of-heaven, *Ailanthus altissima*, an invasive tree from China and Taiwan, the rapid spread of the lanternfly is nearly inevitable. Introduced in the 1700s, records show that the

tree-of-heaven is now found in 44 states.

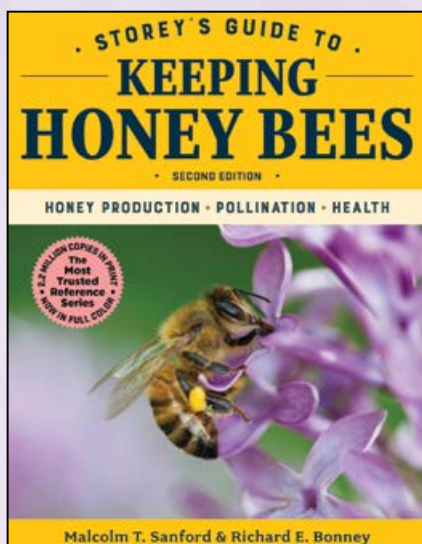
If the invasive spotted lanternfly restricted its munching to the tree-of-heaven, many people wouldn't care. But unfortunately, the lanternfly has a voracious and cosmopolitan appetite, readily feeding on grapevines, fruit trees, nut trees, maples, black walnut, birch, willows, hops, Christmas trees, and nursery stock. So far, over 70 species of plants have

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shown lanternfly damage, some of it severe.

## THE DAMAGING NYMPH STAGE

Unlike bees, these insects undergo incomplete metamorphosis, maturing from egg to nymph to adult. The brightly colored nymph stage, comprising four instars, does all the eating. With their sucking mouthparts, the nymphs pierce the leaves and stems of plants, ingesting large amounts of plant sap. They ingest enough sap to severely injure a plant, causing the leaves to curl and wilt. If too many leaves are damaged, the entire plant can languish or die.

Like other sucking insects, the lanternfly nymphs eat much more than they actually digest, so much of the sap moves quickly through their digestive tract and is excreted nearly unchanged. The excreted sap collects in thick sweet deposits on stems and trunks or drips onto understory plants. These deposits, known as honeydew, are mostly sugar and extremely attractive to other species, including bees, wasps, and ants. Worse, the deposits support the growth of an unattractive fungus known as sooty mold.



An adult spotted lanternfly. USGS public domain image.

## SLEUTHING THROUGH THE SAP

Recently, beekeepers in parts of Pennsylvania began noticing unusually dark honey in some of their supers. At first, some thought it was buckwheat, although it lacked the distinctive buckwheat flavor. Samples submitted to Penn State University for DNA testing returned positive for the tree-of-heaven and for the invasive spotted lanternfly.

Mysteriously, the honey did not resemble tree-of-heaven honey, which is a combination of oddly flavored nectar from the greenish flowers and sap from large glands on the leaves. When they examined the trees, however, the researchers found honeydew adhering to the trunks and splattered onto nearby foliage, all of it attended by bees. Most likely, the honey bees were collecting honeydew excreted by the lanternfly and storing it in the hive as honey.

Various types of honeydew are common throughout the world, although it is not especially popular in North America where consumers prefer a delicate flavor and lighter appearance. On the contrary, honeydew honey is dark, viscous, and robustly flavored, and this new product is no exception. One beekeeper described it as super-sticky with the color of motor oil and the flavor of prunes.

## A MIXED RECEPTION BY BEEKEEPERS

Although a few northeastern beekeepers have capitalized on the find — some selling out their jars of “lanternfly honey” on the first day — others worry the honeydew might contaminate highly profitable

varietals. They fear the dark color and strong flavors might repel buyers looking for traditional honey or consumers who don’t like the idea of eating insect excretions.

Other beekeepers fear many plants will suffer from the invasion of the lanternfly, including those that honey bees thrive on, including willow, apple, cherry, serviceberry, grape, maple, linden, and plum. As honey bees lose more of their traditional nectar flowers, they are more apt to search for alternative sources of energy, including honeydew.

In a recent study, the Pennsylvania Department of Agriculture estimated the spotted lanternfly could cost the state as much as \$324 million per year in agricultural losses. Ultimately, lanternfly excretions — now a curiosity — could damage the local honey industry because the peculiar flavor of tree-of-heaven sap is not a customer favorite. In addition, specialists in pollinator biodiversity worry that increased use of insecticides to control the spotted lanternfly could damage already vulnerable populations of bees, butterflies, and other beneficial insects.

At this time, Pennsylvania has established an agricultural quarantine for all counties where the invasive spotted lanternfly is found. But as more counties and states are added to the list, control seems elusive. For now, people are advised to kill adult lanternflies, scrape away egg deposits, and remove tree-of-heaven stands.

If you spot new infestations of the invasive spotted lanternfly, report them to your county extension office or your state department of agriculture. 🍯

**RUSTY BURLEW** is a master beekeeper in Washington State with an undergraduate degree in agronomic crops and a master’s degree in environmental studies with an emphasis on pollination ecology. Rusty owns HoneyBeeSuite.com, and is the director of the Native Bee Conservancy of Washington State.



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## BACKYARD BEEKEEPING

### ASK THE EXPERT: RUSTY BURLEW



## How Many Days After Requeening Should I See Eggs?

*Kathy Stevens asks: I just requeened two colonies. Eight days later, I went in to see if the queens made it. I found the queen in one hive, but not in the other. I suspect this hive has been queenless for several weeks, as I have noted no eggs or brood during the last two inspections. There is plenty of nectar, honey, and bee bread. I pirated a frame with brood from the other hive into the queenless one and checked for supersedure cells three days later. They made three of them on both sides. Not wanting to end up with another Africanized feral bee — the first hive being requeened is very defensive — I ordered new queens. Long story short, I need to know if I should look again before ordering another queen, and if so, how long should I wait? So far, the population seems normal, but I know that won't last without a laying queen. I would appreciate your advice.*

Rusty Burlew replies:

After eight days, you should see eggs, even if it took the workers two or three days to release her. A queenless colony can go about 21 days before the workers' ovaries begin to develop. So, 21 minus eight is 13. This means you have about 13 days max to get a queen accepted, or less if the colony was queenless for a long time before you installed the first queen. The timing is tricky because a lot of open brood will extend the amount of time you have before ovary development, but you can't see backward.

On the other hand, if the colony already had some laying workers before you requeened, they may have killed her. So, you need to decide whether she just died or if she was killed by laying workers. If you don't see any eggs at all, you are probably still okay. Continue to supply eggs or open brood every few days until you can get a replacement queen. Alternatively, you can

supply eggs and very young brood and see if they will raise a queen by themselves, but then you run the risk of unwanted, perhaps Africanized, genetics.

This is a difficult situation because if laying workers killed the first queen, they will kill the next one, too. When you put a new caged queen in there, watch how the bees react to her. They should be interested, and some should try to feed her, but if they bunch themselves all over the cage and act aggressively, it means they already have a queen or they have laying workers. Unfortunately, a layer worker colony is extremely difficult to handle, and many people don't even bother.

Just a final thought: It might be easier to let them raise a queen by themselves from young brood. If they manage to do that, then you can replace that queen with a purchased queen in order to remove the unwanted genetics. 🍯

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## BACKYARD BEEKEEPING

### ASK THE EXPERT: RUSTY BURLEW



## Can I Make Mason Bee Homes Out of Bamboo?

Annie of Tahoe writes:

*I want to make mason bee homes. I plan to try drilling a wood block, but also want to try bamboo. Since moisture is an issue with bamboo, has anyone tried drying the bamboo out in a low-temp oven? Do they have suggestions about how long and at what temperature to dry the bamboo?*

*I live in the San Francisco Bay Area; during the time we are supposed to be storing the cocoons for next year, are they affected by temperatures? Summer heat, winter chill? Do they need to be kept in a refrigerator?*

*Also, regarding lining the wood block with paper tubes, any particular kind of paper? Does parchment or wax paper work? What about freezer paper?*

Rusty Burlew replies:

Most bamboo websites recommend drying bamboo very slowly. Sun-drying seems to be the method of choice, although it can take six to 12 weeks. Quick-drying causes the surface layers of cells to lose moisture and become stiff before the inner cells have a chance to dry thoroughly, leaving you with dry walls surrounding a wet interior. Over time, the center moisture will migrate out into the tube, the very thing you are trying to avoid.

If you choose to dry the bamboo in an oven or kiln, keep the temperature at 100-110 degrees F. Some websites recommend heating the oven to these temperatures before inserting the bamboo. Once the bamboo is in there, turn off the oven but leave the light on to keep the oven slightly warm. Drying with this process should be complete in several days.

To complicate matters, some bamboo specialists recommend the bamboo be soaked in water before it's dried. Soaking dissolves any starches and sugars in the stem that may later attract insect predators such as beetle larvae. Soaking to remove starch takes about 12 weeks.

One way to control moisture in

mason bee tubes and drilled tunnels is to line them with an absorbent type of paper. The paper then absorbs any water that enters the tube or is generated by the bee's respiration. This wicking action protects all life stages of the bee from getting soggy. You can cut strips of paper to the correct size and then wrap them around a pencil or similar object to shape them.

As far as paper choices go, wax paper is definitely not absorbent as it is coated with wax on both sides. Freezer paper is treated with plastic on the inside to prevent moisture loss, so it too is unsuitable. Parchment is made with non-stick cellulose, which, although better, is still somewhat water-resistant. Avoid plastic of any type and any other material that is non-absorbent.

Many people prefer low-quality printer paper for this job. The lower the quality, the more absorbent it is, which is why bubblejet inks often bleed on cheap paper. You can take a sheet of printer paper and cut it in half along the length to get two sheets of 8½-by-5½ inch paper and wrap these around a pencil or dowel to give you 5½-inch tubes. Other people prefer brown kraft paper, which also works well.

As far as temperatures, the ideal

temperature for storing mason cocoons is just above freezing. This is why household refrigerators are popular storage spaces. Because I'm further north, I store mine in a shed that's heated to 40 degrees F in winter, which isn't much different from a refrigerator.

The bees can handle short periods of freezing, but they don't do well in extremely cold environments or during prolonged freezes. It's impossible to say the exact temperature that's best because your local mason bees will have slightly different requirements than those in other places. In fact, if you intend to set up your housing for wild types, they may be entirely different species than the ones that are sold and shipped. That's also one reason why locally adapted bees will do better than purchased ones.

Mason bee cocoons should also be kept out of extreme heat. They should be kept out of direct sun, even in the summer. If the cocoons warm-up prematurely in the winter, the bees may emerge before their host plants. It's best to put out the cocoons in very early spring so bees and plants are subject to the same warming trends and emerge/blossom at the same time. 🐝

## BACKYARD BEEKEEPING

### ASK THE EXPERT: RUSTY BURLEW



What's left of a comb from a hive that was destroyed by wax moths.

### Will Wax Moths Come up Into the Hive From the Screened Bottom Board?

Dave D. writes:

*Will wax moths come up into the hive from the screened bottom board? I've cleaned up some deadouts and would like to leave them set up, the freezing during the winter should have killed eggs or larvae in the comb. I've closed off the entrances with window screens.*

Rusty Burlew replies:

Since I don't know the size of hardware cloth in your screened bottom board, it's impossible to say if an adult greater wax moth, *Galleria melonella*, could squeeze through it. Most of the commercial screened bottom boards use size 8, which is eight squares per inch. Of course, the squares' diagonal measurement is longer than the side measurement, giving them extra wiggle room.

I asked around a bit, and the beekeepers I talked to agreed that size 8 will block most, but probably not all, greater wax moth adults. As with any animal, there is a natural variation in the size of individuals, so there's a chance that some will squeeze through. Another variable is the thickness of the wire used to make

the hardware cloth. A thicker wire leaves a smaller opening.

However, the lesser wax moth, *Achroia grisella*, will have no problem with a screened bottom. They are much smaller than the greater wax moth and often inhabit stored combs, where they eat cocoons, bee feces, bee parts, and pollen. Both types of wax moth are attracted to combs for what they contain, not for the wax itself.

If you want to keep both types of moth out of your stored hives, try cutting a layer of window screening to lie atop the screened bottom board, or use the slide-in varroa tray that comes with most commercial bottom boards. Alternatively, you can force-fit a piece of regular cardboard either above or below the screened bottom, something I do for short-term storage of just a few months or less. 🍯

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# MUCH ADO ABOUT MULCH

## How Much to Mulch, and How to Do it Effectively

BY JENNIFER MAYNARD

**F**ROM FLOWER GARDENS to homestead veggie gardens, mulching is an integral part of bed cultivation. But are you mulching the right way? There's a science behind mulching that's more complex than many people realize and learning how to mulch effectively can dramatically

improve your soil health and the prospects of whatever you're planting in it.

Learning how to mulch properly starts with the fundamentals. What is mulching? What material should you use? When should you mulch? And so on. I'll answer these questions and more, giving you

a crash course in good mulching practices and why they're so important.

### What is Mulching and Why is It Important?

Most green-thumbs and croppers know why mulching is important. For those new to cultivation, mulching is something of a surface treatment for planting beds. While mulch types vary, it's typically comprised of organic matter, spread across the surface of the bed to evenly cover and protect the soil.

Done right, mulching creates ideal conditions for germination and reinforces the soil microbiome to support growth. Mulching stands right alongside fertilization and proper tending as one of the core pillars of good cultivation.

### THE REASONS BEHIND MULCHING ARE MANY:

- Helps retain and balance moisture levels in the soil
- Impedes the growth of weeds, mold, and fungi
- Improves the fertility and health of the soil
- Reduces potential for water and wind erosion
- Stabilizes ground temperature during seasonal shifts

## Mulch Materials and Proper Spreading

For mulch to be an effective aid to cultivation, it needs to properly support the crops growing in that bed and the soil profile they're rooted in. Case in point: material matters. Too many novice planters mulch before understanding the ramifications of the material they've chosen.

As an example, bark and wood chips are a common mulch material. Unfortunately, they're not ideal for many planting beds because they leach nitrogen from the soil. Conversely, fresh organic mulch such as leaves and lawn clippings contain an abundance of phytonutrients that can be reabsorbed into the soil to improve its microbiome. This opens the door to a bigger conversation about falling leaves and natural mulching, a regenerative farming practice that's largely preferable over other mulching practices. Instead of raking fallen leaves out of your planting beds, rake them in and allow natural composting to take place for an effortless solution to mulching! Finally, when it comes to spreading mulch, less is often more. Layering mulch too thick will generally leave soil oversaturated and could cause root issues, such as root rot. Keep mulch to between two and four inches.

## When to Mulch for Maximum Effect

Mulching is typically best done seasonally and serves distinct purposes depending on the season. During the spring, early mulching helps stabilize ground temperatures overnight and impedes weed growth to help springtime crops get a good start on growth. Fall and winter mulching prevents early growth from perennials that may be affected by a late-season freeze. It also moderates soil moisture through the winter and, aided by cover crops, can protect the soil during the offseason.

That said, mulching continuously

is a regenerative farming practice that's gaining momentum. This technique involves thorough mulching in the spring and fall, then using discarded or naturally fallen plant matter as additional mulch as part of routine tending. Celebrated gardening author Ruth Stout often described this technique in her books, simply stating that "as

it decays and enriches the soils, I add more."

## Common Mulching Mistakes to Avoid

Despite the seemingly simple process of mulching, croppers need to beware of the common pitfalls to planting beds, as opposed to a vital cultivation step.



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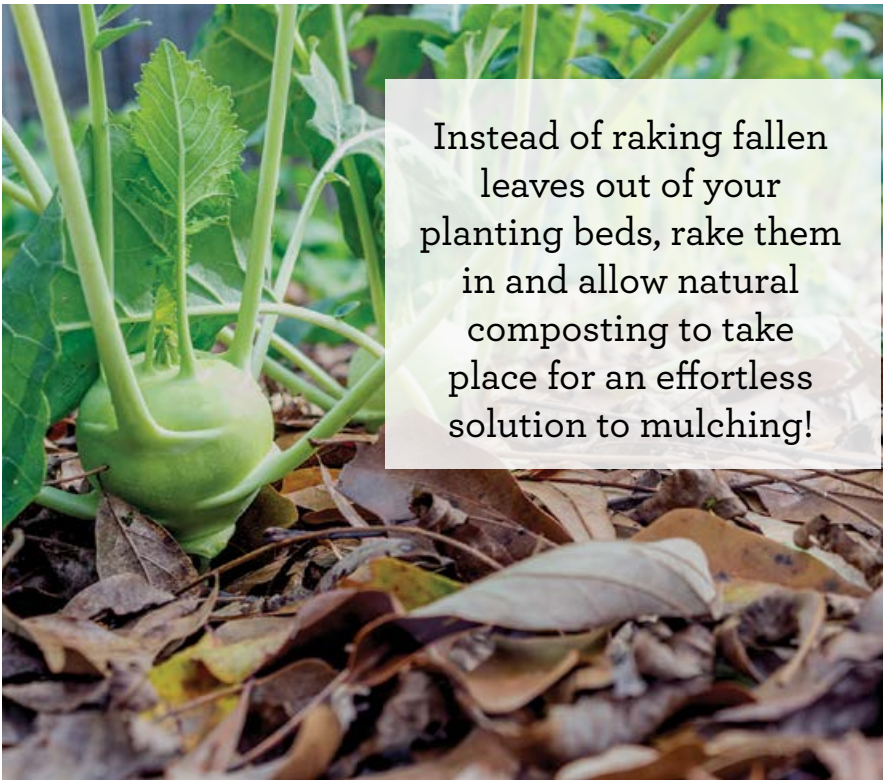
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Instead of raking fallen leaves out of your planting beds, rake them in and allow natural composting to take place for an effortless solution to mulching!

The first thing is to avoid store-bought mulch. Bagged mulches come with a variety of unknowns. First, they're often dyed for visual appeal. Second, despite being labeled as a particular type of mulch, many are amalgams, making it impossible to know exactly what you're dumping into a planting bed. Finally, the cost of bagged mulch can make it prohibitive for larger beds.

The alternative to bagged mulch is, of course, fresh mulch. If you can compost your own fresh organic matter, this is preferred. If not, there are likely several local sources for fresh mulch at affordable prices.

The other major mistake to avoid is mixing mulch into the soil. Mulch is meant to stay on the surface of planting beds. Mixed in, the soil will spend precious nutrients breaking down organic matter instead of nurturing plants. To avoid this, it's best not to till the soil between plantings — another tenant of regenerative farming.

### Be Diligent in Mulching

Mulching remains one of the most beneficial soil cultivation practices, but one that demands mindfulness. When in doubt, lean on regenerative farming practices to properly mulch your planting beds. Done properly, mulching will improve the health of your crops, restore the integrity of your soil, and sustainably rejuvenate its nutrient profile. ©

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**JENNIFER MAYNARD** has worked in the biotech and pharmaceutical space for more than 20 years. She created Nutrition for Longevity, a farm-to-table meal delivery service that focuses on bringing nutritionally tailored meals to the masses direct from her farm.

