
The magazine of modern homesteading
COUNTRYSIDE
& Small Stock Journal
Volume 106 • Number 1
JANUARY/FEBRUARY 2022
Sourdough From Scratch
STRAW BALE GREENHOUSE
ANGORA RABBITS
CUTTING FOOD BILLS
HOMESCHOOLING HOMESTEADERS
PLUS Canning Homemade Marmalade
$7.99 US • iamcountryside.com

find your FREEDOM®

United Country Real Estate

Our nationwide team of experts have helped clients find the perfect country properties for over 95 years. Take advantage of our unmatched expertise today.

HUNTING LODGE & HOME - Malta, MT



Recently updated, this property features a 7-BR, 5-BA home and lodge that includes a room for preparing game, as well as a smoke house, woodshop, wrap-around deck and office.
$285,000 | #25008-04506

MODERN FARMHOUSE - Pittsville, VA



Sitting on 9.7± acres, this modern 3-BR, 2-BA farmhouse offers mountain views and access to an area fishing lake. The spacious two-bay garage can hold a vehicle, boat and lots of equipment.
$419,000 | #45007-63710

HORSE PROPERTY POTENTIAL - Silt, CO



This 10-acre mountain property includes a rustic 3-BR, 1-BA home, chicken coop, fenced fields, fruit trees and multiple outbuildings. Water rights and gated pipe for irrigation convey.
$525,000 | #05071-21245

RIVERFRONT HOME - Mountain View, AR



This peaceful 3-BR, 2-BA country home on the riverfront boasts multiple upgrades and new appliances, plus large front and back porches, attached storage shed, firepit, garden and more.
$364,900 | #03086-02077

BEST OF COUNTRY LIFE - Tompkinsville, KY



This private 3-BR, 2.5-BA country house is surrounded by 18.2± acres of lush pastures and forest. It features hardwood and tile flooring, roomy living areas, a covered front porch and pool.
$475,000 | #16052-01519

IDEAL HOBBY FARM - West Plains, MO



Currently a self-sufficient hobby farm, this 9.7±-acre property features a 3-BR, 2-BA house, eight greenhouses, an established garden, barn and mobile home.
$539,900 | #24084-60570



SELL THE LIFESTYLE YOU LOVE

Leverage your love of country and lifestyle properties and explore career opportunities with United Country Real Estate. As the nation's leading seller of lifestyle and non-urban properties, we can give you the tools you need to succeed. **Contact us today.**

844.415.8959 | JoinUs@UnitedCountry.com

Find many more lifestyle, recreational & country properties at

UCCountryHomes.com | 800.999.1020 ext 110



Winter's Delight Jam

Ingredients

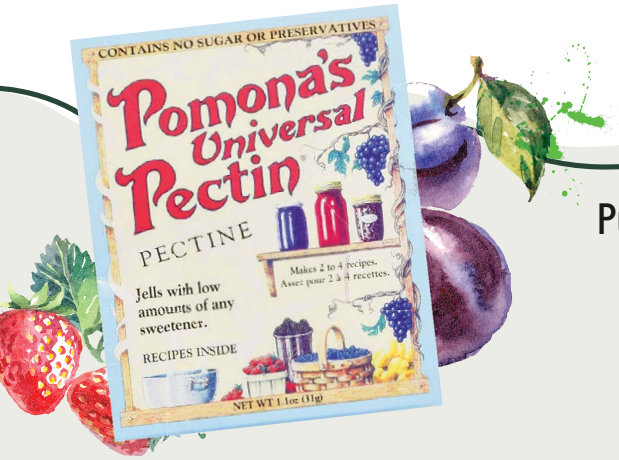
- 3 cups whole cranberries
- 1 orange, peeled, seeded, and sections separated
- 2 teaspoons grated orange zest, from the above orange
- 2 cups frozen, slightly thawed, sliced strawberries
- ¼ teaspoon ground cloves
- ¼ teaspoon ground cinnamon
- 2 teaspoons calcium water
- 2 cups sugar, divided
- 2 teaspoons Pomona's Universal Pectin powder

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 jars, lids, and bands. Place jars in canner, fill canner 2/3 full with water, bring to a boil. Turn off heat, cover, and keep jars in hot canner water until ready to use. Place lids in water in a small sauce pan; cover and heat to a low boil. Turn off heat and keep lids in hot water until ready to use.
2. Rinse cranberries and combine cranberries and orange sections in a food processor. Pulse until coarsely chopped.
3. Add strawberries, orange zest, cloves, and cinnamon. Process until finely chopped, but not pureed.
4. Put processed fruit mixture into sauce pan.
5. Cook mixture for 2 minutes over low heat, stirring constantly.
6. Add calcium water, and mix well.
7. Measure 1 cup sugar into a bowl. Thoroughly mix pectin powder into sugar. Set aside.
8. Bring fruit mixture to a full boil. Add pectin-sugar mixture, stirring vigorously for 1 to 2 minutes to dissolve the pectin.
9. Add remaining 1 cup sugar once pectin is dissolved. Stir well and return to a boil. Once the jam returns to a full boil, remove it from the heat. Skim off any foam.
10. Fill hot jars to ¼" of top. Wipe rims clean. Screw on 2-piece lids. Put filled jars in boiling water to cover. Boil 10 minutes (add 1 minute more for every 1,000 ft. above sea level). Remove from water. Let jars cool. Check seals; lids should be sucked down. Eat within 1 year. Lasts 3 weeks once opened.



Pure, high-quality pectin for your jamming needs.