# Pomona's Peach Melba Jam

Recipe by Allison Carroll Duffy



## Ingredients

- 2 pounds ripe peaches
- ½ pound raspberries (about 1 pint)
- 1 vanilla bean
- 3½ teaspoons calcium water
- 3 tablespoons lemon juice
- 1¼ cup sugar
- 3 teaspoons Pomona's Universal Pectin

## Before You Begin

*Prepare calcium water — To do this, combine ½ teaspoon calcium powder (in the small packet in your box of Pomona's pectin) with ½ cup water in a small, clear jar with a lid. Shake well. Calcium water should be stored in the refrigerator for future use.*

## Directions

- 1 Wash and rinse jars, lids, and screw bands. Set screw bands aside until ready to use. Place jars in boiling water bath canner with a rack, fill at least 2/3 of the way full with water, and bring to a boil. Boil jars for 10 minutes to sterilize (add 1 additional minute of sterilizing time for every 1000ft above sea level), then turn down heat and let jars stand in hot water until ready to use. Place lids in water in a small pan, bring to a low simmer, and hold there until ready to use.
- 2 Remove and discard peach peels and pits. Then, in a large bowl, mash the peaches thoroughly.
- 3 Pick over raspberries to remove any dirt or debris. If raspberries look clean, rinsing is optional. Place raspberries in a bowl and mash thoroughly.
- 4 Combine the mashed peaches and the mashed raspberries and mix well. Measure out 4 cups of the mashed fruit mixture (If you have extra, simply use it for something else). Pour the measured amount of fruit into a large saucepan.
- 5 Using a paring knife, slice the vanilla bean in half lengthwise and scrape out the seeds. Add the vanilla bean seeds, as well as the bean pod itself, to the mashed fruit. Add lemon juice and calcium water to the fruit, then stir to combine.
- 6 In a separate bowl, combine the sugar and the pectin powder. Mix thoroughly and set aside.
- 7 Put the sauce pan on the stove and bring the fruit mixture up to a rolling boil over high heat. Add the sugar-pectin mixture, then stir vigorously for 1 to 2 minutes, still over the highest heat, to dissolve pectin. Return the jam to a boil, then remove from heat. Using tongs, remove the vanilla bean pod and discard.
- 8 Remove hot jars from canner and fill jars with jam, leaving ¼" of headspace. Remove trapped air bubbles, wipe rims with a damp cloth, and put on lids and screw bands, tightening bands only to "fingertip tight" (until resistance is met, and then just the tiniest bit more).
- 9 Place jars in the hot water, on the rack inside the canner. (Make sure jars are upright, not touching each other or the sides of the canner, and covered with at least 1-2" of water). Place the lid on the canner, return the canner to a rolling boil, and boil for 10 minutes. (Add 1 minute additional processing time for every 1000ft above sea level.)
- 10 Turn off heat and allow canner and jars to sit for 5 minutes. Then, remove jars from canner.
- 11 Allow jars to cool undisturbed for 12-24 hours. Then, confirm that jars have sealed. Remove screw bands from sealed jars, rinse off outside of jars if necessary, label jars, and store for later use.



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# Parsley

## The 2021 Herb of the Year

BY RITA HEIKENFELD



**P**ARSLEY (*PETROSELINUM CRISPUM*). Who knew this humble, and most ordinary, biennial herb would be held in such high esteem that parsley would be the International Herb Association's 2021 Herb of the Year?

Nicholas Culpeper, the famous 17th century physician, and herbalist noted that parsley, cultivated for over 2,000 years, "is a very good salad herb."

My own Lebanese culinary heritage proves that description: tabouleh/tabouley, the national salad of Lebanon, uses fresh parsley as a base.

Parsley, though, goes far beyond an ingredient in salad. That sprig of parsley on a restaurant plate is not just for looks. Parsley freshens the breath with its high chlorophyll content and helps stimulate digestive juices.

This pretty green herb contains vitamins A and C, important nutrients with antioxidant qualities.

### Choose Between Curly and Italian

I grew up with curly parsley. It holds up well due to its sturdy, curly leaves.

Italian/flat-leaf parsley was the parsley of choice in cooking school. To my palate, Italian parsley has a more refined flavor than curly.

Interestingly, parsley has no aroma but the spicy, somewhat peppery flavor is distinctive.

### Soak Seeds Overnight for Best Germination

Yes, parsley grows easily from seed but is slow to germinate.

To hurry the process along, I soak the seeds overnight in tepid water.

Plant in well-warmed ground, or in pots in a sunny location. Water when needed.

### Plant Seeds in Spring or Fall

You can plant parsley in the spring or in the fall. Planted in spring, you'll get a full season's growth. Parsley planted in the fall produces very early growth in the spring. Plant in full sun to part shade with good drainage, two inches apart and about ¼" deep. You'll be blessed with an abundant harvest.

### Harvesting Parsley

Harvest outer growth first. Parsley is a cut-and-come-again herb.

Feel free to give it a good "haircut" during the growing season.

Freeze parsley stems. They're a nutritious addition to soups, sauces, and stews. Remove before serving.

So now that you've got all the basics about parsley, here's some timely and yummy recipes using this common, much-loved herb.



### BELGIAN ENDIVE WATER LILY

This is so pretty and really easy to make. I've adapted the recipe to use fresh parsley along with other fresh herbs. I've also lightened up my original recipe, this time using less butter.

#### INGREDIENTS

- 3 heads Belgian endive
- 8 oz cream cheese, regular or light, softened
- 2 oz or 4 tablespoons butter, softened
- 1 clove garlic, minced
- Scant tablespoon each of fresh minced parsley, oregano, thyme, marjoram, basil, and dill
- Fresh lemon juice to taste
- Freshly ground black pepper to taste
- 1 heaping tablespoon Romano or Parmesan cheese

#### INSTRUCTIONS


1. Mix everything but Belgian endive leaves together. Do this by hand or in a food processor.
2. Shape cream cheese mixture into a mound and place on a pretty tray. Cut off the bottom of endive leaves. Starting with the largest endive leaves, push the leaves into the base of the disk about 1" deep. Make alternate layers to form petals.

#### Optional

Sprinkle with edible flowers or more of the minced fresh herbs.

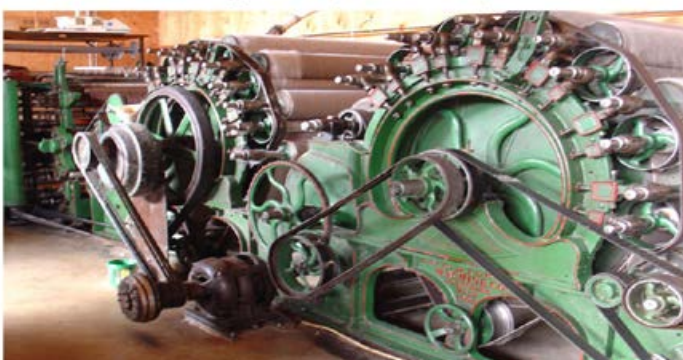
#### TIP

What is Belgian endive? Belgian endive, also known as French endive, is a bitter cream-colored, torpedo-shaped, vegetable. It's grown in darkness so it only develops chlorophyll at the very tip of its leaves.



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## GLUTEN-FREE QUINOA TABOULEH

I had requests to make this super summertime salad with quinoa instead of bulghur cracked wheat, which is traditional. Of course, you can use either.

Follow directions on quinoa box for cooking, using 1 cup dry quinoa for this recipe. Cool completely before adding to salad.

For the wheat, use 1 cup as well. Reconstitute the wheat by soaking in cool water until tender to the bite, about 20 minutes. Squeeze out excess water and proceed with the recipe.

### INGREDIENTS

- 3-4 medium tomatoes, chopped or equivalent grape or cherry tomatoes
- 3 green onions, chopped
- 1 bunch parsley, chopped
- 1 medium cucumber, chopped
- 1 bell pepper, chopped
- Cumin to taste — start with a good teaspoon
- Several sprigs mint leaves, chopped
- Several sprigs basil leaves, chopped
- Salt and pepper to taste
- ¼ cup vegetable oil, or less to taste
- Squeeze of fresh lemon juice to taste

### INSTRUCTIONS

1. Mix vegetables together.
2. Stir in quinoa and mix gently.
3. Add cumin and herbs and mix gently.
4. Add salt and pepper to taste. Stir in oil and lemon juice to taste.

### TO SERVE

This is wonderful as a side to lean protein, stuffed into pita halves, or as a relish for grilled meats.

### GOOD FOR YOU!

Along with the fresh garden vegetables and healthy herbs and cumin, the quinoa boosts the nutrition even higher. It's a complete protein and is gluten-free.



Parsley goes great with:

- |                 |          |
|-----------------|----------|
| ✓ Potatoes      | ✓ Eggs   |
| ✓ Tomato sauces | ✓ Grains |
| ✓ Poultry       | ✓ Breads |
| ✓ Salads        | ✓ Soups  |
| ✓ Seafood       | ✓ Stews  |

## CHIMICHURRI SAUCE

This is my slight adaptation of Rick Bayless' recipe. I had the pleasure of working with Rick when he hosted our culinary event at Macy's, where, at the time, I was the regional culinary professional. He made this chimichurri as part of a Mexican meal.

Rick's version is very spicy. For less heat, substitute jalapeños for the serranos.

Note that parsley, along with cilantro, are the herbal stars in this recipe.


### INGREDIENTS

- ½ head garlic, cloves broken apart but with peels left on
- 2 serrano or jalapeños peppers
- 1 cup packed cilantro leaves
- 1 generous cup packed parsley leaves
- ⅓ cup olive oil or more to taste
- Salt to taste
- Squeeze of lemon juice (optional)

### INSTRUCTIONS

1. Set a dry skillet over medium heat. Add the unpeeled garlic cloves and the peppers. Roast until soft and blotchy brown spots appear here and there. Turn frequently.
2. Cool. Remove skins from garlic.
3. Pull stems off peppers and chop roughly. No need to remove seeds unless you want to. (We don't.)
4. Place garlic, peppers, herbs, and oil in a food processor. Process until almost smooth. Taste and add salt and lemon juice.
5. Sauce will be thick; if too thick, add a bit more oil or stir in a little cold water.
6. Refrigerate, covered, up to two weeks.

### Versatile!

Top a grilled steak with chimichurri, stir some in when sautéing shrimp, or brush on chicken or vegetables before grilling. We love it on omelets, as well. 

**RITA HEIKENFELD** comes from a family of wise women in tune with nature. She is a certified modern herbalist, culinary educator, author, and national media personality. Most important, she is a wife, mom, and grandma. Rita lives on a little patch of heaven overlooking the East Fork River in Clermont County, Ohio. She is a former adjunct professor at the University of Cincinnati, where she developed a comprehensive herbal course.

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# Profitable Backyard Vegetable And Meat Production

BY HEATHER SMITH THOMAS

**A** PERSON DOESN'T NEED MUCH ACREAGE to have a small "farm" to grow marketable products like vegetables, eggs, or meat. A large garden, fertilized with litter from raising chickens or rabbits, can produce more than a family can use, with excess sold to neighbors or other local customers.

Martin Anderton, a homesteader, permaculture and homesteading advocate, and advisor in Massachusetts, says his region has a short growing season. "I stress the importance of locating and utilizing microclimates such as sunny hillsides, fences, or walls of your house where sunlight warms an area of your yard more than the rest. These are spaces where animals can be kept warmer in winter and plants can be started sooner in the spring. Other important season extension practices such as greenhouses, hoop houses, or high tunnels are also useful in small space homesteading," he says.

In terms of selling what you produce, Anderton says your biggest market is usually your neighbors, rather than a grocery store or even a farmers market.

It's helpful to have your animals in the garden at some point, to keep the soil healthy. When his family finishes harvesting beans, they put their moveable chicken coops out there so the chickens can scratch around and eat

bugs and fertilize the garden. "I don't put in permanent structures. Having mobility is important, especially in a small area."

In the spring, his chickens start in one area and rotate around, and by November, they are in the middle of his larger garden digging up grubs and fertilizing the soil for the next spring. The same can be done with a stationary house and electro-net moveable fencing.

A person can also do this kind of rotation with

rabbits. "It's easy to create small, moveable hutches with mesh floors, so the rabbits can eat the grass through the mesh and poop directly on the ground. If that's not convenient, you can have stationary hutches with collection troughs underneath — preferably with some sort of drainage system, because you don't want to collect all the urine and put it directly on

your garden. It has a high level of ammonia and this can burn the plants because it's too rich," he explains.

"It's also worthwhile to put worms in the rabbit manure, as long as it is drained well (or the worms will get burned, too). Then you just move aside the freshest rabbit droppings off the top, and you have worm castings underneath. Those can be put right into the garden, or you might feed them to your chickens occasionally, if you have an abundance. The worms are

In terms of selling what you produce, Anderton says your biggest market is usually your neighbors, rather than a grocery store or even a farmers market.

an incredible source of protein and other rich nutrients for the chickens,” says Anderton.

If you don’t have moveable coops in your yard and garden, find ways to make stationary coops work, and have enough bedding to keep the chickens healthy and happy, move them around and still distribute the manure. A person can keep adding new bedding and raking it out the back into a pile, to create compost in place.

He suggests finding people who are doing the things you’d like to do, and get advice and tips from them, and also find folks who’d like to buy your products or have a share in them. He raises meat chickens, and has an egg-share co-op program. “I usually get a group of seven households together. They all buy into purchasing a chicken coop, fencing, and chickens, and I train them to manage the coop through the summer. Each day, one household comes and manages the chickens. They let the chickens out, feed and water them, and take home that day’s eggs,” he says.

“It works nicely because all of these people said that they can’t raise chickens; they can’t have animals because either they didn’t have the money to do it or didn’t have the experience to do it by themselves, or the time. This makes it feasible — doing it just one day a week,” says Anderton.

“Currently, we are doing soil building projects on small lots in town, using chickens, and will expand to other livestock eventually. We rotationally graze chickens around these small plots of land and have a couple spaces planted in blueberries and raspberries, and some with apples and peach trees. We are creating edible food forests around the chicken coops,” he says.

This is the value of community, for homesteading — looking at the resources beyond your own backyard. “You might want to grow vegetables to take to the market but maybe you don’t have enough space. Maybe you don’t have to limit it to your own backyard. Perhaps your neighbor wants to help and it can be a cooperative venture.”

Look at your resources, and what you feel you can do. “Be willing to experiment but have some understanding about limitations and know when it might work or might not. Never underestimate the value of your community members. They will be your support and your customers, and a resource,” he says.

“I can’t afford to buy a lot of hay or wood shavings for bedding for my chickens. But I have a massive stockpile of leaves that I’ve gotten for free from all of my neighbors. I also have mulch that I’ve gotten from tree crews. If I see a tree crew working, I ask them if they need a place to put that truckload of ground-up tree material, since I am just right up the street. They are glad to get rid of it,” he says.

He found a greenhouse for his chickens — for free — on Craigslist. He still had the expense of securing it against rodents, but even with all the expense of fixing

## GOATS IN THE BACKYARD

One of his clients has goats in a small space. She has shrubs, each one protected by a four-foot diameter wire goat fence around them. The goats can’t get to the base of the shrubs and permanently damage them, but anything that grows beyond that four-foot fence, the goats can snack on. They keep the new growth trimmed.

“Periodically she also has a few chickens that have the run of that space when she fences the goats out; she takes down the goat fence and lets the chickens clean up around the base of those shrubs while they are producing berries. The chickens get to eat the berries,” says Anderton.

“Her three Nigerian dwarf goats produce enough milk for her and she sells a gallon a week to two of her neighbors. The chickens help the goats because they eat the intestinal parasites in the goats’ manure (and the parasites don’t get back into the goats). Being able to keep them together or rotate the goats and chickens helps a lot.”

it up, he was able to get a 20-by-37-foot greenhouse set up for his chickens for only \$500 and now has a great place to house them in winter. It has full sunshine and piled leaf bedding (leaves from his neighbors) inside to make a deep litter bedding.

“I can wet down the bedding and it heats up so I have hot compost all winter long to keep my chickens warm,” he explains. There are many ways to make a chicken enterprise work in your backyard.

For a vegetable garden, the chickens have great value to clean it up and supply fertilizer. “They get rid of pest bugs and their activity and manure is good for the soil. So, the main thing is how to incorporate the chickens into your system. Rabbits also work. My rabbit hutches right now are stationary even though I’d rather have them moving around. I collect the manure in a bin under the rabbits, let the urine go through in a tray underneath, and have worms that live in the droppings. It’s a great system,” he says. 🐰

**HEATHER SMITH THOMAS** ranches with her husband near Salmon, Idaho, raising cattle and a few horses. She has a B.A. in English and history. She has raised and trained horses for 50 years, and has been writing freelance articles and books nearly that long, publishing 20 books and more than 9,000 articles for horse and livestock publications.

Find Heather online at [heathersmiththomas.blogspot.com](http://heathersmiththomas.blogspot.com).

# HOW TO TAKE AN ACCURATE SOIL SAMPLE

STORY BY KRISTI COOK  
ALL PHOTOS BY LANCE BROOKS

Soil samples may be obtained any time of year provided the ground is not saturated. If the soil can be worked with a tiller or plow, a sample can be taken, as well.

**D**O YOU WANT YOUR GARDEN to produce the best-tasting food in town? Do you want to maximize production to fill your farmers market stands? Maybe you simply wish for your first garden to be a success and produce enough fresh, flavorful food for your dinner table. Whatever your goals are for your garden, you need a soil test. Yet, this simple and inexpensive garden chore is the most commonly overlooked aspect of gardening. How do I know? Just take a listen around the garden center and you'll hear countless folks complaining that their garden "just didn't do well this year." Yet when asked how their soil tested, they nearly always tell you they've never taken a soil test. So, take a few moments to discover the how and why behind soil testing so your next garden can be a chore of pleasure rather than a chore of frustration.

## Why Conduct a Soil Test?

Just as your body requires certain nutrients to perform at its best, so does your garden. Basic needs for

every garden include the proper pH, or acidity/alkalinity level, and sufficient levels of nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), and magnesium (Mg) to name just a few. And while it is true that nature is often able to provide what the soil needs in a more naturalized setting such as in a forest or a valley, a home garden

is unique in that we as humans determine what we wish to grow in the garden. Most often, our choices are not in sync with what nature is capable of naturally supporting.

For example, we may wish to grow blueberries, but our soil is too alkaline. Or we wish to grow cucumbers, but the soil is too acidic. To make the situation worse, when



A wedge the size of the shovel is all that is needed to open the ground enough to take a good sample.

we plant these same crops in the same general area year after year, the soil is drained on a continual basis resulting in the dreaded summer when "the garden just didn't do well." This constant drain on the soil's resources requires us to provide and replenish nutrients in order to meet our specific crops' needs. Soil testing tells us exactly which nutrients are needed and to what level.

But wait, can't I just toss in some fertilizer and call it a day? Sadly, this is most often the case with home gardeners. The reason is simple — it's fast and easy. But the end result is often a lackluster garden with pest and disease issues caused by a lack of proper nutrition. Just as people cannot fight off disease and pests easily when nutrition is lacking, neither can the garden. Nutrition is not just about robust growth and maximizing production. It is also a key factor in a plant's ability to fight off the dangers it faces within its environment.

### How to Conduct a Soil Test

Taking a soil test is simple, requiring little more than a spade, a bucket, and a way to transport the sample. First, determine which facility to use. Most labs offer free, or inexpensive, analysis of the potassium and phosphorus levels in addition to pH. Most, if not all, also routinely check for magnesium (Mg) and organic matter levels for the same nominal fee. More in-depth analyses may be obtained for an additional fee such as soil salinity, aluminum (Al), boron (B), copper (Cu), manganese (Mn), and zinc (Zn). Nitrogen (N) is most often not included unless requested due to the fact that nitrogen is not held in the soil very well and thus must be replenished each year anyway.

Once you've selected a lab, gather the collection materials needed. Some require samples to be submitted in specialized containers supplied by the lab while others simply need a pint jar or Ziploc bag of the sample.



The 'squeeze test' is not a reliable indicator of soil nutrient levels.

Other equipment needed is a spade or soil probe, a bucket for collecting samples, a pen, and paper.

Samples consist of multiple "cores" or "slices" of soil. For most family-sized gardens, five to 10 cores are usually sufficient while larger areas such as yards need 10 to 15 cores. If sampling areas are larger, consider up to 20 or more samples. If in doubt, contact your selected lab to determine their recommended number of cores to include in the composite sample.

To obtain samples, first remove all plant residue, rocks, mulch, etc. from the soil surface where the sample will be taken. Then take the spade and cut a triangular wedge in the cleaned-up area. Take wedges from multiple areas in the garden using a zigzag pattern to ensure samples are taken from the entire area. Once the wedge is removed, take a sharp knife or a clean hand trowel and slice a section of soil from the edge of the hole, roughly two inches or so in width from the surface down to about six to eight inches of depth. Then further reduce the width of the soil sample to about one inch. Place all samples from the same area into a bucket and mix thoroughly. You want the samples to be mixed as well as possible to create a composite of the entire area. Once mixed, allow the soil to dry thoroughly before packaging for transport. Most labs require two cups (or a pint) of soil to test, so check the sample size of the

selected lab. Label the sample and make notes as to which sites were sampled so that you know which results go with which location.

Once you receive the results, read them thoroughly and contact the lab if you have any questions regarding the instructions. Most include recommendations for amendments based on acreage and square footage to facilitate different sized operations. These recommendations also include how much nitrogen to add to your particular plot of land, so be sure to follow instructions closely so as to not add too much of any amendment.

Some basic computations are occasionally required to tailor the recommendations to your garden size, but labs are very helpful in assisting with the conversions. (These results may be used with both conventional and organic practices.)

A basic soil test is the most often overlooked aspect to growing a successful garden and is simple and inexpensive to do. Even better, tests need only be repeated every three to five years, so testing is not a laborious task to be added to an already busy season. Test in the fall when things slow down or test when the urge hits you, it's all the same. Be sure to test so you never find yourself saying your garden "didn't do well this year."

For a listing of soil testing labs in the U.S. go to: <https://gardeningproductsreview.com/state-by-state-list-soil-testing-labs-cooperative-extension-offices/>

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# KNOW BEFORE THEY CROW



## Picking out Roosters

BY PATRICE LEWIS

**I**N THE FUN OF GETTING TINY fluffy chicks, it's hard to imagine a time they won't be welcome in the barnyard (or backyard).

Yet most people want hens, not roosters. In some places (notably suburbs), roosters are not permitted at all, thanks to their penchant for crowing. So how do you tell apart males from females?

Several methods can determine gender (including some which are breed-specific). Sexing methods include:

- Vent sexing
- Wing feathers
- Behavior
- Leg thickness
- Comb and wattle
- Secondary feathers
- Sex-linked traits
- Behavior
- DNA testing

### VENT SEXING

When chicks are just out of the shell and dry, the only reliable sexing method is examining the sex organs in their vents. Vent sexing is a specialized practice that takes years to perfect. The difference between the male and female sex organs of newborn chicks is so subtle that even trained experts get it right only 90-95% of the time. Vent sexing can cause serious injury or death if done incorrectly, so this technique is best left to the professionals.

### WING FEATHERS

Between three and seven days old, feather sexing is possible — but **ONLY** if a chick's father was a fast-feathering breed and the chick's mother was a slow-feathering breed. "When slow-feathering females are crossed with fast-feathering males, the male offspring are slow-feathering like their mother, and the female offspring

are fast-feathering like their fathers," notes Dr. Jacquie Jacob from the University of Kentucky. Frustratingly, this technique of feather sexing does not work with purebred chickens.

Feather sexing of these hybrids is determined by a layer of feathers lying over the primaries. The longest feathers on any bird's wings are the primary feathers. If you (gently!) spread the little wings of week-old chicks with the mixed heritage mentioned above, the primary feathers are already in. Layered over those is a secondary layer called "primary coverts."

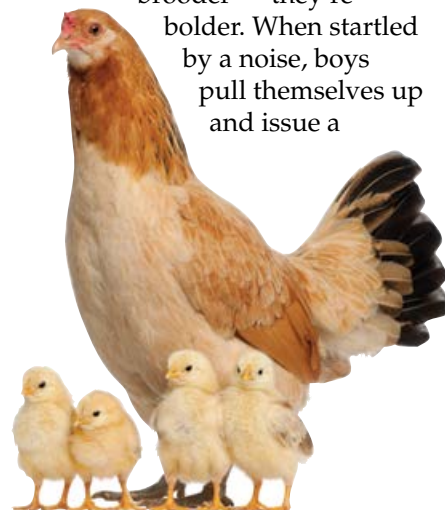
On hybrid pullets, the primary feathers are strong and straight, and the layer of primary covert feathers is obvious and well-developed. Their feather sprouts have an alternating pattern of longer and shorter feathers.

On hybrid cockerels, the primary feathers are shorter, look spindly, and lack a noticeable row of primary coverts. Their feather sprouts look all one length.

### BEHAVIOR

By the time they're a month old, little roosters are already becoming little roosters, not just in looks but in dominant behavior. Cockerels may square off with other males, feathers ruffled, to establish a pecking order. Little boys don't flee when you put a hand in the brooder — they're

bolder. When startled by a noise, boys pull themselves up and issue a



warming peep, whereas girls usually crouch down and stay silent. Cockerels are more prone to puffing out their chests and standing taller and even start "clucking" the pullets to a new food source, just as they do when they're adults.

### LEG THICKNESS

At four to six weeks of age, pullet legs are more slender and refined, whereas cockerel legs are thicker with bigger feet.

As with all things chicken, leg thickness is not uniform across all breeds. Bare-legged chicks are easier to sex than feather-legged chicks.



Between three and seven days old, feather sexing is possible – but **ONLY** if a chick's father was a fast-feathering breed and the chick's mother was a slow-feathering breed.

### COMB AND WATTLE

In breeds with pronounced combs and wattles (and not all breeds have these traits), little roosters already have larger and redder attributes than pullets by four to six weeks of age. By eight to 10 weeks, combs and wattles are noticeably larger and more colorful among males.

### SECONDARY FEATHERS

By four to six months of age, secondary feathers begin to form as the birds approach sexual maturity. The most distinctive are the hackle, saddle, and tail feathers.

Long, sinuous hackle feathers grow around a rooster's neck and flow over his "shoulders." Hens also have hackle feathers, but they stay rounded and shorter. In some breeds, hackle feathers are a different color than feathers on other parts of their bodies. If you



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see two roosters fighting and it looks like an umbrella got stuck in their throats, those are the hackle feathers.

Saddle feathers, as the name implies, are located on the back just above the tail, right where a saddle would fit. They start growing at around three months. These flowing, sinuous feathers spill down the sides like little waterfalls. Some breeds of roosters (notably Sebrights, Silkies, Golden Campines) lack both hackle and saddle feathers (they're termed "hen feathered"), but among most breeds, these are reliable secondary characteristics, since only males have saddle feathers.

Then of course there are tail feathers, for which strutting roosters are justifiably famous. Even before elongated plumes grow, boys and girls have different tails. The tail feathers of hens are broad, straight, and full. On young roosters, the tail feathers are rounded, a little pointy, and not well-defined. Most notably, on cockerels the tail area "arches" in a rounded shape, whereas a hen's tail region is flatter. Once again, however, not every breed of rooster has large, showy feathers.

By the time  
they're a month  
old, little roosters  
are already  
becoming little  
roosters, not  
just in looks but  
in dominant  
behavior.

### SEX-LINKED TRAITS

In a few lucky instances, it's possible to instantly tell the gender of a chick based on color. Male Rhode Island Reds and New Hampshire chicks have a white spot on the down over the wing web (this spot is lost when the chicks feather out). Sexing by this spot color is not always accurate

because of the spot's size variations. Similarly, Barred Plymouth Rocks have a light-colored spot on their heads upon hatching — larger in males, and smaller and narrower in females. It's not flawless, but this gender determination is about 80% accurate. The Welsummer breed has differences in striping between males and females, accurate to about 90% (with experience).

Sex-linked chickens are crossbred hybrids, producing the desirable traits of both parent breeds (such as egg color, egg production, or meat production). A convenient benefit is male and female chicks are different colors. Breeds include the Bovan Nera (sometimes called Black Rocks or Black Stars) in which Rhode Island Reds are crossed with Barred Plymouth Rocks. However sex-linked birds will not breed true.

Some "autosex" breeds also have different-colored genders at hatching. Originally hybrids with complicated lineages, they continued to breed "true" and developed into an autonomous breed, such as "Legbars" (originally bred from Leghorn roosters and Barred Plymouth Rock hens).

There are essentially two kinds of sex-linked crosses: black sex-linked and red sex-linked. Black sex-linked is a cross between a Barred Plymouth Rock hen and a Rhode Island Red rooster. Upon hatching, both sexes have black down, but males have a white dot on their heads.

A number of different crosses can produce red sex-links. At hatching, males are whiter and females are red.

### CROWING AND LAYING

Most people think crowing is the ultimate test of a male, and for the most part, they're right. Early crowing attempts by young roosters, which start around four to five months of age, are often comical. "He's missing a 'doodle' in there," someone once observed. Some hens do crow occasionally,





# Wound Care for Poultry

*Be Prepared in Advance*

BY REBECCA SANDERSON



Photo by Sean of Great Basin Eggs.

**I**F YOU HAVE POULTRY, SOONER OR LATER one of them is going to need you to care for a wound. That wound could result from a predator attack, feather picking by other chickens, or just from an encounter with something sharp around your homestead. You will need to be prepared before your poultry gets injured by having both the supplies and knowledge for wound care.

## Before Treatment

When your birds gets hurt, they are likely in pain, scared, and perhaps confused. Wrap them gently in an old, clean towel to prevent them from hurting themselves (or you) further with struggling and panic. If the wound is not too serious, treating it at night may help the bird to be calmer and more relaxed. In this case, you would need a headlamp or small portable battery-operated lantern. Take the wounded bird away from the rest of the group. The last thing you need is a nosey one getting in the way or knocking over your supplies. If the wound is still bleeding heavily, applying wound powder and light pressure for about 10 minutes with a clean cloth should do the trick. Feet wounds are notorious for heavy bleeding.

## Clean the Wound

Now you need to clean the wound. This is best done with a saline solution that you can pour or squirt into the wound to clean out dirt and debris. Saline solutions can be purchased in first aid sections or made with four cups of (cooled) boiled water and two teaspoons of salt. The salt should be non-iodized and not contain any anti-caking agents. If the wound is deep, you will need to use a squirt bottle or syringe to clean it out. Tweezers are great for carefully grabbing larger pieces of debris. If you are having a hard time getting everything, the foaming action of some hydrogen peroxide can lift the debris out, but is damaging to soft tissues and should only be used as a last resort. Gently dab the wound dry with a gauze pad.



If the wound is not too serious, treating it at night may help the bird to be calmer and more relaxed.



## Treat the Wound

Once the wound is completely clean, it needs to be treated to prevent infection. You may want to keep a few types of antibacterial products handy for different uses. A simple spray such as Blu-Kote works great for small wounds such as scratches or feather picking. It not only disinfects, but it also colors the area purple so most chickens will leave the area alone rather than continuing to peck at it. For larger wounds, povidone-iodine is a broad-spectrum antimicrobial available over the counter. Gently pour the iodine on the wound and allow it to air dry. You may follow with antibiotic ointment for dry wounds or antimicrobial powder for oozing wounds.

## Dress the Wound

If you are only treating minor feather picking or some superficial scratches, Blu-Kote or a similar product is usually enough covering to aid in healing. If not, then you may need to dress the wound. First, check for feathers that may get in the way of the wound healing and clip or pluck them away. If the wound is no longer bleeding and is in a place where it will not be pecked at, you may leave it open so that you can check it more easily. Otherwise, cover the wound with a gauze pad and tape it either directly around the wound or make a body wrap around the bird to hold the dressing in place.

## After Treatment

You must keep the injured poultry isolated from the others until it is completely healed. This can be accomplished by having a separate wire cage away from the other birds, or even with a box in your closet. Your healing bird needs rest, warmth, quiet, and no more stress. The injury may likely have put it into shock, and you need to ensure that you do not cause that shock to go deeper. Be sure that it has adequate food and water. You may need to tempt it with some favorite treats as it may be disinclined to eat while it is in pain.

## Treating Infection

Sometimes, even though you did everything by the book, a poultry wound can still become infected. This is easier to spot if you are either checking the wound under the dressing daily or opting not to use a dressing. An infected wound will be red, may ooze pus or fluid, and the scab may get larger as time passes. If a wound just isn't healing within about two weeks, assume it is infected. You will need to remove the scab. Rather than simply ripping the scab off, soften it first by repeatedly applying a thick ointment such as zinc oxide (diaper

## WOUND CARE SUPPLIES

- Old, clean towel
- Headlamp or battery-operated lantern
- Saline solution
- Hydrogen Peroxide
- Gauze pads
- Medical tape
- Blunt-tipped scissors
- Povidone-iodine
- Antibiotic ointment
- Antimicrobial powder
- A thick ointment such as zinc oxide or Ichthammol
- Antibiotic such as Terramycin (talk to your vet)
- A safe, isolated place to heal

rash cream works great) or Ichthammol. This may take a day or even two of repeated applications. Clean out the infection once again using your saline solution and retreat the wound just as before. Once again, if the wound is oozing or weepy, an antimicrobial powder is better than an ointment.

## Special Considerations

If the wound is from an animal bite, you may need a stronger antibiotic such as Terramycin. Also, if the poultry's wound doesn't stay closed with a simple dressing or is multiple layers deep, it may need stitches. This is best done by a veterinarian or other professional.

## Conclusion

While we all hope that we will never face our birds getting hurt, we must be prepared for proper poultry wound care. Having these supplies on hand and knowing what to do will speed your ability to help them in their time of need. 🍀

### RESOURCE

- Damerow, G. (2010). *Storey's Guide to Raising Chickens*. North Adams, MA: Storey Publishing.

**REBECCA SANDERSON** grew up in a very small town in Idaho with a backyard full of chickens, goats, sometimes sheep and ducks, and other random animals in addition to the cats and dogs. She is now married with two little girls and loves the homesteading life! Her husband is very supportive (tolerant) of her continued experiments in making many items from scratch and he even helps sometimes.

# 10 WAYS TO PREVENT CHICKENS EATING THEIR EGGS

FLOCK FILES



Most of us who are in the business of raising backyard poultry are doing it for the eggs. When your chicken's eating eggs, nobody wins. Many practices on this list are not only great ways to prevent egg eating, but are also good ways to keep your backyard chickens happy and healthy.

**1. Make sure your chickens are getting enough protein.** The protein ratio in their layer feed should be at least 16%. You can supplement their diet with milk, yogurt, and/or sunflower seeds.

**2. Keep the eggshells strong.** Make sure hens get enough calcium to build strong shells. A thin shell is a broken shell and an eaten egg. The easiest way to do this is to supplement with oyster shells. If an egg does break, clean it up quickly!

**3. Put a wooden egg or golf ball in the nesting box.** The chicken will peck it hoping to break the "egg" open and get a yummy snack only to find it unbreakable. They will eventually give up.

**4. Fill an empty egg with English mustard.** (Most) chickens don't like mustard. Blow out an egg. Carefully fill it with mustard and place it in the nesting box. When your egg eater goes to eat it, she'll get a nasty surprise and be turned off.

**5. Collect eggs frequently.** Try to collect eggs two to three times a day.

**6. Provide a cushioned nesting box.** No, you don't need to sew an ACTUAL cushion. Just make sure there is enough natural material in the box that when the hen lays the egg, it falls softly and doesn't crack.

**7. Keep nesting boxes dim/dark.** One great way to do this is to sew and install some nesting box curtains.

**8. Only feed your chickens cooked/scrambled eggs.** A lot of people like to supplement their chickens' diets with eggs. Chickens eating eggs are fine. Just make sure they are cooked so your girls don't get a "taste" for raw eggs.

**9. Build/buy slanted nesting boxes.** You can build or buy nesting boxes that are slanted so that when the hen lays her egg, it rolls away and out of her sight.

**10. Give them plenty of things to do and peck at.** A bored or crowded chicken will take to pecking at things, even their own eggs. One easy, homemade thing you can do is make toys for chickens, to keep your hens busy and pecking at the "right" thing.

Implementing some or all of these recommendations should help with your egg eating problem. For some, the very last thing to do is cull. Some feel this is cruel, others view it as a flock problem that must be dealt with seriously. Egg eating CAN be a hard problem to solve and it can spread to other hens if not solved effectively. At the end of the day, it is a personal decision that we each have to make.



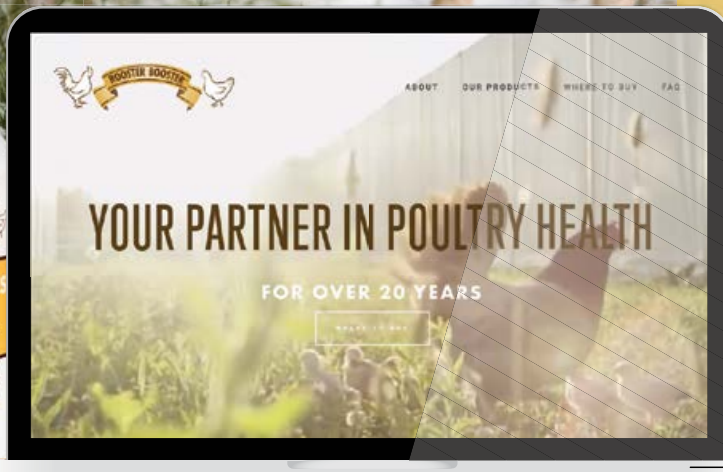
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# Choosing a Butcher for Your Pasture Pigs



BY JODI CRONAUER

**R**AISING PIGS ON PASTURE not only means you have healthier pigs and have paid less to raise them, but also that you have better-quality pork. So, you've taken the extra steps to raise your pork differently, now what? Do you butcher your pigs yourself, take them to a trusted butcher, have a mobile butcher come to your farm, or just take them to any local butcher?