Find your nearest retailer and more recipes at

WWW.POMONAPECTIN.COM



I AM COUNTRYSIDE

OUR JOURNEY INTO FARMING

BY KIPPER PRICE AT GRACE HAVEN GROWN





HAVE YOU EVER HEARD ABOUT chickens being the gateway into homesteading? Or maybe you're familiar with the very relatable phenomenon called "chicken math?" Basically, I have my chickens to thank for our humble beginnings as farmers.

My husband, Tom, and I both grew up around horses, so mucking out the barn and the occasional dusting ourselves off after being thrown from a horse is one of many things we have in common. After we got married, we needed wide open (but fenced-in) spaces for our horses. Then came those chickens. We bought a farm about eight years ago in the beautiful Blue Ridge Mountains with absolutely no experience farming. Even for two free spirits, this old neglected farm felt like home.

The task of "rehabbing" our farm was incredibly daunting. We initially started with a couple of goals in mind and got our hands dirty. We made a lot of mistakes, but continued researching, learning, and doing. We are blessed to live in a community with other small farmers who have become great friends and outstanding mentors for us along the way. Our local ag. rep. has also been a significant source of encouragement.

We had zero intentions of getting into cattle. But a friend gave us a Charolais calf that needed bottle feeding. The moment she saw us, we were hers. Soon after, we invested in a high-quality line of registered Herefords for breeding and recently filled one of our freezers with our own beef.

My backyard chicken obsession reached a whole new level when I fell madly in love with a rare breed called English Silver Laced Orpingtons. I bought an entire adult flock from a well-known breeder, became National Poultry Improvement Plan certified by the Department of Agriculture, and started a small batch hatchery. We have been selling day-old chicks and hatching eggs nationwide for two years. Many of our customers have become part of our extended farm family.

We have been farming without the use of chemicals early in our journey. I grow a variety of seasonal produce naturally, for both market and personal use. I found a passion for growing various flowers and specialty pumpkins and selling "easy-to-grow" flower seeds from our farm through our website. We'll be taking a giant leap and expanding into flower farming in 2022, with a focus on beautiful bouquets for weddings and special occasions!

Farming is an arduous life. There's a lot of blood, sweat, tears, and very few "atta girls." If you aspire to have a farm or are new to this life, I share our journey with you to encourage you to take your own leap of faith. If two first-generation farmers with no prior experience can do it, you've got this. Hold your "why" close and keep going. Make mistakes, learn from them, and know your resources. This country needs more farmers, and our communities depend on us. The multitude of blessings gained are far worth it.



We'd love for you to connect with us on Instagram and Facebook at @grace.haven.grown and through our website www.gracehavengrown.com. Take care, and God Bless!











Farming is an arduous life. There's a lot of blood, sweat, tears, and very few "atta girls."







Visit on Instagram and Facebook at @grace.haven.grown
www.gracehavengrown

CONTENTS

January/February 2022

IN EVERY ISSUE

4 I Am Countryside
11 Editor's Letter
12 Country Conversation
84 *Countryside* Bookstore
88 Just for Fun
90 Almanack
93 Capture Your Countryside
94 Marketplace
96 Breeders Directory/Classifieds

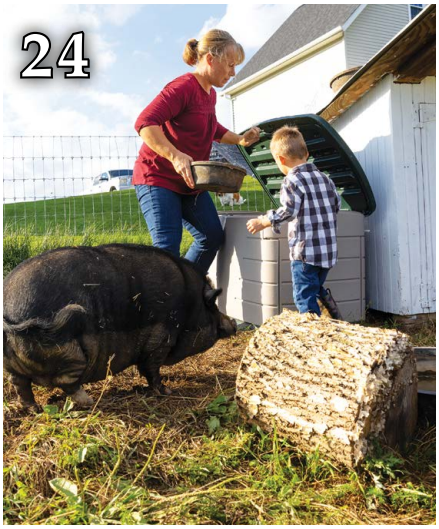
HOMESTEADING

16 **Homeschooling Homesteaders**
By Jenny Underwood

18 **Barn Quilts: Rekindle Legacies From Past Days**
By Dorothy Rieke

20 **Running a Homestead-Style Bed and Breakfast**
By Janet Garman

24 **Plain Values: An Interview With Marlin and Lisa Miller**
By Marissa Ames









BEEKEEPING

28 **Why Are Bees Important?**
By Dorothy Rieke

30 **Solar Bleaching Beeswax**
By Kristi Cook

33 **Hive Highlight: How to Make a Quilt Box**
By Steph Merkle

GROWING

34 **Beyond Straw Bale Gardens: The Six-Week Greenhouse**
By Marissa Ames

38 **Why Learn to Graft Fruit Trees?**
By Marissa Ames

42 **Viola Violet: 2022 Herb of the Year**
By Rita Heikenfeld

46 **How to Grow Blueberries in Containers**
By Rhonda Crank

POULTRY

48 **Choosing the Best Coop Size for Your Flock**
By Janet Garman

50 **The Dangers of Heat Lamps**
By Rebecca Sanderson

52 **Flock Files: Fowl Cholera**
By Lacey Hughett

ANIMALS & LIVESTOCK

54 **EZ Milker Makes Colostrum Retrieval or Mastitis Treatment Easy**
By Heather Smith Thomas

56 **Boer Goats: Beyond the Meat**
By Lacey Hughett

60 **From Start to Finish**
By Stephenie Slahor Ph.D.