This answer is going to be determined by a few factors. Are you butchering the pigs just for your family? Are you going to sell packages (1/8, 1/4,

1/2, whole)? Or are you planning on selling individual cuts of the pork?

Butchering a pig specifically for yourself and your family means you

pork and are eating it is extremely gratifying and rewarding.

When you are planning to sell to other people, it is always best to

determine what your individual state requirements are before you decide on what butcher to use. When selling in packages or individual cuts, most states require the butchering and processing to be done by a licensed butcher. Knowing your butcher personally,

Knowing your butcher personally,  
knowing how the facility is run, and  
knowing how clean the facility is kept is  
important information you should have  
before deciding on a butcher.

know everything that has happened to your pigs from beginning to end. Knowing you have raised quality

knowing how the facility is run, and knowing how clean the facility is kept is important information you

should have before deciding on a butcher also. The most important fact to know, as far as we are concerned, is knowing that you will be getting your own pork back from the pigs you brought in. If you are like our family, then you didn't go through all of the time and energy to raise your pigs outside on pasture only to get the pork from "Charlie's traditionally raised pig" down the street.

When our family first moved to Wisconsin, we had to find another butcher for our animals. After having a spectacular butcher for the past many years, we had to start over and find a quality and ethical butcher who met all of our needs. Come to find out, this isn't an easy task. We started by word of mouth. Everyone we talked to told us three different options for local butchers. We decided to pick one and try them. Now, we raise our pigs outside year-round and they have never been confined, nor in a pen area where they are walking through piles of their own feces. Imagine my horror when I got to the butcher and opened the door to let the two pigs out, only to have the feces of other animals falling back into my trailer. I was both appalled and horrified. I should have turned around and left at that point, but I didn't. I felt like I was letting my pigs down in the last 30 minutes of their lives. Our pigs had never seen anything like that before and none of our pigs have seen it since. But that wasn't the worst part of that butcher shop. When I handed in my cut sheet to the woman at the counter, I asked for confirmation that I would be getting our own pork back. I was told, in no uncertain terms, that no, that isn't how they do business. They take all of the pork for the day, put it into totes, and give it back to the customers based on weight. Needless to say, that didn't sit well with me. I asked what I had to do to enable us to get our own pork back.

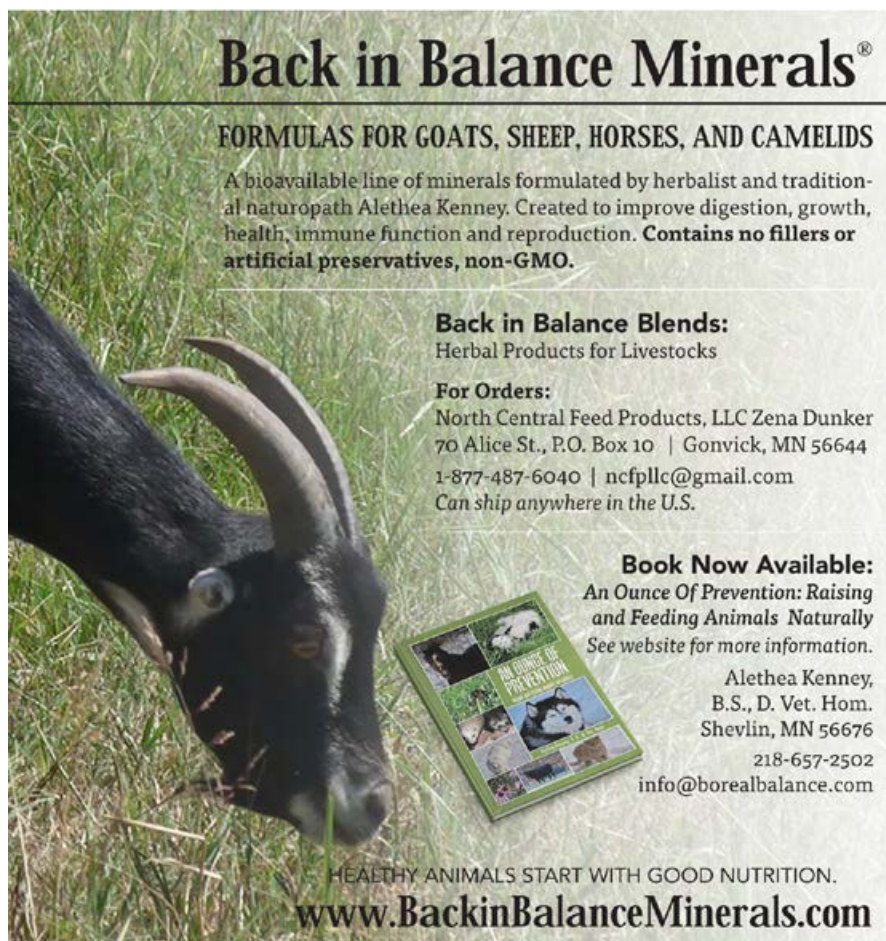
They had to get the owner and the butcher out to meet with me and discuss what needed to be done. We finally figured what needed to happen so we could get our own pork back. I had only taken two of our pigs because we wanted to try them before we took in more. Thank goodness!

By the time we had it all figured out, there was a line of 11 people behind me. I apologized for taking so long and started to leave. As I was walking away, the gentleman behind me said to the woman at the counter, "I have 10 steers today, what do I need to do to make sure I get all of my own beef back?" I smiled and walked out! We have never been back to that butcher again.

From that point on, we visited the butcher shops before taking animals and we requested to look at their facilities (both the holding pens as well as the cutting area). We only encountered one butcher shop

that refused to let us look at their place. Needless to say, we never took animals to that shop. While talking to the butcher shops, we had one shop adamantly refuse to give us back our own pork regardless of how many animals we brought in or how we had it packaged. We never went to that shop either. We found a few butcher shops that we thought would be good and when we took our pigs to them, they were good. Ultimately, we found a butcher shop that we developed a great rapport with. They cut our meat like we want, package the meat like our customers want, and make sure we get our own meat back each and every single time we take animals in. The shop is always clean and sanitized and they always put our animals into their own clean holding pen so they aren't stressed by other animals.

We highly recommend doing a check of the butcher shop before



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you choose one. Talk to the owner, make sure you know how your meat will be cut and packaged. Most importantly, make sure you know that your own meat is coming back to you!

It is also important to know what inspection certifications the shop has. When selling individual cuts of pork across state lines, we are required to have it USDA inspected. Since we live near the border of Michigan, this is a common occurrence. For that reason, we had to make sure our butcher carried the USDA inspection as well as the state inspection. Checking your state requirements will let you get your pork butchered and inspected correctly for you and your farm.

Packaging is something you should also consider. There are a few options when getting your meat processed. Traditionally,

freezer paper was used to wrap all of the cuts of meat, but within the past few years, vacuum wrap has become more popular. There are some benefits to both forms of wrapping, so you need to determine what will work the best for you. Vacuum wrapping is the better method for protecting the color, flavor, and overall quality of processed meat from oxygen. The problem with vacuum packing

is that if the vacuum seal breaks, the meat is not protected as well. We personally get all of our cuts of meat packaged in vacuum packaging except for our hams. The hams get packaged in freezer wrap paper because the vacuum seal breaks too easily on the bigger hams.

Knowing your butcher will help ensure you are eating the same quality pork you raised! 🌱

**JODI CRONAUER** lives in Wisconsin with her husband and her three sons. They raise Idaho Pasture pigs, Kunekune pigs, and American bison as well as Gypsy Vanner horses. They saw the need for animals raised properly in pastures outdoors as well as the need for them to be raised without chemicals and hormones. They strive to provide both at their farm and pride themselves in producing quality animals in every way. The meat from their pigs and bison is rich in essential nutrients because they eat grass as their primary diet. Jodi is the author of *Raising Pigs on Green Pastures* (Dorrance Publishing, 2021).

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By Jodi Cronauer

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# Accidental Shetland Sheep Farmers

BY LAURA THOMAS

small-statured with rams being 90-125lbs, ewes 90-100lbs, and standing between 22"-26" tall. This breed is extremely hardy, being able to endure cold weather, and they're disease-resistant.

Shetlands can thrive on low levels of nutrition, thereby making them ideal for poor pastures in need of conditioning. Shetland sheep are not as well-known in North America because of their non-commercial applications due to their small size and low wool production. Fleeces range from two to four pounds per sheep. Shetland sheep are becoming more popular because of their fine, soft wool. The wool is graded from fine at its smallest diameter 10 microns to its largest diameter of 30 microns, making it, "Against the skin soft."

Shetlands have naturally occurring colors in their wool, with 11 main colors such as blue, silver, black, and red-brown, and with 30 recognized patterns within the breed.

It produces a naturally soft, and dye-free product. Shetland wool has been sought-after by hand spinners for generations because it's one of the most versatile of wools used for baby clothes and blankets, to very fine shawls and lace, to durable outerwear and felting. The wool that cannot be used for spinning can be used as a water reservoir in the garden, lining hanging baskets, and mulching around soft fruit. Shetland sheepskins are an excellent product and can be used in a variety of ways including baby rugs, car seat covers, and strollers to luxurious rugs for the home.

The breeding season is late October through January, with gestation being five months. This breed has a low mortality rate and an ability to produce and raise multiple births successfully. Shetlands are wonderful mothers producing enough milk for their lambs and they need little to no assistance in the birthing process.

The lambs, when born, range

**I** BECAME WHAT I TERM as an accidental sheep farmer. Why do I say that? Well, sheep were not something we had considered for our small homestead. Let's say plans changed. Our whole northwestern area of Montana has been invaded by knapweed, an invasive plant that takes over by sterilizing the ground so that nothing else will grow. And the property we had bought had knapweed. I did some research on how to eradicate the knapweed and the recommendation was a chemical spray, but we wanted something that would be environmentally safe to use, not to mention, spraying is expensive. Also, it would have to be sprayed every year.

My husband said, "Ok, now what do we do?"

Out of the blue, I said, "We need sheep."

"Sheep? And what value will that bring to us?" he said. I didn't have the answers at that time, but we knew the knapweed was something we needed to deal with.

So, our adventure began. We

bought cattle panels for fencing. A bit pricy up front, but long term, they pay for themselves with easy maintenance. And a big benefit: sheep can't get out and predators can't get in. We built a 10'x15' shelter from a yard sale find, including the tin for the roof. So far, we were doing good and next was time for the sheep. It's funny, but I didn't go looking for a specific breed; they kind of came to me. And as I was looking through our local trader ads, I saw the ad for Shetland sheep. The seller was retiring and wanted to find a good home that would take her small herd of sheep. I was new to sheep and had no idea of what to expect or anything about this particular breed. The seller was very informative and helpful. So, the sheep came home with us, and here is what I learned and am still learning about this wonderful little breed.

Known as a heritage breed, Shetland sheep originally came from the Shetland Islands of Scotland, going back to the Vikings and maybe even further. This breed has a mild temperament and are




from three to five pounds, are lively and robust, not to mention cute, and need little to no bottle feeding.

Shetlands are also known for their high-quality, lean, tender meat with outstanding flavor and texture. As a primitive breed, they tend to put their fat around body organs rather than muscle, resulting in a far leaner meat making it a great choice for people who are looking to reduce fat in their diet, without losing flavor. The meat is easy to prepare with no need of elaborate preparation or sauces.

As a homesteader, I have learned

that sheep, particularly Shetlands, can and should be a part of homesteading. Our Shetlands have added value to our homestead, by not only a means of producing our own product on several different levels but they are also wonderful weed-eaters, controlling our

knapweed issues. I have come to love this little breed of sheep. If you're interested in learning more in regard to this breed, there are websites specific to Shetlands. And there is also North America Shetland Sheepbreeders Association (NASSA) that is very informative. 

**LAURA THOMAS** is a homesteader on three acres in Montana where she grows a garden for self-sufficiency, raises Shetland sheep, poultry, and a Caucasian Shepherd guardian dog named Max. And for fun, she has two horses and also does some photography.

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## Miniature Cattle May Be a Good Fit For a Small Farm

BY HEATHER SMITH THOMAS

**M**ANY FAMILIES ON A SMALL FARM enjoy having livestock but don't have a lot of land for pasture. With only one or two acres, you might be able to keep one standard-size milk cow or a couple of calves to grow for beef. A lone animal is not happy or as productive as a cow with companions, however.

This problem can be resolved with miniature cattle. Several "minis" can make a "herd" and can actually produce more milk or beef per acre than one or two standard breed animals, just because the pasture will support more of them. Miniature cattle are also easier on your land, and easier to manage. Children can handle them and halter-break the calves.

Fences don't need to be as tall; it's easier to contain small cattle. It does require some adjustments and different facilities/equipment, however. For example, water tanks and hay-feeders need to be shorter.

You also shouldn't breed a miniature cow to a standard-size bull, even if he's smaller than the average of his breed. The genetic mismatch in size might create

a larger calf, and the cow might need a cesarean to deliver the calf. The best option is to breed your miniature cows to miniature bulls using artificial insemination (AI).

Most of the miniature breeds today were created by selectively breeding smaller animals in traditional breeds, or utilizing some of the "older" genetics that were typical before the 20th century. Cattle brought into the U.S. in the late 1800s and early 1900s were smaller animals, compared to cattle today.

Most modern cattle have been selectively bred to increase their size for more beef production or greater volume of milk. Some cattle still carry the genetics of their smaller ancestors, however, so the people who have been creating miniature cattle try to select these smaller-size purebreds, crossing them with a small-breed bull with proven traits. The goal is to keep desired conformation and relative purity of the breed (but creating smaller animals) through careful breeding and selection.

The International Miniature Cattle Breeder's Society and

Registry maintains herd books for 26 breeds, and the Animal Research Foundation registers minis of every breed, but several of the miniature breeds today, such as miniature Jerseys, Herefords, and Angus (often referred to as Lowline Angus), have been around long enough to establish their own registries and breeder lists. Their genetics are diversified enough and plentiful enough that inbreeding (and some of the problems that go along with it — such as dwarfism, if both parents carry that recessive gene) isn't a serious issue.

Minatures of many other breeds, such as Holstein, Highland, and White Park, are harder to find and don't have a miniature registry established yet. With a small gene pool, inbreeding is more of a concern.

The miniature Jersey is somewhere in between. There's a registry but membership is small and most breeders have only a few cows. But the "small" Jersey population is diverse enough that they won't become quickly inbred. Also, due to the popularity of the Jersey as a family milk cow, more

folks are downsizing standard Jerseys using small-breed Jersey semen, which also helps with genetic diversity.

Other “small” cows, like the Dexter (from Ireland) and the Vechur from India, are traditional breeds of small-sized cattle. The Australian Lowline was the unexpected result of a scientific experiment with Angus.

Dexter cattle are traditionally tri-purpose (beef, milk, and draft) and small enough to be easily handled by women and children. This breed has good foraging ability, high feed conversion, and meat-to-bone ratios. You can finish a grass-fed Dexter steer in 18 to 24 months, and it will dress out at 50 to 60% of its live weight.

Small-framed cattle are becoming more popular today, especially among small farmers with only a few acres of pasture and people who raise grass-fed beef for custom butchering. The smaller animal is a more appropriate size for this niche market.

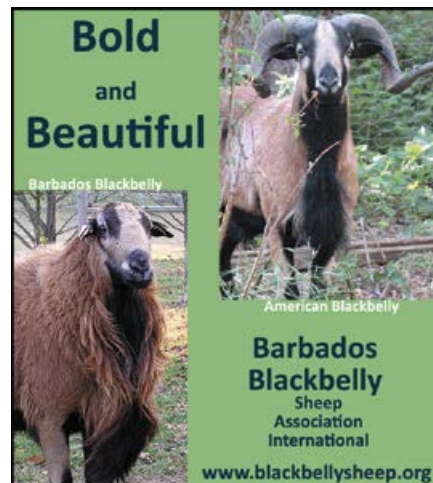
For instance, Lowline Angus have exceptional feed efficiency and less waste fat on the carcass, along with the benefits of calving ease. These small Angus began as a research experiment in Australia many decades ago at the Trangie Agricultural Research Centre in Australia, where two Angus herds were kept for many years. They kept one herd basically the same frame size they were when they were first imported from Scotland. The other herd was made up of animals selected for larger frames and more growth.

This research center was created in 1929 to provide high-quality Angus genetics to the Australian cattle industry, with seedstock purchased from Scotland, Canada, the U.S., and Australia. The research herd was closed to outside genetics in 1964. As part of the performance testing, scientists kept track of weight gain, structural

measurements, visual assessments, and did selective breeding to achieve certain goals.

The trial that led to Lowline cattle began in 1974, to evaluate selection for growth rate on herd profitability — to see whether large or small cattle were more efficient converters of grass to meat. For this experiment, the Trangie herd was divided into three groups, based on yearling growth rates. The high growth rate yearlings were called High Lines, the low growth rate yearlings were called Low Lines, and a randomly selected group was called Control Lines.

The trial focused on detailed evaluations regarding feed intake, weight gain, reproductive performance, milk production, carcass yield, and structural correctness. The Low Line herd started with 85 low growth rate (small-framed) cows, mated to bulls that were also selected for low growth rate from birth to yearling age (low yearling weights), and this herd remained closed to outside genetics. All replacement bulls and heifers were selected from within that line, based on the small size at maturity. After 15 years, the



Lowlines were 30% smaller than the Highline cattle.

This research project continued for many years, and then was disbanded because most ranchers wanted big cattle. Australian cattlemen who purchased the small cattle started a Lowline Angus Association. By the late 1990s, a few North American cattle producers became interested in these cattle. A Canadian Lowline Association was formed in 1998. In 2017, the American Lowline Registry changed its name to Aberdeen Angus Association (promoting the



Miniature Zebu, Annabelle.

“original” small-framed Angus cattle).

At birth, calves weigh 45 to 53 pounds. They grow rapidly at first because the cows give lots of milk and double their birth weight in the first six weeks. At eight months, the heifers average 240 pounds and bulls 300 pounds. As yearlings, heifers weigh about 420 pounds, and the bulls 510 pounds. Mature cows weigh about 700 to 750 pounds and bulls about 880 to 1,500 pounds. These cattle can produce 70% of the beef (on 50% of the feed required) of a larger animal. This means more cattle can be grazed

and more total beef produced on any given pasture.

Mini Herefords are another scaled-down purebred breed. They mature earlier than standard Herefords, plus they are gentle, adapt to all climates, and are highly efficient foragers. The Miniature Hereford has been developed over the last 30 years by selective breeding of Herefords originally imported to the U.S. from England in the early 19th century. The breeding program to develop these smaller cattle was started by the Rust Largent family in Texas in 1974. Rust Largent initially concentrated

on breeding efficient cattle suited to the local conditions of his ranch. After working on size reduction for several years to increase efficiency, he used a bull called Laser that sired smaller daughters.

The only difference between a Hereford and a Miniature Hereford is height; the Miniature Hereford has the same body profile and proportions. A Miniature Hereford averages 42 inches in height and weighs 1,000 pounds or less. Otherwise, Miniature Herefords have the same characteristics as larger counterparts. All purebred Miniatures can be registered with the American Hereford Association, once they are checked free of the dwarfism gene, but they also have their own registry (Miniature Hereford Breeders Association).

Miniature Zebu cattle resemble Brahman cattle but are much smaller and sometimes have upright ears rather than drooping ears. They have the same short, sleek hair coat and tough, loose skin, with more sweat glands than other cattle, and do well in hot climates. They are more resistant to biting flies and ticks and thrive on marginal pasture. These cattle are eye-catching, docile, and easy to handle.

The Miniature Zebu was established as a breed in the U.S. with the formation of the International Miniature Zebu Association in 1991. At that time, there were small zebu cattle in 23 American zoos, and others owned by about 50 private owners. The parent stock were originally imported from Brazil, the Dominican Republic, and Sweden.

Miniature Jerseys are perfect for a family farm, for folks who want a milk cow to produce their own milk and cream for butter and ice cream. Helping take care of a cow (and learning to milk one) is a good experience for children.

Jerseys are the smallest dairy cows and their milk has the highest percentage of protein and butterfat. They are very feed-efficient, with



Lowline Angus.



Miniature Zebu.


excellent feed-to-milk conversion. This trait is even more pronounced with Miniature Jerseys. They readily maintain weight while producing at their peak. Their lower feed requirement also means they can be managed on less acreage, and are less expensive to feed,

Today's Miniature Jersey is very much like the "original" Jersey cow. The frame size of this breed gradually increased with selective breeding because the dairy industry wanted larger cows that could produce more milk. The full-size Jersey is still the smallest dairy cow, but much larger than her early ancestors. The Miniature Jersey of today descends from older bloodlines that were not changed as much in size.

A Miniature Jersey should look just like a full-size Jersey with proper structure — just smaller. True miniature cattle are bred to be proportionally smaller than their full-size counterparts, and should not just have short, tiny legs or a large head. Often, these disproportionate animals are actually dwarfs, the result of doubling up a genetic defect. Affected animals generally have short legs, and often have a big head and short nose ("bulldog" calf). This recessive trait often shows up when breeders try to create smaller animals by inbreeding and linebreeding. Many breeds (including Jersey, Dexter, Hereford, Angus, Shorthorn), have a few individuals that carry this recessive gene but the "dwarf" calf is only produced when two carriers are mated and the calf inherits a defective gene from each parent. Dwarfism in Miniature Jerseys sometimes occurs when breeders out-cross their Jerseys with Dexter cattle to reduce the height of the offspring.

The American Miniature Jersey Association & Registry began in 2000. Miniature Jerseys are divided into size categories, with true Miniatures reaching up to 42 inches when measured at the hip, and the larger "Mid-Miniatures" measuring between 42 and 46 inches. Cattle

over 46 inches can be registered as breeding stock but not miniatures.

The weight of a standard-sized Jersey cow ranges from 800 to 1,200 pounds, while standard Jersey bulls can weigh as much as 1,800 pounds. Miniature Jersey cows range from 500 to 800 pounds and require only about one-third of the feed or pasture. 

**HEATHER SMITH THOMAS** ranches with her husband near Salmon, Idaho, raising cattle and a few horses. She has a B.A. in English and history. She has raised and trained horses for 50 years, and has been writing freelance articles and books nearly that long, publishing 20 books and more than 9,000 articles for horse and livestock publications. Find Heather online at [heathersmiththomas.blogspot.com](http://heathersmiththomas.blogspot.com).

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# SIGNS OF GOAT HEAT

BY GAIL DAMEROW

Breeds that cycle year-round include fainting goats, Kinder, Boer, Kiko, Nigerian Dwarf, Spanish, Pygmy, and sometimes Nubian goats. Alpine breeds experience heat cycles about mid-summer until the end of the year. Seasonal breeders include Alpine, LaMancha, Oberhasli, Saanen, and Toggenburg goats. Angoras are also seasonal.

Estrus lasts for two to three days, starting gradually, reaching a peak, and then tapering off. During the peak, known as standing heat, a doe is receptive to a buck's attention and can become pregnant. The time between the start of one estrus and the start of the next is called the estrous cycle. Different does have different estrous cycles that can range from 17-25 days, with 19 days being typical.

## SIGNS OF HEAT

Some does show little or no signs of estrus, a phenomenon known as silent heat. Here are ten ways to recognize goat heat:

### 1. The doe gets talkative

She may vocalize more than usual. Nubians may literally scream while in heat. If no buck is present, she may moan and blubber as a buck in rut would.

### 2. The doe wags her tail.

She usually wags her tail, a behavior known as flagging, and may let you handle it. Even while flagging, a doe that's not in standing heat will spurn a buck's attentions.

### 3. The doe's personality changes.

A normally submissive doe may become aggressive, while a normally aggressive doe may allow other goats to boss her around.

### 4. Her tail gets sticky.

The area under her tail may become red, swollen, and wet with a gel-like

discharge. Identify vaginal discharge by noticing if hair at the sides of the tail appears damp or clumps together.

### 5. Milk volume changes.

She may resist getting on the milk stand, may give less milk than usual, and may have little interest in eating. (If this pattern lasts over two days, it could indicate illness.)

### 6. Your does act bucky.

If no buck is present, she may mount other does or allow them to mount her. When other does sniff at her tail, she may lift it to accommodate them.

### 7. The doe urinates often.

Does in heat usually urinate more often. Her urine contains pheromones, and a buck will stick his nose into the urine stream, raise his head, and curl his upper lip to get a good whiff.

### 8. The buck acts goofy.

If she comes into heat near a buck, he will wag his tongue, slap a front hoof against the ground, and urinate on his

own face. He may even do this when he smells the doe's odor on you.

### 9. The doe stands for mating.

If not in standing heat, she will move away when a buck tries to mount her. A receptive doe remains still or may urgently push her body against his. Mating takes only seconds and the buck arches and throws his head back during ejaculation.

### 10. The buck rag trick.

Rub a cloth on a mature buck's forehead, then place it in a sealed container. When you open the container near a doe in estrus, she will show clear signs of excitement.

## THE TWO-MONTH RULE

When I have a doe ready to be bred, I leave her with our buck for two months. She will cycle at least twice. Leaving her longer than two months can be counterproductive, because the buck may lose interest in breeding.



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# CANNING PICKLED CARROTS

BY ANN ACCETTA-SCOTT



**P**RESERVING THE CARROT HARVEST is easily achieved due to the many methods available. Canning pickled carrots is a great way to enjoy the harvest for months to come. This easy pickled carrots recipe contains the basic ingredients and is a great way to get your family to consume their vegetables.

Unlike traditional pickles, pickled carrots retain their crispy crunch for up to one year or more. This crunch is achieved from carrots being raw-packed and because it is a very dense food. Over time, as the jars sit, the carrots will soften in texture, but even then, they remain extremely delicious.

Before jumping into preserving foods at home, you must be aware of the process in which foods are transformed into shelf-stable items. Carrots are vegetables that are low in acid. Outside of consuming them straight from the garden, this root vegetable can be made shelf-stable, and luckily there are two methods which to do so.

Carrots canned with water will need to be processed in a boiling water canner or steam canner to make them shelf-stable. However, with an acid booster, such as 5% vinegar, carrots are transformed into a pickled item which means they can be processed using a boiling water bath or steam canner.

## Pickled Foods

There are an endless amount of vegetables and fruits that can be pickled. However, there are guidelines as to how these items can be preserved. With the addition of vinegar (which is 5% acidic or higher), many vegetables can safely be transformed into a pickled item and then canned. Many recipes call for the use of distilled white vinegar, and though it is a good option, why not try a vinegar that is smoother in flavor?

Distilled white vinegar has a tartness to it that many enjoy, but some might enjoy a smoother culinary vinegar mentioned below.

- Red or white wine vinegar
- Balsamic vinegar (excluding aged balsamic)
- Apple cider vinegar (raw is not necessary)
- Champagne vinegar

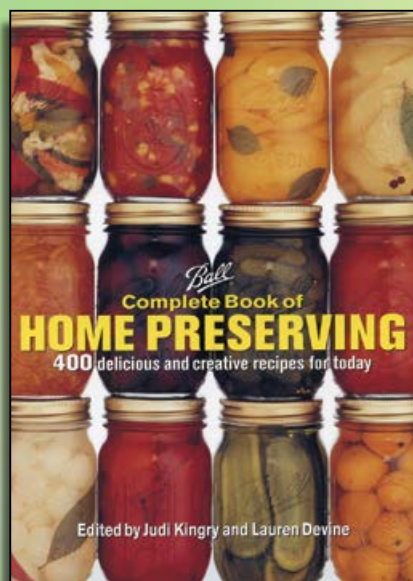
Keep in mind, homemade apple cider vinegar should not be used in home canning. The acidity level cannot accurately be verified and may fall below the necessary 5% required to minimize bacteria from forming within the jars.

### Canning Tools

When canning pickled carrots or other pickled items there are two tools available for processing the jars; a boiling water bath canner and a steam canner. One canner processes the jars in boiling water and the other successfully vacuum seals jars with the use of steam. Both tools are efficient, however, I do favor using a steam canner. Take the time to learn how to use a steam canner and discover the benefits of this preserving tool. It has revolutionized preserving high-acidic food items.



## 400 INNOVATIVE & ENTICING RECIPES



By Judi Kingry and Lauren Devine

These 400 innovative and enticing recipes include everything from salsas and savory sauces to pickling, chutneys, relishes and of course, jams, jellies, and fruit spreads. This book includes comprehensive directions on safe canning and preserving methods plus lists of required equipment and utensils. Specific instructions for first-timers and handy tips for the experienced make the *Ball® Complete Book of Home Preserving* a valuable addition to any kitchen library. *448 pages*

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## PICKLED CARROTS RECIPE

This recipe is delicious as written, however, the vinegar and herb selection can be modified to better fit the flavors you enjoy. For example, swap out the type of vinegar used or simply use four teaspoons of pickling spice instead of individual spices.

### Ingredients

- 3½ pounds large peeled carrots
- 5½ cups white wine vinegar (5%)
- 1 cup water
- 2 cups sugar
- 2 teaspoons canning salt
- 4 dried whole red pepper, optional
- 3 dried bay leaves
- 2 teaspoons mustard seeds
- 4 teaspoons dried dill weed

### Equipment

- 4 pint jars
- Steam canner or hot water bath canner
- Non-reactive pot (copper jamming pot, stainless steel pot, or enamel Dutch oven)
- Air bubble remover
- Jar funnel
- Measuring cup
- Measuring spoon

### Instructions

1. Wash and rinse pint canning jars; keep hot until ready to use. Prepare lids and bands according to the manufacturer's directions.
2. Wash and peel carrots. Wash again after peeling and cut into sticks long enough to fit into the canning jars making sure to leave one-inch headspace.
3. Combine white wine vinegar, water, sugar, canning salt, and bay leaves in a non-reactive stockpot. Bring to a boil and boil gently for three minutes.
4. Add one red pepper to each jar. Next, add one teaspoon each of mustard seed and dried dill to each jar. Tightly pack the carrots into jars.
5. Fill hot jars with the hot brine, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed by adding additional brine.
6. Wipe rims of jars with a dampened, clean towel; add warmed lids then twist on rings to finger-tight.
7. Process in a steam canner or boiling-water canner, as recommended in the table. The processing time is based on the altitude at which you reside.
8. Let cool, undisturbed, for 12 to 24 hours and check for seals. Store jars that have not been sealed in the refrigerator and consume first.
9. For best flavor, allow carrots to sit two weeks before consuming.

## Processing Chart

The processing time for home-canned foods is based on the altitude in which you reside. The higher you are above sea level, the longer the goods will need to be processed.

### PROCESSING TIMES BASED ON ALTITUDE

Style of Pack	Jar Size	0 - 1,000 ft	1,000 - 6,000 ft	above 6,000 ft
Raw	Pint	15 mins	20 mins	25 mins



## Storing Home-Canned Goods

Home-canned goods store best away from direct sunlight and between the temperatures of 50 degrees F to 70 degrees F, not exceeding 95 degrees F. Home-canned goods can withstand higher temperatures for a short period of time.

Ideally, home-canned goods are stored in the pantry; however, those with limited space may need to be creative on how to store jars. Consider storing canned goods under beds, in closets or the garage, a cold storage space, or root cellar. ©

**ANN ACCETTA-SCOTT** homesteads on two acres in Washington State, raising poultry, goats, and rabbits. She is an educator and encourager of all who are seeking to live a more sustainable lifestyle. Ann is also the face behind the website *A Farm Girl in the Making* and author of *The Farm Girl's Guide to Preserving the Harvest*.

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# Hummingbird Cake

BY HANNAH MCCLURE

SOME MAY TELL YOU I've been a fan of cake my whole life, but it wasn't until recent years that I realized that cake is one of my favorite desserts. It's the best part of any celebration and the variety of cakes seems endless. With this cake, you may lift an eyebrow of curiosity when you read the ingredients. I know I did. In fact, I almost didn't make it the first time I came across it. I'm so glad I did, though. It has quickly become one of my favorites and it's a must on my birthday (perfectly fitted in July for a cake of this sort). I sure hope you enjoy hummingbird cake as much as we do.

## INGREDIENTS

3 cups unbleached all-purpose flour  
 1 teaspoon baking soda  
 1 teaspoon sea salt  
 3 teaspoons ground cinnamon  
 ½ teaspoon nutmeg  
 1 cup granulated sugar  
 1 cup packed brown sugar  
 1 ¼ cup vegetable oil  
 3 large eggs (room temperature)  
 3 teaspoons vanilla extract  
 ½ teaspoon almond extract  
 4-5 very ripe mashed bananas  
 8 ounce can crushed pineapple (drained)

## INSTRUCTIONS

- Sift together all dry ingredients and set them aside.
- In a mixing bowl, beat together both sugars and oil until smooth.
- Add eggs, one at a time, and blend till well combined.
- Add in bananas, pineapples, and both extracts.
- Mix in flour mixture, one cup at a time until well blended.

Evenly distribute batter into two greased and floured 9-inch pans (I like to use round pans) or three 6-inch pans.

Bake at 350 degrees F for 50 to 55 minutes. To check for doneness, make sure a toothpick inserted in the middle comes out clean. Let cool and frost with a cream cheese frosting.

## NOTE

Traditional hummingbird cakes call for pecans. My family doesn't love pecans in their cakes so I often use the pecans as "sprinkles" for the cake.



## CREAM CHEESE FROSTING

### INGREDIENTS

1 stick of butter (room temperature)  
 2 8-oz blocks cream cheese (room temperature)  
 2 tablespoons vanilla extract  
 1 teaspoon almond extract  
 2 lbs confectioner's sugar (sifted)

In a mixing bowl, beat together cream cheese, butter, vanilla, and almond extract until smooth. Slowly add confectioner's sugar and mix until smooth.

This makes plenty for you to use between your cake layers and to completely frost your cake with some to spare. 🍷

**HANNAH N. MCCLURE** is an old soul homemaker and mother of four from Ohio. Gardening, keeping bees, sewing, raising chickens/seasonal hogs, and baking/cooking from scratch are a few things she enjoys in her homemaking. Always learning and always chasing her littles.



Canned kale ready for the pantry.

## How to Pressure Can **SUMMER GREENS** for Easy Winter Meals

BY STACY BENJAMIN

**I**F YOU'RE LIKE ME, you fill up your garden beds to maximum capacity and then have trouble keeping up with all of the summer bounties! In particular, I find keeping up with the prolific summer greens to be a challenge. An easy way to preserve greens for winter when you're short on time is to blanch and then freeze them, but with a little more effort they can be preserved by steam pressure canning, which leaves your freezer space available for other things that aren't as well-suited for canning.

If you've canned using a boiling water canner (also called the water

bath method) then you already have a working knowledge of the important safety concepts involved with food preservation that will also be used with a steam pressure canner (pressure canning). If canning is entirely new to you, this article will give you a crash course, and I highly recommend reading a canning guide from a reputable source that delves deeper into the proper techniques required for safe canning.

Pressure canning is used for low-acid foods including most vegetables that cannot be safely canned using the water bath method. Leafy green vegetables

must be canned using pressure canning. You can use a pressure canner on the stovetop, or if it's a hot day and you don't feel like heating up your kitchen, you can set up an outdoor canning station which is my preference. Be sure to gather everything you'll need before you start canning to make the canning process a smooth one.

### Preparing the Greens:

Select mature greens in good condition from the garden. My favorite type of leafy green to can is kale. You can also can other greens such as chard and collards. Pick them right before canning and wash thoroughly to remove any dirt hiding within the crinkly leaves. Remove the stems and tough center rib, along with any discolored, diseased, or insect-damaged spots. I also like to rip or chop large leaves into coarse pieces. Blanch the greens in a large pot containing a few inches of boiling water for three to five minutes until leaves are well wilted. Blanching stops enzymes from degrading the quality during storage, so this is an important step. You can use a steamer basket to hold the greens, or alternately, I just drop them in the pot of boiling water and use long tongs to remove them. Immerse the wilted greens in a large bowl of ice water to stop the cooking process. After the greens have cooled, place them in a large colander to drain. Continue blanching and cooling the remaining greens until they are all ready for canning. You will be surprised how much the greens cook down after blanching. I always pick a really big bunch of greens so that I can fill enough jars to make the canning process worth the time it takes.

### Preparing the Canning Jars:

Pack the cooled greens into pint canning jars. Fill to approximately one inch from the top of the jar, and don't pack too tightly. Add ¼ teaspoon salt to each jar if desired

## EQUIPMENT

- Pressure canner
- Canning jars
- New canning lids & rings
- Large pot for blanching
- Large bowl of ice water
- Colander
- Boiling water for topping up jars
- Long tongs
- Tool for removing air bubbles
- Jar lifter
- Towels

for taste. Cover with fresh boiling water leaving one-inch headspace. Use a narrow spatula or another non-metallic tool to remove air bubbles from the jars by slowly turning each jar and moving the spatula up and down. Wipe the rim of the jars to remove any water or debris that would prevent the jars from sealing. Place the lid on, and tighten the ring securely on the jar.