62 **Fencing Your Pasture Pigs**
By Jodi Cronauer

64 **An Introduction to Angora Rabbits**
By Jacqueline Harp

FARM TO FORK

66 **Chicken Soup is Good Medicine**
By Gail Damerow

70 **Homemade Orange Marmalade**
By Ann Accetta-Scott

74 **Sourdough from Scratch**
By Jenny Underwood

76 **Substitutions in Recipes**
By Rita Heikenfeld

HOMESTEAD HACKS

80 **Creative Ways to Cut Your Food Bill**
By Patrice Lewis

82 **You Can Use Salt as a Disinfectant**
By Rhonda Crank

Join the *Countryside* Community!

Tag us on Instagram, share your stories on Facebook and find new inspiration on Pinterest. We read all the comments and love the feedback!

INSTAGRAM
@iamcountryside
#iamcountryside

FACEBOOK.com/
iamcountryside

PINTEREST.com/
iamcountryside

Why Katahdins?

- Natural parasite resistance
- Medium frame and mild tasting
- Strong maternal traits
- Adaptable to any climate
- No wool, no shearing



katahdins.org

A Breed Whose Time Has Come

KATAHDIN HAIR SHEEP INTERNATIONAL

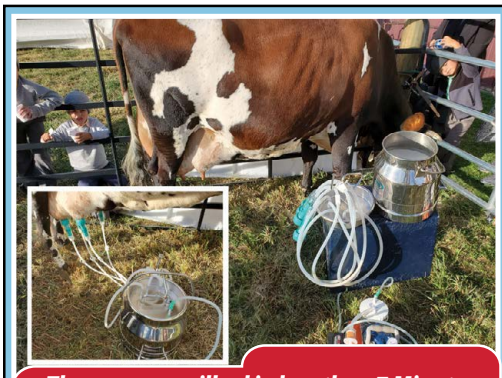
Katahdin Hair Sheep International

Annual EXPO and SALE

Online Membership and Breeder Directories

Online Registration

PO Box 739
Fowlerville, MI 48836
717-335-8280
info@katahdins.org



The cow was milked in less than 7 Minutes giving 2.5 gallons with the Ultimate Ez using the 300 Watt Inverter.

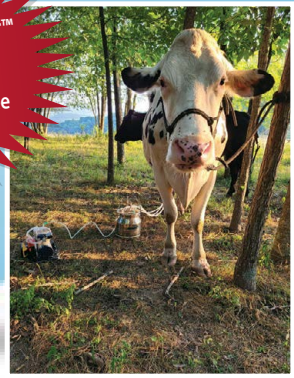
EZ ANIMAL PRODUCTS

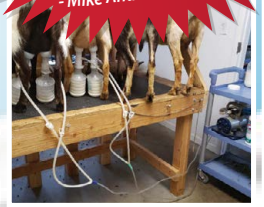
ORDER YOURS TODAY!
Visit **EZAnimalProducts.com** for demo videos!

UltimateEz with Stainless Steel Bucket and Ez Power Pak



Izzy doesn't like to come to the barn for milking, so we take the Ultimate Ez Milker™ with the 300 watt inverter to her on the Mt. Top. I just tie her up to a Hickory tree and getthe job done!"
- Mike Anderson, W.Va.,







Put these on your "BUCKET" list!

Don't forget about our other products, The Udderly Ez Hand Milker and The Stableizer!

"I have been using the Ultimate Ez Electric Milker with the bottles milking from 45 down to 20 does daily without experiencing any problem or negative effects for seven years. We recently added the Statinless Steel 2.6 gallon Bucket so we can milk six at a time. We highly recommend this piece of milking equipment, and best of all it's made in the U.S.A. it's fast, safe, easy to clean with outstanding Customer Service"
- *Shery Goodman, Sunspring Ranch, Provo, Utan.*



EZ Animal Products – Buck Wheeler
2524 Pascoli Pl, Lexington, KY 40509
507-213-2126
Toll Free: 800-287-4791

Fisher Manufacturing
706 Red Hill Road
Narvon, PA 17555
717-768-0155

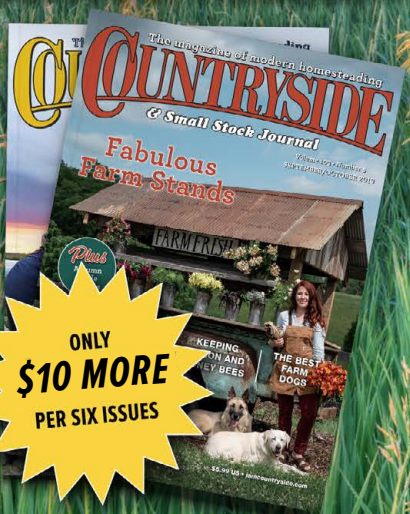
MICHIANA Catalog Sales
12865-2 C.R. 30, Middlebury, IN 46540
574-642-4768
Toll Free: 844-477-3268

BROOKSIDE HARNESS
Harley Helmuth
N4227 Brook Road, Bonduel, WI 54107
715 758 6186

Available on the App Store

ANDROID APP ON Google play

MORE TO EXPLORE
AT
IAMCOUNTRYSIDE.COM



UPGRADE TO ALL-ACCESS PERKS:

DIGITAL REPLICAS OF YOUR FAVORITE ISSUES

FREE SHIPPING IN OUR STORE EVERY DAY (U.S. ONLY)

LIVE CHAT WITH EXPERTS

DIGITAL ARCHIVES SINCE 2014

EXCLUSIVE STORIES ONLINE

CALL
970-392-4419
TO UPGRADE TODAY

COUNTRYSIDE
& Small Stock Journal

Volume 106 • Number 1
January/February 2022

Countryside & Small Stock Journal
Includes *Small Stock Magazine* Founded 1917 by Wallace Blair and
Countryside Magazine Founded 1969 by Jd Belanger.