### Pressure Canning:

Place a jar rack on the bottom of the canner so that the jars are not sitting directly on the bottom. Add hot water until it is a few inches up the side of the canner. Place the jars into the canner, leaving space between the jars. If you have a large canner, you may be able to fit a second row of jars on top. Be sure to use another jar rack before adding the second row of jars. Tighten the lid of the canner to get a secure lock. Depending upon the type of canner you have, it will have either a weighted pressure gauge or a dial pressure gauge on top. The instructions for maintaining the proper steam pressure will vary a bit depending on the style of gauge you have, so read the instruction manual to understand how the pressure gauge works before you start the canning process.

If you are canning on a stove, heat the canner over high heat. If you are using an outdoor propane burner, you'll want to keep the flame fairly low. As the canner is heating, you will need to watch the pressure gauge on the canner to see when it has reached the correct pressure. The pressure you will need to maintain will vary based on the type of canner you have and your altitude. Once the canner reaches the correct pressure, you will begin timing. Refer to the instruction manual to understand when the proper pressure is reached and when to begin timing. You'll need to maintain constant pressure for 70 minutes for pint jars, or 90 minutes for quart jars. After the



A mature kale plant, ready for canning, in a mixed bed of flowers and greens.



Blanch the greens and then cool them in an ice bath before packing into jars.



An outdoor canning set-up including a propane burner and steam pressure canner.

processing time has passed, remove the canner from the burner and allow the canner to depressurize to zero before opening. After depressurizing, carefully open the canner, remove the jars and allow them to cool. As the jars cool you should hear a high-pitched 'ping' sound indicating that the vacuum seal has pulled the lid down into place. Let the jars stand at room temperature for 12 hours before testing the seals.

### Storing:

After the jars have cooled, test the lids to make sure all of the jars have sealed. A securely sealed jar will have a little indent in the middle of the lid and will not push down when you press your finger on the lid. Any jars that have not sealed should be refrigerated and eaten in a few days. Jars with a good seal

can be stored in your pantry for enjoying all winter long. The texture of canned greens will be soft. My favorite ways to enjoy them are adding them to hearty winter soups or simply warming them up for an easy greens side dish and seasoning to taste. 🍴

**STACY BENJAMIN** lives on four and a half acres in St. Helens, Oregon with her husband and her flock of four dozen-ish chickens and heritage Narragansett turkeys. She is an avid gardener who enjoys preserving her garden harvest, as well as making handmade soaps and other natural products. Find her on Instagram @5farmoregon and @5farmsoap and on her website [www.5farm.com](http://www.5farm.com)

# Homemade Exfoliating Soap Recipes

BY MELANIE TEEGARDEN

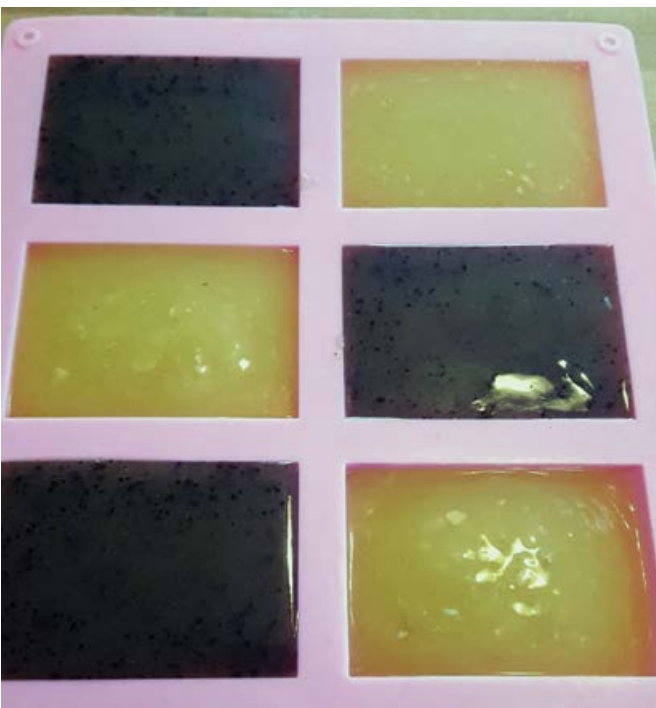
CREATING HOMEMADE EXFOLIATING SOAP for use with many different skin types has been a fun exercise. From exfoliants as gentle as powdered oatmeal to a powerful, grease-scrubbing pumice soap, there is something for everyone in homemade exfoliating soap. Nuts, grains, and seeds all make excellent exfoliants, as do cornmeal and clay. It all depends on which part of your body you want to focus on. For facial use, stick with a super gentle, fine-textured exfoliant such as rose clay, powdered oats, or ground calendula petals. Powdered sage leaves also make a good, fine polishing exfoliant. For more general body use, a larger grain such as cornmeal, coffee grounds, or poppy seeds can be just what you're looking for. These give a gentle but effective scrub, increasing circulation to the skin as they buff away dead skin cells. Finally, if you're looking for a powerhouse scrubber for dirty hands or calloused feet, go for the pumice soap recipe included at the end of the article. The finely powdered pumice provides an effective grit for removing tough grime and dead skin cell buildup.

## Homemade Exfoliating Soap

- 10 oz. coconut oil, melted and cooled
- 16 oz. olive oil
- 6 oz. shea butter, melted and cooled
- 10 oz. water
- 4.45 oz. sodium hydroxide
- 0.65 oz. sodium lactate (optional)
- 1.2 – 2.0 oz. fragrance or essential oils, according to usage rate (optional)
- 2 tablespoons of exfoliant of choice: poppy seeds, ground herbs or flowers, powdered oatmeal, rice flour, clay, cornmeal, or coffee grounds. It's up to you!

In a well-ventilated room, weigh the sodium hydroxide into a lye-safe container. In a separate, heat- and lye-proof container, weigh the water. Slowly pour the lye into the water, stirring gently for a few minutes until fully dissolved. Be careful to stand at arm's length while stirring, and to avoid breathing the steam that rises. Once the lye is fully dissolved, weigh out the sodium lactate, if using, and add to the lye water. In a separate container, weigh each of the oils, transferring the oils to a large bowl after weighing. Mix the exfoliants into the oils and give a quick zap with the stick blender to blend well. Pour the hot lye water over the oils and stir gently for a few minutes to mix thoroughly. When ready, mix with the stick blender until light to medium trace is reached. Mix in the fragrance or essential oils, if using, then pour the soap into the mold. Unmold soap after 24 hours, slice into bars with a thin, sharp knife, and cure for six weeks before use.

When using pumice as your exfoliating additive in soap making, it is important not to use too much — more than one tablespoon per pound of base oils is too much and will soak up too much water in the soap, leading to a crumbly result. Of course, if you use too little of the pumice, the soap will not be very scrubby. One-half to one tablespoon of pumice powder per pound of base oils is about right. The powder will be fully distributed throughout the soap without becoming too brittle. Pumice powder, though fine, is still a powerful scrubbing substance and as such I recommend these soaps be used primarily on hands and feet. Other areas of the body could experience scratches due to the highly abrasive nature of pumice. I also recommend a high superfat recipe to counter the potential drying effects of a strong exfoliant. The following recipe can help you get started.



## Pumice Soap

- 10 oz. coconut oil, melted and cooled
- 16 oz. olive oil
- 6 oz. shea butter, melted and cooled
- 10 oz. water
- 4.40 oz. sodium hydroxide
- 0.65 oz. sodium lactate (optional)
- 1.2 – 2.0 oz. fragrance or essential oils, according to usage rate (optional)
- 2 tablespoons cosmetic-grade pumice powder

For these soaps, I prefer using single-soap molds instead of pouring into a loaf and cutting. I find that the exfoliants create drag lines in the surface of the soap during cutting. If you do not have individual soap molds, a slab or loaf mold will work just fine. Drag marks are merely a cosmetic concern.

In a well-ventilated room, weigh the sodium hydroxide into a lye-safe container. In a separate, heat- and lye-proof container, weigh the water. Slowly pour the lye into the water, stirring gently for a few minutes until fully dissolved. Be careful to stand at arm's length while stirring, and to avoid breathing the steam that rises. Once the lye is fully dissolved, weigh out the sodium lactate, if using, and add to the lye water. In a separate container, weigh each of the oils, transferring the oils to a large bowl after weighing. Mix the pumice powder into the oils and give a quick zap with the stick blender to mix. Pour the hot lye water over the oils and stir gently for a few minutes to mix thoroughly. When ready, mix with the stick blender until light to medium trace is reached. Mix in the fragrance or essential oils, if using, then pour the soap into the mold. Unmold soap after 24 hours, slice into bars with a thin, sharp knife, and cure for six weeks before use.

We have covered the use of a wide range of exfoliants in soap making, as well as the general guidelines for how much to use, and the specific uses for various grades of exfoliation power. A gentle exfoliating bar for the face might have a high superfat of 8% and a gentle exfoliator such as oatmeal powder or clay. A moderately scrubby bar, such as that made with coffee grounds or cornmeal, is suitable for body use on most people. A significantly scrubby bar such as pumice soap should be reserved for the roughest places — hands, feet, elbows. On all exfoliating soaps, a high superfat number will create a milder bar and less dryness and irritation after the scrub. 🌿

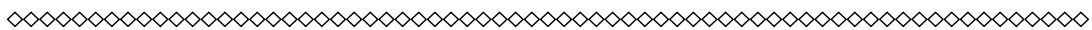
**MELANIE TEEGARDEN** has been proprietor of Althaea Soaps & Herbals for 14 years. She has run an international website selling bath and body products to individuals and spas since 2006. In addition to her home-based business, Melanie also teaches soapmaking classes in her community of Johnson City, Tennessee, and is the resident soapmaking expert for Home Soapmaking at iamcountryside.com.



# Hack Your Hypertension Naturally

BY JENNIFER VANBENSCHOTEN

**M**AKING LIFESTYLE CHANGES is probably the number one way to hack your hypertension diagnosis. Even if you've been given a prescription for medication from your doctor, it's important to support that treatment with lasting lifestyle modifications. Even better, making these lifestyle changes now can help prevent hypertension.



**1. Look at your sleep routine.** Do you have a poor or disrupted sleep routine? Making some simple changes to your nightly bedtime habits can help lower your blood pressure. For starters, whenever possible, start your bedtime ritual as close to 9:00 p.m. as possible so that you're asleep by 10:00 p.m. This gives your body time to wind down and lets you take advantage of the most optimal time for restful sleep. Other changes to your nighttime habits might include things like creating a more comfortable space for sleeping, taking a warm (not hot) shower or bath about an hour before you want to be asleep, removing the television, computer, and any electronics from your bedroom if at all possible, or using my favorite sleepy time treat: a small cup of warm milk with a pinch of freshly ground nutmeg. All of these things can help your body relax and switch off the constant fight or flight mechanisms of your sympathetic and parasympathetic nervous systems that, when agitated, can cause hypertension.

**2. Check in with your diet.** Increasing your ratio of vegetables and whole grains to meat and dairy products can be a simple, tasty way to naturally hack

your hypertension. You don't have to stop eating meat or dairy altogether, in fact, most people need to have some animal products in their diet for optimal health. However, numerous studies have shown that eating more vegetables and whole grains daily can help naturally lower your blood pressure. Just cut your serving size of meat and dairy in half, and substitute steamed or roasted vegetables in their place.

**3. Experiment with new seasonings, herbs, and spices.** Most food in the U.S., especially commercially processed foods, contain incredibly high amounts of sodium — not salt, sodium. These high levels of sodium can wreak havoc on our vascular systems and can contribute to high blood pressure. If you're going to increase your servings of fresh vegetables and whole grains, you certainly don't want to eat them plain or bland, but hold the salt! This is a great time to experiment with new and different types of herbs, spices, and other seasonings. If you don't already have an herb garden, this is a great time to plant one. Herbs like savory, basil, garlic, thyme, and rosemary can all add a new kick to your favorite veggies while adding a medicinal element to

mealtimes. All of those herbs have been shown to slightly lower blood pressure in laboratory studies, and you can't beat the experience of growing your own herbs to add to your home-cooked meals.

**4. Speaking of cooking and sleeping,** try having a hearty vegetarian meal for dinner as a way to help you get to sleep at night. While you don't have to cut out meat and animal products completely, having a lightly seasoned, hearty, vegetarian meal for dinner can help you sleep better, which we know can help treat hypertension.

**5. Get moving — but gently.** Strenuous workouts aren't going to do a heck of a lot to reduce your blood pressure. But now, the evidence is mounting that gentle movement — including some types of gentle and restorative yoga — is way more effective at relaxing the walls of blood vessels and lowering your heart rate naturally. If yoga isn't your thing, try going for slow walks of at least 30 minutes a day on easy-to-navigate terrain. Investing in a good pair of walking shoes is a great idea for this type of exercise!

If you have a job where you spend most of your day seated, set a timer to get up and move around for a quick walk every 45 minutes, whenever possible. This kind of gentle movement can help increase focus and concentration and provide much-needed stress relief throughout your day.

**6. Learn how to practice conscious relaxation.** And speaking of restorative yoga, if you're looking to start a regular practice to help lower your blood pressure, look into a technique called yoga nidra. This practice of conscious relaxation helps us target tension in specific areas of the body and is better than meditation for reducing blood pressure. It can also help improve sleep and digestion.

For any of these things to be effective, consistency is key. According to experts, it can take an average of 66 days for new habits to stick, so be patient with yourself. If you “fall off the wagon” with any of your new lifestyle routines, don't beat yourself up — just pick up where you left off the next day. Another way to set yourself up for success with a new habit is to just pick the one you think would be the easiest, and commit to doing that for 30 days.

Most food in the U.S., especially commercially processed foods, contain incredibly high amounts of sodium. These high levels can wreak havoc on our vascular systems and contribute to high blood pressure.

### Herbal and Plant Medicine for Hypertension

In addition to any of these lifestyle changes, you can supplement your diet with herbs and plants that have been shown to lower blood pressure numbers. If you're a tea lover, you can use any of the following herbs and spices as medicine:

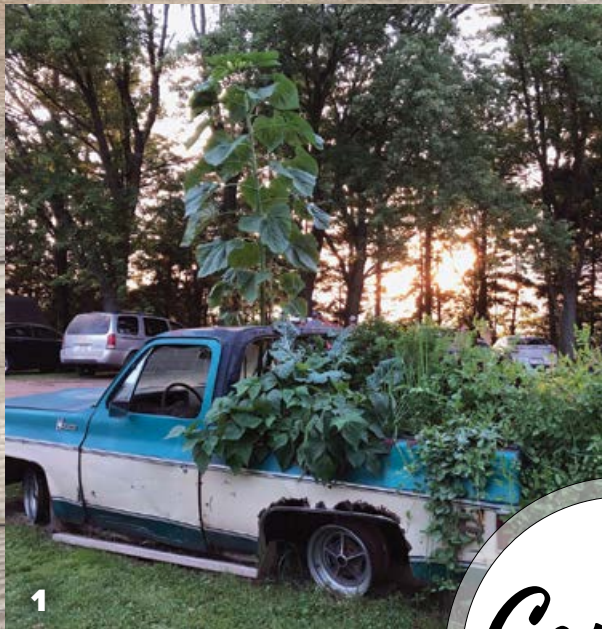
- Ginger is good for so many things, and yes, it can help with your blood pressure and improve your digestion.
- Cardamom is my favorite spice to add to baked fruit in the wintertime. Cut up an apple or a pear and put it in an oven-safe covered dish (or use tin foil). Sprinkle the flesh of the fruit with ¼ teaspoon of cardamom and bake, covered, at 350 degrees F for 45 minutes or until soft enough to scoop with a spoon. You can even make them the night before and warm them up for breakfast in the morning!
- Basil makes a lovely tea with lunch or dinner.
- Thyme also can help with cold and flu symptoms when drunk as a tea.
- Cinnamon not only helps lower blood pressure but can also help regulate blood sugar levels in type 2 diabetics! Add a pinch to your baked fruit with the cardamom, or steep cinnamon sticks in hot water and a spoonful of honey for an invigorating winter drink.

As always, be cautious when using herbal and plant medicine in conjunction with any prescription medications given to you by your doctor, and don't hesitate to reach out to your medical professional if you experience increased symptoms of high blood pressure when using any herbal or plant medicine. 🌿

In the heart of the Adirondack mountains, **JENNIFER VANBENSCHOTEN** raises chickens for eggs, keeps bees for honey, and grows her own food. She discovered home remedies for anxiety after conventional medicine didn't work for her, and since then she's been educating herself about herbal remedies for common ailments. Jennifer enjoys scratch cooking, writing creative nonfiction and poetry, teaching yoga, and creating handmade beaded jewelry.

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1



2



3



4

1 My Chevy garden! 📍 Mallory Blasel, Dorchester, Wisconsin

2 This is Sweet Hope, one of our babies this last spring on Rusty Knot Farm. 📍 Pam Honkin, Kansas

3 A boy and his duck: Ezekiel and Mr. Quackerhead. 📍 Brooke Lynch, LayZGrace Farm, North Carolina

4 Twin Icelandic's, first lambs on the farm. 📍 Ana Skemp, *Countryside* Audience Engagement Specialist



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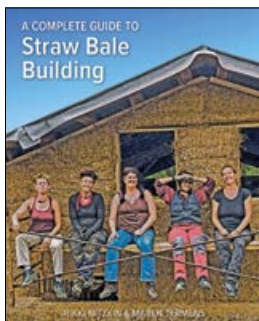


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## A Complete Guide to Straw Bale Building

BY RIKKI NITZKIN



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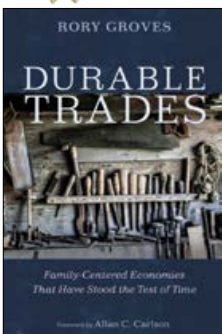
Included are: Step-by-step instructions for many processes; Tips, tricks, advice, and warnings; Over 600 photos, drawings, and diagrams; Materials, tools, and building techniques; Solutions to common

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## Durable Trades

BY RORY GROVES



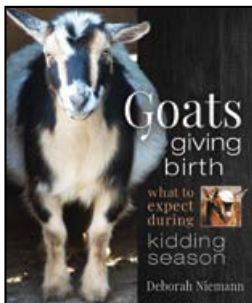
In *Durable Trades*, Groves uncovers family-centered professions that have endured the worst upheavals in history — including the Industrial Revolution — and continue to thrive today. Through careful research and thoughtful commentary, Groves offers another way forward to those looking for a more durable future. 318 pages.

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## Goats Giving Birth

BY DEBORAH NIEMANN



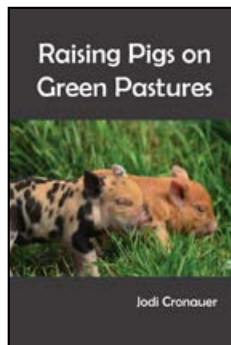
Seasoned goat farmer Deborah Niemann, author of *Raising Goats Naturally*, answers these questions and more by distilling the stories and experiences from over 600 goat pregnancies and births. Coverage includes: The differences between normal goat pregnancies; Necessary C-sections; Incidents that may turn deadly serious.