EDITORIAL

Ann Tom, Editor
editor@countrysidemag.com

Marissa Ames
Senior Editor

Samantha Ingersoll
Publication Designer

Ana Skemp
Audience Engagement

OPERATIONS

Danielle Werbick
General Manager

Chad Kuskie
Operations Manager

Melonie Bryant
Customer Service Specialist

ADVERTISING

Alicia Soper, Advertising Director
asoper@countrysidemag.com
(715) 829-7330

COUNTRYSIDE'S MAIN HOMESTEAD

Countryside
P.O. Box 1690, Greeley, CO 80632
iamcountryside.com

PRINTED IN THE U.S.A.

SUBSCRIPTIONS (U.S. FUNDS):

$29.97 for six print issues, $29.97 for digital only, $39.97 for all-access (print + digital)

***Countryside* Subscriptions**
P.O. Box 1690, Greeley, CO 80632
970-392-4419
iamcountryside.com/all-membership

Countryside & Small Stock Journal (ISSN 8750-7595; USPS 498-940) is published bi-monthly by Countryside Publications, P.O. Box 566, Medford, WI 54451. Periodicals postage paid at Medford, WI and additional mailing offices. ©2022 Countryside Publications. Countryside Publications is owned and operated by Fence Post Co. The views presented here do not necessarily represent those of the editor or publisher.

All contents of this issue of *Countryside & Small Stock Journal* are copyrighted by Countryside Publications, 2022. All rights reserved. Reproduction in whole or in part is prohibited except by permission of the publisher.

POSTMASTER: Send all UAA to CFS. (See DMM 707.4.12.5);

NON-POSTAL AND MILITARY FACILITIES: Send address corrections to Countryside Subscriptions, P.O. Box 1690, Greeley, CO 80632.

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.

Contact Us

PHONE: (970) 392-4419

ADDRESS: P.O. Box 1690, Greeley, CO 80632

ADVERTISING OFFICE: advertising@countrysidemag.com

EDITORIAL OFFICE: editor@countrysidemag.com

CUSTOMER SERVICE/BOOK ORDERS:
customerservice@countrysidemag.com

iamcountryside.com





FROM THE EDITOR

Hoppy Days

In this first issue of 2022, Jacqueline Harp shares her article on raising Angora rabbits. Reading this made me think back to my experience of raising my pet rabbit. When I was seven years old, my extended family came over for Easter dinner. My aunt brought with her a box and said it was for me. As I peered into the box, I saw the most adorable little bunny. He was white with brown spots and I instantly fell in love with him. After much deliberation, I decided to name my new little friend, Thumper.

Thumper had a new hutch (a mansion) built for him and he loved it. It looked like a small house with a peaked, shingled roof. It included an "upstairs" where he could jump up and lay down to get out of the weather. It also included a wooden box for shelter that I would fill with straw for the winter. Also for winter, we stapled thick plastic around the main level of the "house" to help with extra wind protection.

One thing that I will never forget is for Christmas that year, my grandparents bought me a new fur coat. It was the prettiest coat I had ever had and I wore it everywhere I went … even out to feed and give fresh water to Thumper. One day, as I reached in to grab Thumper's water container, he let it be known that he loved my new coat, too. He thought he had a girlfriend that came to visit. I never wore my new coat out to care for Thumper again.

The following summer, I bought a harness for him and would take him for "hops" around the yard where he would eat fresh grass, clover, etc. (I always wanted a dog to take for walks but, my parents wouldn't allow a dog, so this was the next best thing in my eyes.)

The next winter was a hard one with lots of snow and very cold temps. There were times when I just didn't want to trudge through the snow and cold to take fresh water to Thumper. But my mother told me something that I never forgot. She said, "You know that Thumper can't go to the refrigerator to get something to eat or drink as you can so he depends on you to care for him." I didn't ever fuss again when it was time to bundle up and take my boy a fresh drink and some snacks.

Thumper finally died of old age. I was heartbroken. He was my first real pet and he taught me a lot. I never got another rabbit but have had several dogs through the years and I've always enjoyed taking them for a walk. A lot more distance can be achieved versus taking a rabbit for a hop.

I would like to wish you all a very "hoppy" and healthy 2022!





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
P.O. Box 1690
Greeley, CO 80632
Or email: editor@countrysidemag.com



Country Conversation & Feedback

Contact us at: P.O. Box 1690, Greeley, CO 80632; editor@countrysidemag.com

Dutch Oven Bread Recipe

I made this and my family loved it so much that I wanted to share it with everyone.

DUTCH OVEN JALAPEÑO CHEDDAR BREAD

3 ½ cups of bread flour
1 tbsp salt
2 cups shredded cheddar cheese
1 diced jalapeño (you may want to add 2)
2 cups warm water
1 package of yeast



Add dry ingredients to warm water and stir with spatula, mix well. Cover and let rise for one hour.

Lay parchment paper in a Dutch oven pan.

Knead dough on a floured board. Then place on top of paper. Slice an "X" on top of dough and brush with olive oil and top with ½ cup shredded cheddar cheese.

Bake in oven at 450 degrees F for 30 minutes, remove lid and continue baking 20 minutes with lid off.

— Diana Johnson, Ohio

Heartfelt Gift

I just wanted to share a very nice gesture. My neighbor, whom I have never met, stopped by to give me a heartfelt gift.