For both new and experienced goat owners, *Goats Giving Birth* illuminates the joy, the sadness, and everything in between when birthing pregnant goats, giving you the confidence to handle a large spectrum of goat pregnancies and help birth happy thriving kids. 128 pages. **\$19.99**



## Raising Pigs on Green Pastures

BY JODI CRONAUER

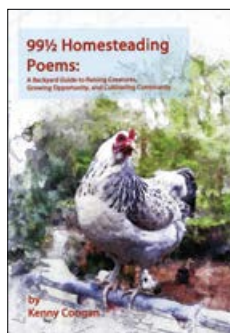


Covering the most asked about topics such as farrowing, watering, wintering, and marketing, as well as the importance of minerals, types of grasses, and sales. Everyone raising pigs on green pastures will benefit from this book and it isn't specific to one breed, but instead encompasses all of the breeds that are able to be raised outdoors on pastures. 126 pages. **\$25.99**



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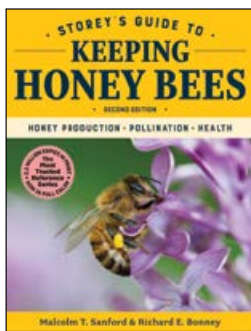
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## The Good Living Guide to Keeping Sheep and Other Fiber Animals

BY JANET GARMAN

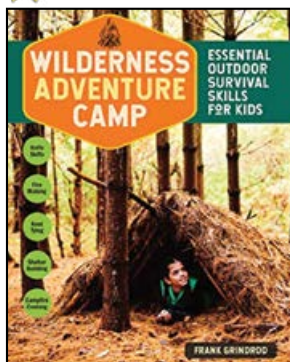


A comprehensive and inspiring guide to small-scale fiber farming and wool crafting. Fiber crafts — such as knitting, weaving, and crocheting — continue to surge in popularity. Readers will learn the basics of properly raising sheep, goats, llamas, alpacas, and rabbits, with tips on selecting animals, feeding, housing, breeding, and healthcare. From there, instructions are provided for shearing, sorting, skirting, washing, pick-

ing, carding, combing, and spinning the wool. Enthusiasts will also find recipes and instructions for natural, plant-based dyes and advice for selling your finished yarn. 176 pages. **\$14.99**

## Wilderness Adventure Camp

BY FRANK GRINDROD



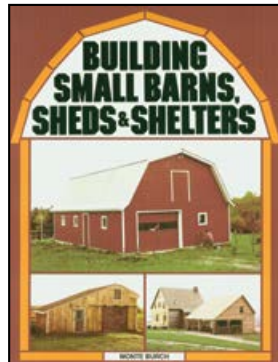
Whether in the rugged backcountry or a suburban backyard, kids can experience the sense of personal independence and self-confidence that come from outdoor proficiency, while also developing a deeper connection to and understanding of the natural world. With this skills-based book, kids learn essential safety and survival tips and bushcraft that they need to have a safe

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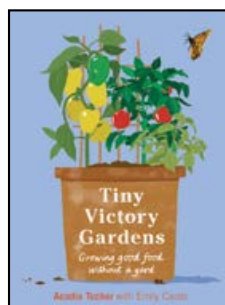
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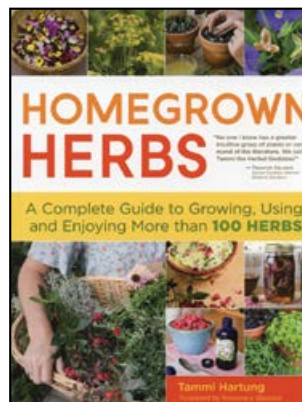
Climate activist and farmer Acadia Tucker fell in love with container gardening after glimpsing its potential to produce food — lots of food. By applying select growing practices, and managing for square inches rather than square feet, she has come up with instructions for growing a small-scale farm in your patio, on your stoop, or in your dining room. If all

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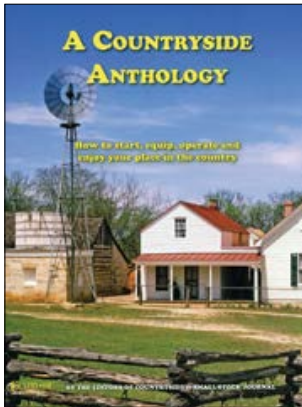
Saxon Holt bring the information to life. 255 pages.

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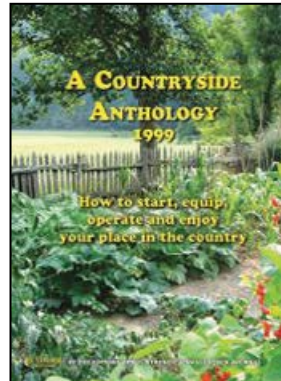
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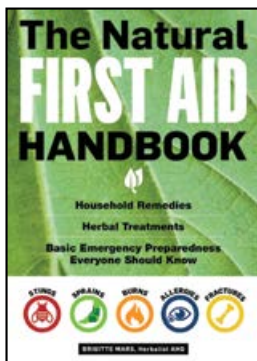
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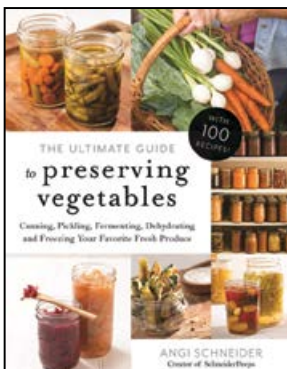


Making cheese at home does not have to be complicated or difficult. Let Kate Johnson, award-winning cheesemaker and "cheese coach," show you how to use basic ingredients to make a wide variety of cheese in your own kitchen. There are three videos to help you achieve immediate success as well as build the skills that

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BY ANGI SCHNEIDER



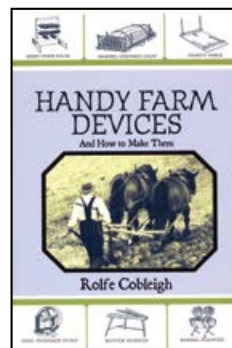
When veggies are at their peak of the season, this preserving compendium covering nearly every vegetable is your one-stop source. Brimming with 100 recipes, beautiful full-page color images, step-by-step preservation methods, and handy reference charts, this foolproof guide will help you master canning & pickling, fermenting, dehydrating, and freezing the most common

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## Homemade Yogurt & Kefir

BY GIANACLIS CALDWELL



With probiotic-rich foods increasingly recognized as essential to gut health, yogurt and kefir are gaining popularity as a source of protein and beneficial bacteria. Cheesemaker and small-scale dairy producer Gianacelis Caldwell opens the door for fermentation enthusiasts and dairy devotees to make and use yogurt and kefir in the home kitchen. She explores the many culture choices and techniques for working with cow, goat, sheep, water buffalo, and even some plant milks. 224 pages. **\$19.95**

With probiotic-rich foods increasingly recognized as essential to gut health, yogurt and kefir are gaining popularity as a source of protein and beneficial bacteria. Cheesemaker and small-scale dairy producer Gianacelis Caldwell opens the door for fermentation enthusiasts and dairy devotees to make and use yogurt and kefir in the home kitchen. She explores the many culture choices and techniques for working with cow, goat, sheep, water buffalo, and even some plant milks. 224 pages. **\$19.95**

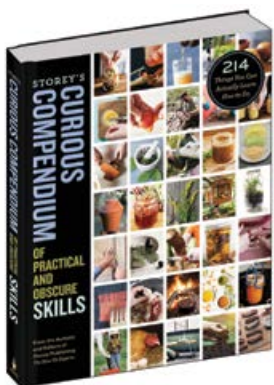
## Beginner's Guide To DIY & Home Repair



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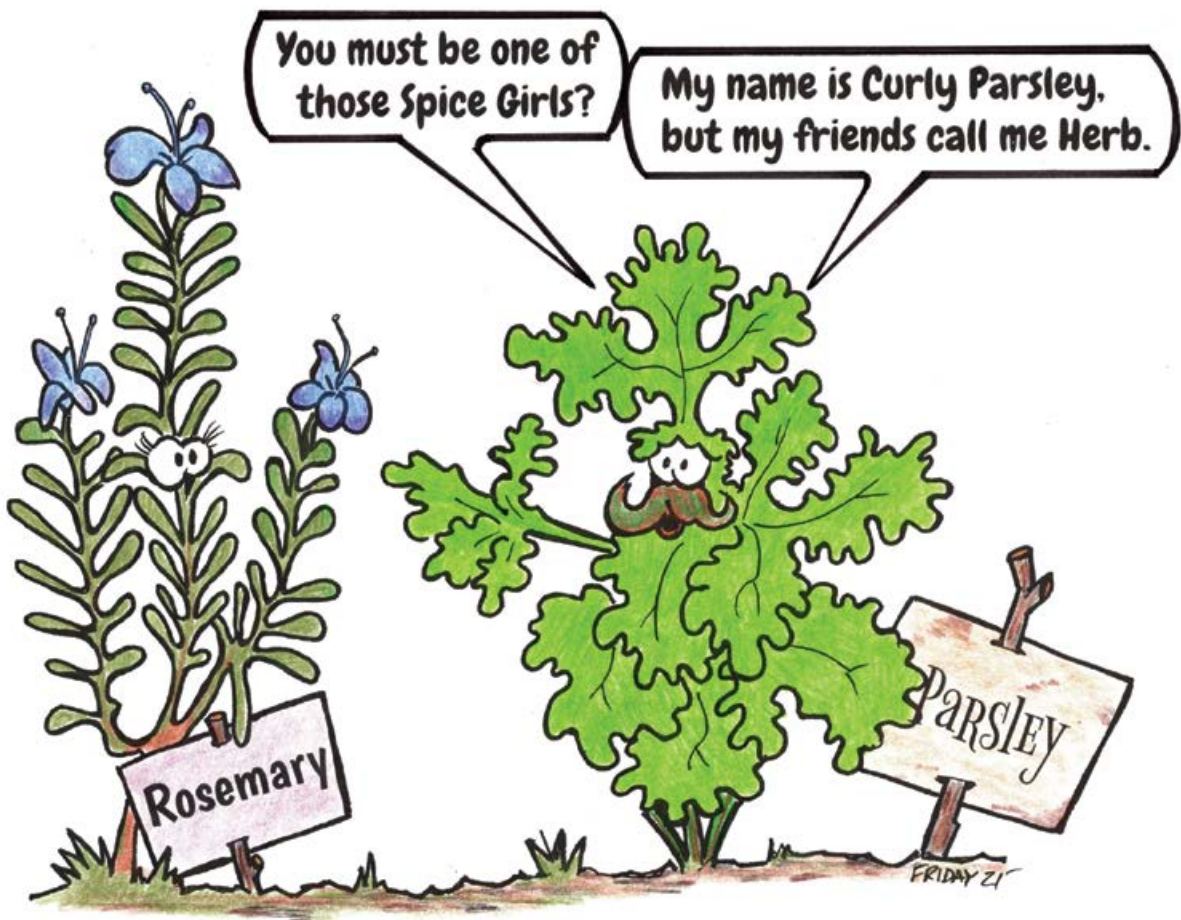
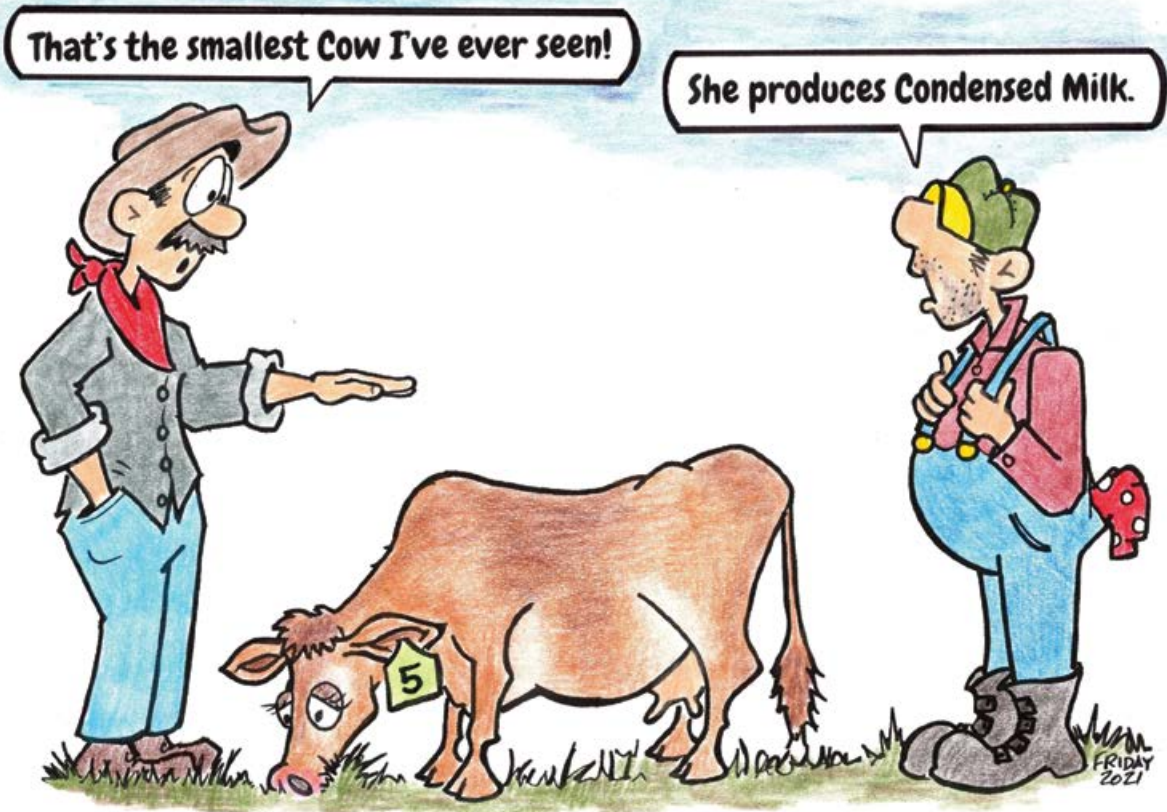
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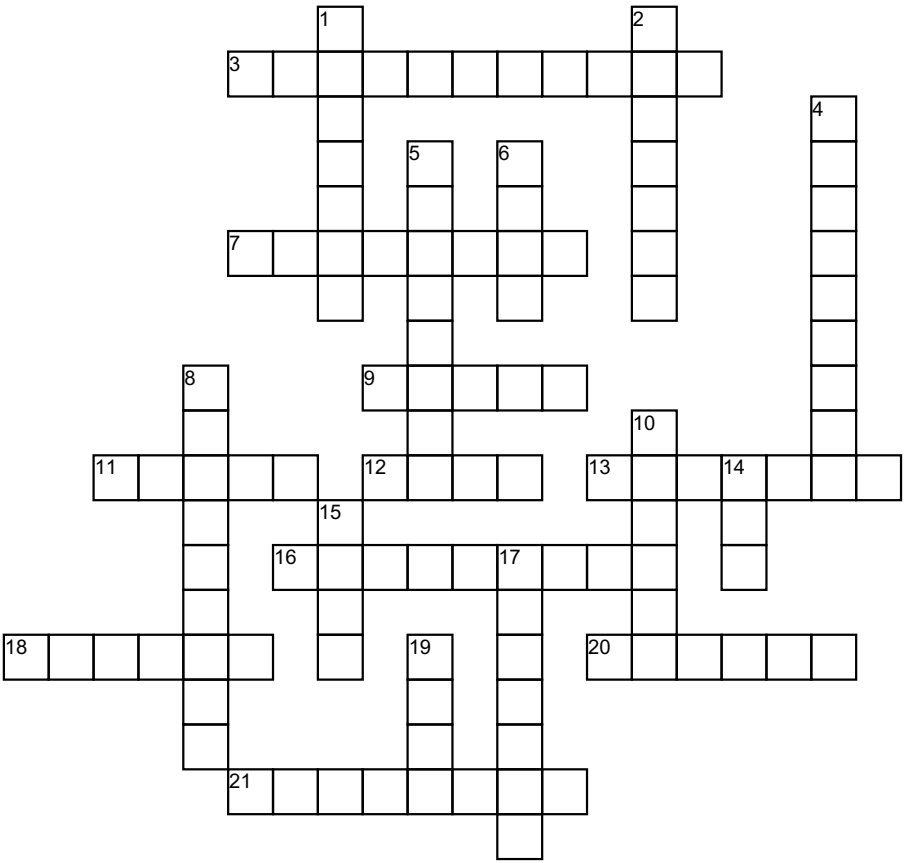
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# JULY/AUGUST CROSSWORD PUZZLE



**ACROSS**

- 3. \_\_\_\_\_ are so named because they do more jumping than flying.
- 7. An item to have on-hand in case of a chicken wound.
- 9. Reduces potential for water and wind erosion.
- 11. One sign of goat heat is the does act \_\_\_\_\_.
- 12. When choosing a butcher, it's important that you get your own \_\_\_\_\_ back.
- 13. \_\_\_\_\_ helps stimulate digestive juices.
- 16. Providing a \_\_\_\_\_ nesting box will help to prevent chickens eating their eggs.
- 18. \_\_\_\_\_ can help with your blood pressure and improve your digestion.
- 20. \_\_\_\_\_ cattle are traditionally tri-purpose.
- 21. Lack of \_\_\_\_\_ affects corn.

**DOWN**

- 1. One of the basic needs for every garden.
- 2. On hybrid baby roosters, the \_\_\_\_\_ feathers are shorter.
- 4. Children can handle and halter-break \_\_\_\_\_ cattle.
- 5. Leafy green vegetables must be canned using \_\_\_\_\_ canning.
- 6. This can be added to soap to make an exfoliant.
- 8. \_\_\_\_\_ are more prone to puffing out their chests and standing taller.
- 10. \_\_\_\_\_ feathers are located on the back just above the tail.
- 14. The lanternfly consumes large amounts of \_\_\_\_\_.
- 15. When getting a soil test, most labs require two \_\_\_\_\_ of soil to test.
- 17. Deciding to move bees to an \_\_\_\_\_ can be a difficult decision at times.
- 19. Chicken \_\_\_\_\_ wounds are notorious for heavy bleeding.

Name: \_\_\_\_\_ Address: \_\_\_\_\_  
 Email: \_\_\_\_\_ Phone: \_\_\_\_\_

The winner will be chosen randomly from all of the submissions returned by August 1, 2021. The winner of the March/April Reader Contest was Tory Perrotto, Ohio. Congratulations to you, Tory! Enjoy your new camp mug.