Honestly, I was floored at the thoughtfulness. She said, "I love to look at your holiday displays with the old blue truck." This F-100 has been in our family since it rolled off the assembly line in 1964. It still runs like a champ!

— Jeffery Parson

Sweet Carrots!

Maybe you have a bounty of carrots and you've been enjoying them in soups, stews, side dishes, or even raw. But they can also make a healthy dessert that doesn't need much sugar.

The recipe actually comes from the Manor House Museum of Kettering, England, which houses among its collections items and information from World War II. During that war, when sugar was rationed, people improvised to make their treats sweet and carrots did the job.



CARROT CUPCAKES

4 tbsp of grated raw carrot
2 tbsp sugar
6 tbsp of self-rising flour, or 6 tbsp of plain flour sifted with ½ tsp baking powder
1 tbsp of butter or margarine
½ tsp of baking powder
Almond, vanilla, or orange flavoring, as preferred, or no extra flavoring.

Cream the sugar and butter/margarine together until fluffy. Beat in the carrot and flavoring. Fold in the self-rising flour (regular or gluten-free) or the plain flour and baking powder, and drop the batter by spoonfuls into greased muffin tins or cupcake papers. Bake 20 minutes. Makes about 10-12 cupcakes.

— Dr. Stephenie Slahor, California

Shotgun Shell Cuties

I didn't want to throw away our empty shotgun shells, so I painted them white, red, and brown and turned them into a snowman, Santa Claus, and Rudolph. I used red, brown, white, black, orange, and peach paint as well as my glue gun.

I painted two coats of paint on the shell and when they dried, I painted stars and dots on the red one, a Santa face with a beard on another red one, as well as a snowman and Rudolph. I added a tiny red pom pom for the nose on Rudolph and green bow.



You could turn them the other way so that the gold/silver top is on the bottom and drill a hole through the plastic, attach a string or ribbon, and hang them on the Christmas tree.

— Diana Johnson, Ohio

Apple Slicer/Corer

What delight reading your email messages from *Countryside*. The one today brought back a sweet memory of the bright red apple slicer/corer in Rita Heikenfeld's article. (Grandma Knows Best: Tried-and-True Kitchen Gadgets — Nov/Dec 2020 issue) I remember standing on a kitchen stool long ago helping my grandmother prepare apples for autumn pies. What a thrill getting to use her prized gadget!



— Cappy Tosetti

You, too, can sign up for our FREE email newsletters at: www.iamcountryside.com/homesteading/newsletter

Wood Splitting Hack

Years ago, I saw this method of splitting wood and have been using it ever since. Although I didn't come up with the idea, it really does work well.

Over the years, anyone that has split their own firewood with an ax or splitting maul has probably had their preference on a splitting stump or block.

And if you split wood this way, more than likely you have had to pick up the pieces after they fly off the block to either be stacked or split again. Well, this simple trick saves a lot of double work.

Secure a tire to your block. I chose an ATV tire because the rim diameter was close to the size logs I cut for firewood. You don't want anything too big or it might be too much to lift.

It does a great job holding the piece of firewood in place while protecting your ax or maul in the process. You can simply walk around the tire making multiple splits.

To store the split wood, I like using the cages that come with 275-gallon totes. You can move them with a tractor and they let air flow through the wood to help it dry. I like having the tote close to where I'm splitting so I can pitch the wood in there as I go.

To keep the wood dry and protected from rain, I lay some sheets of barn metal over the top, securing them with heavy rocks.

— Bryan Downs, Kentucky



January/February Question of the Month:

'Tis the season for spending time in the kitchen. Comfort food is most prevalent during this time of the year. Whether it is an easy slow cooker recipe or a from-scratch, more involved meal, we want to see your favorites.

What are your go-to comfort food recipes?

Share with us at:

Countryside Editor,
P.O. Box 1690, Greeley, CO 80632

Or email to: editor@countrysidemag.com

ROOSTER BOOSTER®

Rooster Booster® has been your trusted partner in poultry health for over 20 years.

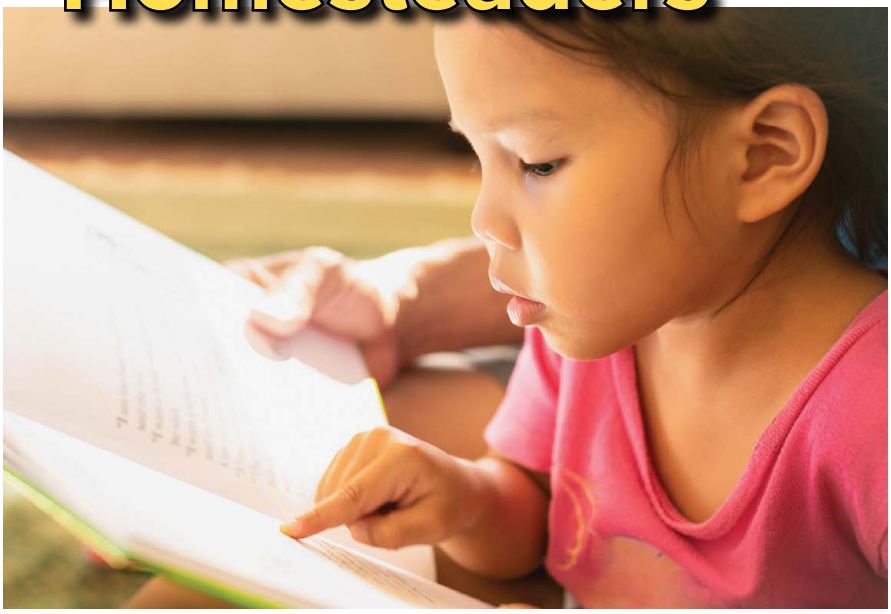
From supplements to topicals, Rooster Booster has your flock, brood, and clutch covered.

This Fall, visit your local feed store to ask which Rooster Booster products they carry.



Head to roosterboosterproducts.com for answers to frequently asked questions, to learn more about what our products can do for your flock or to find an online retailer.

Homeschooling Homesteaders



BY JENNY UNDERWOOD

I'M QUITE CERTAIN THAT many of you reading this are possibly already homeschooling on your homestead. But just as many may be considering such an idea and think it's completely impractical or downright impossible! I'm here to say it's definitely doable and with the right mindset, it can even be enjoyable and a blessing to both the homestead and homeschoolers.

First off, let's define learning. Does it have to be done with worksheets in a classroom-type setting? If your answer is yes, then you may either have to tweak your view of learning and education or the combination of homesteading and homeschool may not work well for you. In my opinion, for you to succeed, you will need ALOT of flexibility. Because while you can most assuredly use worksheets and computers, tables, etc., your children will most likely learn far more by participating in hands-on activities on the homestead.

I know this flies in the face of conventional education, but in fact, it's quite traditional and how most children learned their life skills for centuries. There was no shop class or home ec., instead kids learned directly from their parents and grandparents. And there is no reason that your kids can't do the same.

But you don't have to depend on the homestead for simply practical skills; it can be an amazing science, history, literature, and art teacher. How you ask? Let me just give a few ways your children learn academic-type subjects on the farm.

SCIENCE. This is the easiest one with all of the planting, growing, harvesting, and animals around. You have the perfect opportunity to learn insects (parts, types, habits, methods of elimination, and where they fit in the food web), insect controllers like snakes, spiders, frogs, and birds. You can teach them reproduction with any animals you have like chickens, rabbits, goats, or cows. They can be intimately involved in each aspect of animal husbandry from feeding newborn babies to composting manure. Not only is this a huge help, but it teaches them down-to-earth practical science. Of course, this is also the perfect opportunity to let them write stories, draw pictures, or take pictures. Encourage them to submit their works of art to the wonderful homesteading magazines out there!

HISTORY. What exactly is history? Is it a collection of dry dull names and dates or is it the life stories of ordinary but courageous men, women, and children? On the homestead, you may be using tools from centuries past. This is the perfect opportunity to learn about those tools, who invented them, when they were invented, and what modifications they have undergone. Your children can learn about history through the many pieces of artwork that revolve around traditional farming and country living. There are many excellent living books that tell of past rural life such as *The Diary of an Early American Boy*, *The Little House* series, G.A. Henty's books, and many more. Not only will this prove to be wonderful entertainment, but I can guarantee that history will come alive to them. And when they can make connections between their own way of life and these people from the past, that history lesson will never be forgotten!

Homesteading makes a great opportunity to compete in 4-H competitions or in county or state fairs. Since your children are at home with their projects daily, you won't have to try and make extra time for these awesome activities.



Not only will these projects afford your children room to grow, but they'll be contributing to the family economy by helping to grow crops or animals for entry.

And that leads me to another aspect of homesteading and homeschooling. It gives you the best way to teach your children about family economies and the ability to work together. Your children can then carry this over into their own lives as they mature. In an excellent book called *Durable Trades* by Rory Groves, he discusses how this was the norm until the Industrial Revolution and how this almost destroyed family-centered businesses. But you can bring this back in your family! Children can be a needed and integral part of your homestead. When you realize that while you will need to make adjustments when they are a constant presence, the benefits will far outweigh the costs.

Now when there are children involved, you will realize the need to train early and often for independence and obedience. There are many things on a homestead that can pose dangers, but instead of insulating them from the possible dangers, I recommend training them to avoid them until they are mature enough to use them safely. For example, we use fertilizers and sharp tools on our homestead. The older children help use these with supervision while I'm training my two-year-old to respect and leave these alone. However, while she can't use a hoe yet, she can weed the raised beds by hand. Even a toddler can learn what weeds are and what are not. My 10- and seven-year-olds already are using the wood splitter under Dad's direct supervision and with the proper safety equipment. Not only is this a huge help to our whole family, but my children will have so many skills under their belt that they will be way ahead of the masses as they become adults!

When you look at homeschooling and imagine that you must recreate a schoolroom atmosphere, it seems impossible to merge homeschooling and homesteading. However, when you realize that you can completely involve your children in every aspect of your daily life, you begin to understand what true learning is and how amazing it is to include your kids in whatever you do!

JENNY UNDERWOOD is a homeschooling mama to four lively blessings. She makes her home in the rural foothills of the Ozark Mountains with her husband of 20 years. You can find her reading a good book, drinking coffee, and gardening on their little fifth generation homestead. She blogs at www.inconvenientfamily.com.

Considering Homeschooling?

Succeed in homeschooling with curriculum designed for independent study.