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**Be sure to include your contact information so we can inform you if you won the *Countryside* mug. Available for purchase at [iamcountryside.com/shop](http://iamcountryside.com/shop)**

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

# Poor Will's COUNTRYSIDE almanack

## GUIDE TO FARMING AND GARDENING • DEEP SUMMER OF 2021

BY W. L. FELKER

# July

Rent out your sheep to control the noxious spotted knapweed, fringed sagewort, kudzu, and tall larkspur (a leading source of cattle deaths).

1

If your buck rabbit (like your buck goat or ram) is exposed to excessive heat, he may become sterile for up to three months.

2

Don't forget flower arrangements for local fairs. Exposure in all areas contributes to making your farmstead better-known.

3

Market lambs and kids for Independence Day cookouts at parades and celebrations (take orders). Cull animals that are susceptible to parasites. <b>4</b>	Summer brings parasites: Spray for fly-strikes. Check for maggot infestations. Rotate cattle and sheep through the pasture to control worms. <b>5</b>	Just two months until Rosh Hashanah, the Jewish New Year (September 6). Explore the possibilities of marketing lambs or kids in cities near you. <b>6</b>	Sycamore trees shed their bark, marking the middle of summer. Black walnut leaves start to fall a month from now, initiating the great autumn leaf drop. <b>7</b>	Check your pumpkin, cucumber, and squash patch for squash beetles. Act quickly to save your crops. <b>8</b>	New moon today may bring thunderstorms across the central U.S. and contributes to the formation of a hurricane in the Caribbean, rains in the South. <b>9</b>	The peak period of heat stress has begun for summer crops. A wet early summer may actually make it more important to water during midsummer. <b>10</b>
Make sure your pig wallow doesn't go dry in the heat and make sure your pigs (and all your poultry and livestock) have plenty of shade. <b>11</b>	Schedule hoof or foot trimming for a week to two weeks before you show your animals. <b>12</b>	Shear rams and trim the bucks you will use for fall breeding. Some homesteaders shear ewes in midsummer to improve flushing. <b>13</b>	Add a little grain to the rations of animals you plan to show or sell in order to add quality to their coats and overall condition. <b>14</b>	Rotate pastures to ensure the youngest animals get the best location and shade. Consider setting up a mister to cool off your chickens and hogs. <b>15</b>	Make corrective lime and fertilizer applications for August and September seeding. Don't forget the manure market: gardeners need manure! <b>16</b>	Watch for algae in troughs and ponds that are in full sun. Preventative measures are always easier than trying to get rid of full-blown algae. <b>17</b>
Monitor water consumption in all of your livestock. A little salt in your horses' feed may encourage them to drink in the heat. <b>18</b>	Only two months remain before the Harvest Moon Festival (September 20-22) celebrated by Korean Americans and others of Asian descent. <b>19</b>	Today is Eid Al-Adha, the Islamic Festival of Sacrifice. Lambs and kids in the range of 55 to 80 pounds are favored for this market. <b>20</b>	Continue to watch your bee hives for mite infestations. Keep track of honey production and schedule tentative harvest times. <b>21</b>	Count the days: Up to 100 frost-free mornings remain in the season, and about four months of growing weather are left for cool-weather crops. <b>22</b>	Lunar perigee and full moon on the 23rd combine to increase the likelihood of thunderstorms and tornadoes throughout the Plains and the East. <b>23</b>	Be alert for conditions that would favor the transfer of ringworm and club lamb fungus in crowded show conditions. <b>24</b>
As the moon darkens in July, turnip planters often plant a second row of turnips. Carrot and beet planters follow suit. <b>25</b>	Plan to move pansies and mums to market for autumn sales. Register to sell your wool and fiber (and crafts) at wool and fiber shows. <b>26</b>	Drench your sheep to prevent the development of bot eggs and larvae. Keep ducklings in the shade. If a duck is panting, s/he may have heatstroke. <b>27</b>	Late July (or when the day's length falls below 14 hours) is the typical time for does and ewes to show first signs of estrus cycling in much of the country. <b>28</b>	Plan ahead to breed ewes and does in preparation for Chinese New Year in January and the Dominican Republic's Independence Day in February. <b>29</b>	Begin collecting and cutting firewood. Trees cut, split, and dried now could be almost ready to burn in January and February. <b>30</b>	Sponge down the entire body of goats suffering from sunstroke and offer them a brew of mint leaves and sorrel mixed with honey. <b>31</b>

**Now is the high tide of the year,  
And whatever of life hath ebbed away  
Comes flooding back with a ripply cheer,  
Into every bare inlet and creek and bay.**

*James Russell Lowell*

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Get ready to make blackberry jam and wine. Then be set for apples, plums, and peaches! Check the ground for hickory nuts and pecans. <b>1</b>	Keep carrots, oats, and bran on hand to help invigorate bucks and rams as the breeding season opens. <b>2</b>	As grasses age and their nutritional value declines throughout July and August, variety in browse can offer better nourishment to your flock and herd. <b>3</b>	If you're feeding hay, check and clean the hay feeders. Wash and shave your bucks before breeding season. <b>4</b>	If you miss a doe's first cycling of the year, mark the day of the cycle on your calendar and make a date with the buck for 16 to 18 days later. <b>5</b>	Today is Jamaican Independence Day. Demand may increase for older sheep and goats up to 65 pounds. <b>6</b>	Heat and moisture stress may contribute to lower production of cool-weather forage. Rotation of pastures or allowing the grazing of hayfields can help. <b>7</b>
The Restless Billy Goat Moon is new today, not only contributing to estrus in goats and sheep, but encouraging the first major cool front of deep summer. <b>8</b>	Between today and September 6, Muslims celebrate Al Hijrah/ Muharram, the Islamic New Year. Look for a rise in halal meat sales. <b>9</b>	Today is Ecuadorian Independence Day. Reach out to the Hispanic market at this time to provide lambs and kids for cookouts. <b>10</b>	As breeding time approaches for goats and sheep, remember that aromatic plants like thyme and mint are said to be conducive to fertility in mammals. <b>11</b>	Predation by coyotes increases in late summer. Consider adding a foot of barbed wire to the top of your fence to the height of six feet. <b>12</b>	Plan to complete soap and lotion preparation from goat and sheep milk. Be ready to market your products through autumn farmers market season. <b>13</b>	Keep raccoons from the sweet corn with lights, radios, electric fences, and box or cage traps. Or just sleep in the corn patch! <b>14</b>
A salty taste in goat's milk could be the result of mastitis. Or maybe it's ragweed, which can give a strange tang to your milk. <b>15</b>	Check the bottoms of squash, melons, gourds, and pumpkins for rot; shift their position. Inspect the vines once again and treat for squash beetles. <b>16</b>	Today's lunar perigee is likely to bring an end to the worst of the Dog Days. Full moon on the 22nd will increase the chances of cold and rain. <b>17</b>	Today and tomorrow celebrate the Muslim feast of Ashura. Explore how to offer halal meat to nearby customers. <b>18</b>	Monitor insect activity for decline in pollination. Climate change may adversely affect berry production. Consider keeping bees as pollinators. <b>19</b>	Harvest tilapia, catfish, and koi fingerlings for sales to homesteaders, preppers, and hobbyists. Consider selling fish by mail. <b>20</b>	Acorns drop to earth. Collect them for your chickens and pigs, but leave some to attract deer. Select sites for deer stands near oak trees. <b>21</b>
Give your goats their last clipping of the year (and first haircut for the kids); Many people find it easier to clip the udder when it's full of milk. <b>22</b>	Today is Cross-Quarter Day, the halfway point to autumn. Cross-Quarter Day also is the average date for the strongest cool front of Late Summer. <b>23</b>	Puffball mushroom season has begun in moist woods. Check and remove the spores from your bee hives. Consider re-queening at this time. Look for mites. <b>24</b>	Two months remain until the feast of Mawlid al Nabi, the Islamic celebration of the birth of Muhammad. Plan for halal meat sales. <b>25</b>	Corn is often cut for silage in August and September; it can be used for feed, but be sure the accompanying grain mix is high enough in protein. <b>26</b>	Purchase paper-white, hyacinth, and amaryllis bulbs in bulk to sell in pots at holiday markets or loose at farmers markets through the fall. <b>27</b>	Think about having an "egg per gram" count done on stool samples of your livestock, one of the best ways to see the concentration of larvae. <b>28</b>
Physical and mental changes in animals (and people) coincide with seasonal shifts. An "autumn surge" of energy often affects breeding and harvest activities. <b>29</b>	Select your best garlic cloves to plant for next summer after the weather cools in September but before a hard freeze. <b>30</b>	Set up a vaccination timetable for your livestock during the major months of seasonal change: September, December, March, and June. <b>31</b>	<h1>August</h1>			

### THE SUN

On July 5 at 5:00 p.m., the Earth reaches aphelion, the point at which it is farthest from the Sun. Aphelion occurs almost exactly six months from perihelion, Earth's position closest to the Sun. The Sun enters its Deep Summer sign of Leo on July 22.

August 22, 2021 is Cross-Quarter Day and marks the halfway point between summer solstice and autumn equinox. The Sun enters Virgo on the same day.

### THE MATING MILKWEED BUG MOON, THE BUZZING CICADA MOON, AND THE RESTLESS BILLY GOAT MOON

Milkweed bugs still enjoy the milkweed as cicada time begins with the Dog Days, and those days also bring many species of crickets and katydids to song. By the end of the month, the nights are filled with the calls of insects. The lengthening nights (now

approaching 10 hours in much of the nation) also tell the billy goats that it is time for estrus in does. Male goats seem to know right away when estrus begins, and they start trying to find the females.

### THE PLANETS

Preceded by Saturn in Capricorn, Jupiter moves high in the southern sky before dawn as the most prominent Morning Star. Mars remains in Leo during August, disappearing from the night sky. Venus, however, moves retrograde into Virgo, remaining the bright Evening Star in the far west.

### THE STARS

Deep summer is the time of the Milky Way in the eastern early night sky. Cygnus, the swan, can be found there, its formation a giant cross. Below it is Aquila, spreading from its keystone, Altair, like a great eagle. Almost directly above you, Vega of the constellation Lyra is the brightest star in the heavens. Hercules stands beside it. June's Corona Borealis and huge Arcturus have moved to the west.

An hour or two before sunrise, walk out and look to the east. Orion will be rising in the same position he will be in on Christmas Eve. The Pleiades and Taurus will be almost overhead. Cygnus, the summer swan of August evenings, is setting in the northwest.

### THE SHOOTING STARS

The Delta Aquarid meteor shower extends from July 12 – August 23, peaking at about 20 shooting stars per hour on July 28 – 29.

The Perseid meteor shower occurs between July 17 and August 24, peaking on August 12 – 13 with up to 60 meteors in an hour.

### METEOROLOGY

The cool fronts of Deep Summer normally cross the Mississippi River around July 6, 14, 21, 28, and August 4, 10, 17, 21, and 29.

Lunar perigee on July 21 and August 17, and full moon on July 23 and August 22 will favor the formation of storms.

### LUNAR FEEDING PATTERNS FOR PEOPLE AND BEASTS

When the Moon is **above** the continental United States, creatures are typically most active. The second-most-active times occur when the Moon is **below** the Earth.

DATE	BEST	SECOND-BEST
July 1	Mornings	Evenings
July 10-17	Afternoons	Midnight to Dawn
July 18-23	Evenings	Mornings
July 24-31	Midnight to Dawn	Afternoons
August 1-8	Mornings	Evenings
August 9-15	Afternoons	Midnight to Dawn
August 16-22	Evenings	Mornings
August 23-31	Midnight to Dawn	Afternoons

**July 1** | The Mating Milkweed Bug Moon enters its last quarter at 4:11 p.m.

**July 5** | Lunar Apogee (when the Moon is farthest from Earth): 10:00 a.m.

**July 9** | The Buzzing Cicada Moon is new at 8:17 p.m.

**July 17** | Second Quarter: 5:11 a.m.

**July 21** | Lunar Perigee (when the Moon is closest to Earth): 5:00 a.m.

**July 23** | Full Moon: 9:37 p.m.

**July 31** | Last Quarter: 8:16 a.m.

**August 2** | Lunar Apogee (when the Moon is farthest from Earth): 3:00 a.m.

**August 8** | The Restless Billy Goat Moon is new at 8:50 a.m.

**August 15** | Second Quarter: 10:20 a.m.

**August 17** | Lunar Perigee (when the Moon is closest to Earth): 4:00 a.m.

**August 22** | Full Moon: 7:02 a.m.

**August 29** | Lunar Apogee (when the Moon is farthest from Earth): 9:00 p.m.

**August 30** | Last Quarter: 2:13 a.m.

### A POOR WILL EXTRA FOR FUN

Poor Will's Guide to Using Bugs, Livestock, and People to Forecast Weather

Look for rain and wind when:

1. Ants store up provisions.
2. Ants bring out eggs from their nests.
3. Centipedes crawl on walls and monuments.
4. Chickens crow and cackle a lot more than usual.
5. Cormorants fly in circles, screaming.
6. Crows flap their wings nervously.
7. Dogs paw the earth.
8. Porpoises dive near land.
9. Ducks flap their wings.
10. Flies bite more than usual.
11. Frogs croak.
12. Mice squeak and skip about.
13. Goats sniff the wind.
14. Salamanders appear.
15. Sheep and goats frisk wantonly.
16. Swallows skim the surface of ponds.
17. Hogs toss and hide hay.
18. Worms come out of the ground.
19. Dogs roll on the ground.
20. Goats shake their ears.
21. Bees stay close to their hives.
22. Goats lie on their right side.
23. Dogs lie on their right side.
24. Dogs dig holes.
25. Finches and sparrows chirp very loudly at dawn.
26. Blackbirds take baths.
27. Wolves howl.
28. Women become especially forward and irritable.
29. Wasps swarm in autumn. 30. Men are sleepier than usual.

### THE SCKRAMBLER JULY/AUGUST

Here are things, events, or activities that occur in deep summer. They are all listed above in the Almanack text. See if you can unscramble them!

GALEA	LALAH
TALS	QUSHA EBTELE
NOHYE	OOCYNT
EARSH MSAR	OAOCCNR
TEIMS	SITITMAS
TATEOR URESTSAP	EEIIPRG
TBO GEGS	OCASRN
ATEH ROKEST	PPFBLLUA
EUSSRT	PERPATEWHI
RRYEBLBCKA	VCCNTNAIAIO

The 2nd, 8th, 23rd, and 54th correct answers will win their entrants five dollars!

Send your answers to:

Poor Will  
P.O. Box 431

Yellow Springs, OH 45387

There should be no typos in this puzzle, and no typo prize will be awarded. If you happen to find a typo, however, you may simply skip that word without penalty.

### WINNERS & ANSWERS MARCH/APRIL SCKRAMBLER

Poor Will promised a Poor Will's Almanack for 2021 to the 3rd, 7th, 24th, and 40th persons who unscrambled the Sckrambler words before the answers appeared in *Countryside*.

The 3rd solution was submitted by Hughlene Dunn of Claremore, OK. The 7th solution belonged to Cynthia Heber of East Rutherford, NJ, and the 24th to Karen Gough of Salt Lake City, UT. So, they all win the Almanacks!

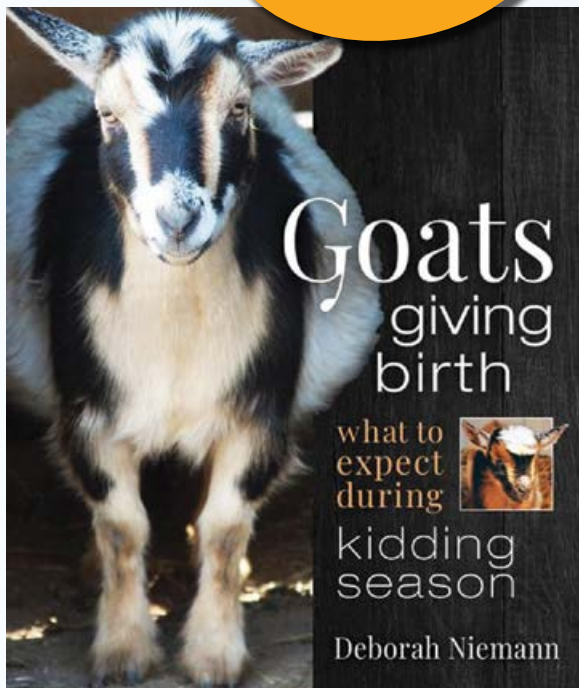
KELVOCIST/LIVESTOCK	SNERF/FERNS
DBONGSIRS/SONGBIRDS	DISPERS/SPIDERS
EAGAL/ALGAE	ENVIS/VINES
EBSE/BEES	SNAT/ANTS
GUFNI/FUNGI	REDE/DEER
OLTRYUP/POULTRY	LETTURS/TURTLES
GSOD/DOGS	EALTGEVBSE/VEGETABLES
GSORF/FROGS	DONSTER/RODENTS
RAINSMEL/MINERALS	SOSM/MOSS
CORPS/CROPS	LOIS BEARCAT/
BUSSHR/SHRUBS	SOIL BACTERIA

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## DOGS

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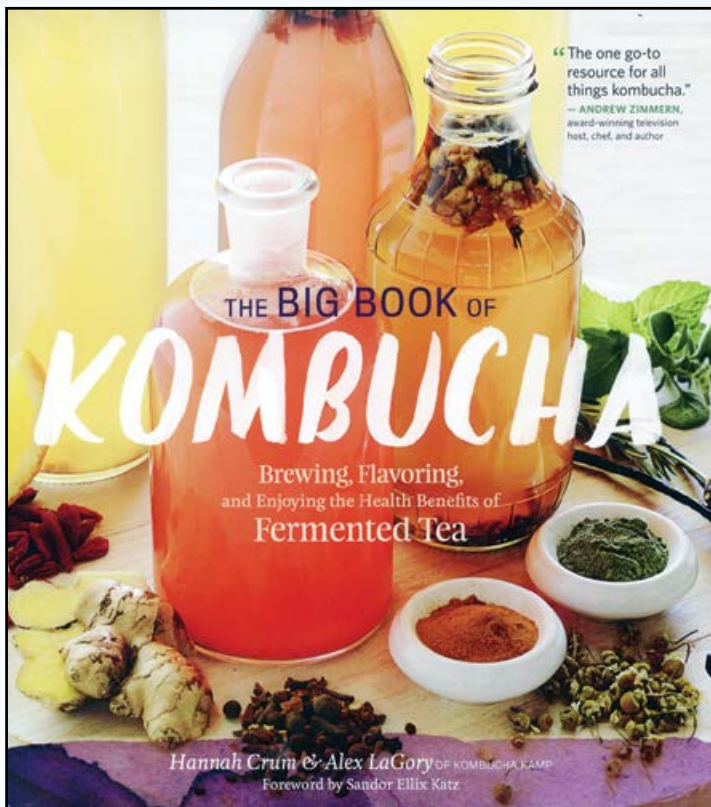
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