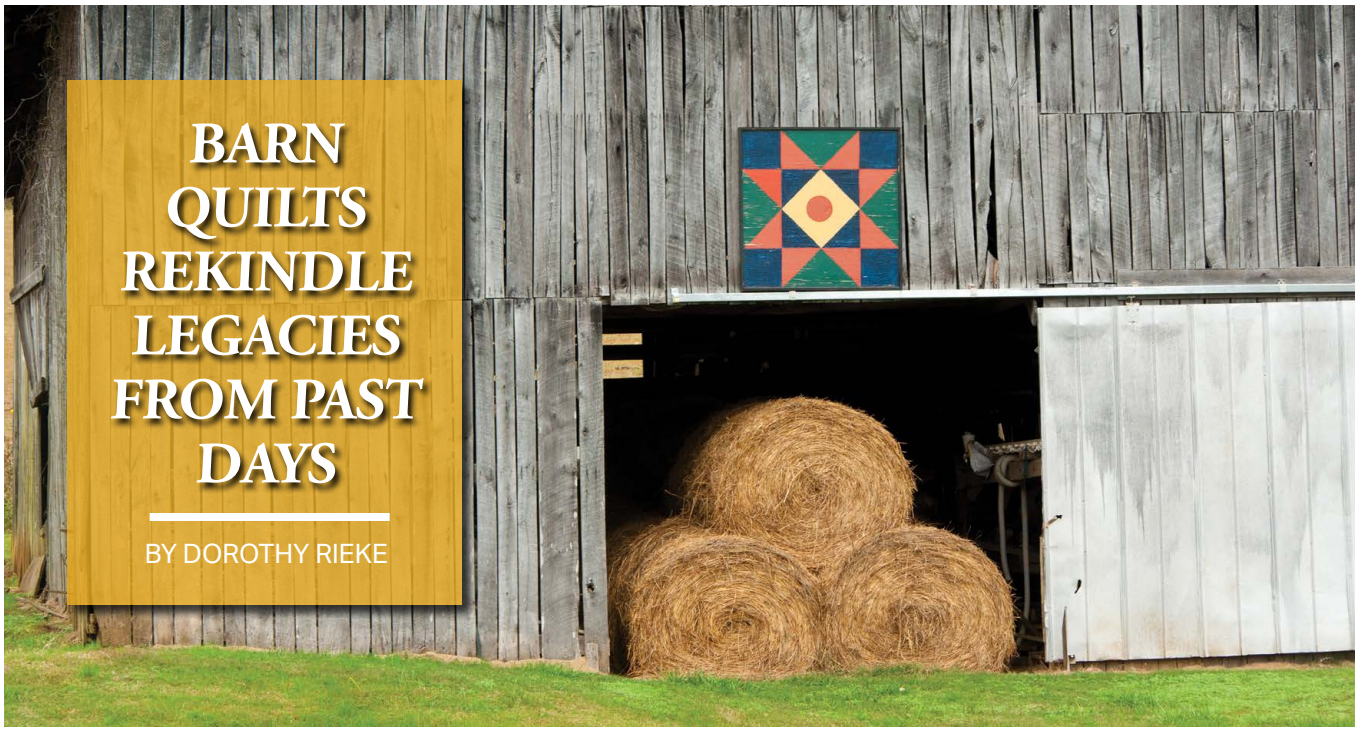


1-800-776-0478

Ask for a free curriculum catalog.

CHRISTIAN LIGHT EDUCATION

CHRISTIANLIGHT.ORG/HOMESCHOOL



BARN QUILTS REKINDLE LEGACIES FROM PAST DAYS

BY DOROTHY RIEKE

TRAVELERS DISCOVER MANY VIEWS of interest along highways. Each mile brings its unique views. As we turned a corner to travel another highway, I saw something that aroused my curiosity. It was a black, white, and purple sign mounted on the front of a barn. It was so vivid and eye-catching, I could not believe what I was seeing. The colors and design intrigued me. I immediately decided to discover what that was. I learned later that it was a barn quilt. What a history those barn quilts have!

Even from the earliest days, man appreciated beauty. From early folk art to today's modern paintings, artists have demonstrated a love of beauty. In fact, John Keats once proclaimed, "A thing of beauty is a joy forever."

So it isn't unusual to believe that immigrants who came to America for religious freedom over 300 years ago loved beauty and found a way to express that love. Even though some dispute the fact that the Germans, settling in Pennsylvania, were the first to paint designs on their barns, it seems logical that Amish, Mennonite, Lutheran, Moravians, and other religious reformed sects pursued their taste for beauty by decorating their outbuildings. In this way, they celebrated their heritage.

These uniquely different barn designs made it possible for travelers to locate families or crossroads as local people knew patterns used by families. Some of the patterns, adopted from older quilt patterns, were "Snail Trail," "Bear Claw," "Mariners' Compass," and "Drunkards Path."

Some referred to these early Pennsylvania settlers as "superstitious Germans." Because these people added these ornamental designs to barns, they were often accused of using signs to frighten Satan or to bring good luck.

Before the 1830s, most outbuildings were unpainted because of the high cost of paint. However, some farmers mixed their own paint using skimmed milk, lime, and red iron oxide. At times, linseed oil was added for a soaking quality. It is also thought that some farmers added blood from recent slaughters to the paint mixture. As the paint dried, the bright red color changed to a darker burnt red.

As paint became more affordable, these structures were painted with real paint with chemical pigments. Red was usually the chosen color.

Barns played important roles in agricultural pursuits. While barns in foreign lands were often small and cramped, the barns, built by early settlers, were large, obviously symbols of hope for successful endeavors. Most barns were hand-hewn structures built with an eye to sunshine, wind, and water drainage because the health of the animals and the storage of grain were of prime importance to the farmer's economy.

Down through the years, cloth quilts have been used for warming beds, covering couches, or hanging on walls as decorations. These beautifully constructed coverings of heritage materials bring feelings of comfort, home, and family. Now, an entirely different kind of "quilt" is appearing in bright patterns on outbuildings.

Today's barn quilts, mounted on garages, barns, outbuildings, and even on houses, are crafted with

clever designs and beautiful bright colors. Any type of exterior-grade paint, latex or oil, is used. While a cloth quilt is constructed with many squares of the same pattern, barn quilts just have one pattern in the square. The simplicity of shapes and the varying colors make them uniquely attractive.

Many designs used on these barn quilts are patterned after early quilt patterns such as the "log cabin," "bear paw," and "wedding ring" blocks. Some include monograms and fancy original designs with messages.

A barn quilt is a large piece of wood, such as plywood, that has been painted to resemble a quilt block. Some larger "quilts" are eight by eight feet square or 12 by 12 feet; others are smaller. The size often depends on how close the quilt will be located to the road and how much space there is on the building. They are remarkable because most of these colorful decorations closely resemble the cloth patterns they are meant to portray.



Years ago, most folk art reflected meanings. Barn quilts are not unlike this early art form, as the symbols and designs often have special meanings. For example, circles represent eternity or infinity. The four-pointed star stands for success, wealth, and happiness.

In the Midwest, Donna Sue Groves and her mother purchased a small farm in Adams County, Ohio. On this farm was a small tobacco barn. Donna Sue decided to honor her mother's Appalachian heritage by hanging a painted quilt on her barn. In addition, she wanted to help a friend draw attention to his business by advertising with a "barn quilt."

The first barn quilt, painted in the area, was one painted with the "Ohio Star." It was mounted on the Lewis Mountain Herbs building. This display, especially noted during a fall festival, encouraged others to follow suit with their own barn quilts.

However, it was some time before Donna Sue pursued this idea as she had other obligations. Finally, with her friends' encouragement and the assistance of the Ohio Arts Council and other community groups, she decided on another plan.

Why not create a driving trail of barn quilts in their county? It would beautify the area and attract tourists. She would promote a "sampler" of 20 barn quilts to be displayed along a driving trail. Soon, 20 barns were ready for tourists in 2003 in Adams County.

Oddly, the first quilt painted and displayed was not located along the proposed route. Instead, it was painted by local artists and placed on a greenhouse nearby. Later, another barn quilt, the "Snail's Trail" quilt square, was painted and mounted on the barn on Donna Sue and Maxine Grove's farm.

Inspired by this unique idea, a group from Brown County, Ohio, began their own barn quilt projects. Donna Sue helped spread "barn quilts" by working with Ohio, Tennessee, Iowa, and Kentucky groups. Today, Kentucky, known as the "bluegrass" state, is home to over 800 painted quilts. In Pennsylvania, octagonal and hexagonal star-like patterns are displayed on the Dutch barns. No two barn quilts are the same.

In the following years, these barn quilts became so popular that the idea of painted barn quilt decorations spread to most of our states and into Canada.

Today, it is estimated that over 7,000 quilts dot the maps of the United States and Canada. These all represent a "clothesline of quilts" that celebrate our art and history legacies of quilting.

These barn quilts, now preserving culture and history using advanced materials, are bright, oversized artworks using high-resolution, longer-lasting outdoor barn paint. These colorful murals adorn historic barns, family homesteads, and public spaces.

Indeed, people are telling their own stories with certain chosen designs. In addition, they celebrate the uniqueness and beauty of each structure where barn quilts are mounted. In addition, they also celebrate the history of agriculture, traditions of quilting, and the owner's passion for art, community pride, and hospitality. As illustrated in barn quilts, the legacies of past days carry all viewers to a level beyond their imaginations.

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



SUGAR WATER MANOR

Running a Homestead-Style Bed and Breakfast

BY JANET GARMAN

DEEP IN THE LOWER Eastern Shore of Maryland sits the historic Sugar Water Manor. The current owners have refurbished, renovated, and restored the main home, the farmhouse, the homestead, and the loft and run a farm bed and breakfast here.

Let me introduce you to Dana and David Zucker, the farmers and proprietors of the property. I was happy to meet with Dana and David in 2020, and we kept in touch after.

The Zuckers are close to retirement age with no plans to sit on the sidelines. The historic 1804 main house and the property are blossoming under their care. They have proceeded with renovations and hosting guests during the global pandemic, all while maintaining a safe and welcoming getaway location.

The beautiful homestead bed and breakfast features waterfront living, fishing, kayaking, hiking, and the whole farm experience if you enjoy friendly farm critters.

The story's beginning goes back to 1992 during a first visit to the Eastern Shore of Maryland. Fast forward to nine years ago, when David found the property listing and they saw the beautiful location, they knew the time was right to begin their future retirement home. Still not officially retired, David works full-time during the week and works the farm and property on the weekends.



In Dana's words, "About nine years ago, we started looking for a summer house. We knew we wouldn't be able live there full-time until we fully retired, given David's work. We were looking for a few key factors in the property: moving water, a place for a garden and animals, and a location that would entice the family to visit.

"I was in Iceland on

a press trip covering food and tourism when David called and said, 'What do you think about Salisbury, Maryland?' I had no clue where that was, but I stopped on my way home and fell in love immediately. I came back two weeks later and looked at 10 homes. Sugar Water Manor won my heart. The location met all of our requirements. We packed up, and a few weeks later, we moved in. Fortunately, David found a great work opportunity. We had no intention of having a bed and breakfast or homestead. We just wanted a little garden. I didn't think I could work hard enough to have a homestead."

After a few months, the gardens grew bigger. The farm animals kept coming, and before they knew it, the Zuckers had become homesteaders. Growing food and raising animals won them over. They felt that the place they called home was too special to not share with others.

Dana wears many hats each day. Managing renovations, animal care, hospitality, chef, and grounds manager are just a few of her daily tasks. I asked her how she stays organized.

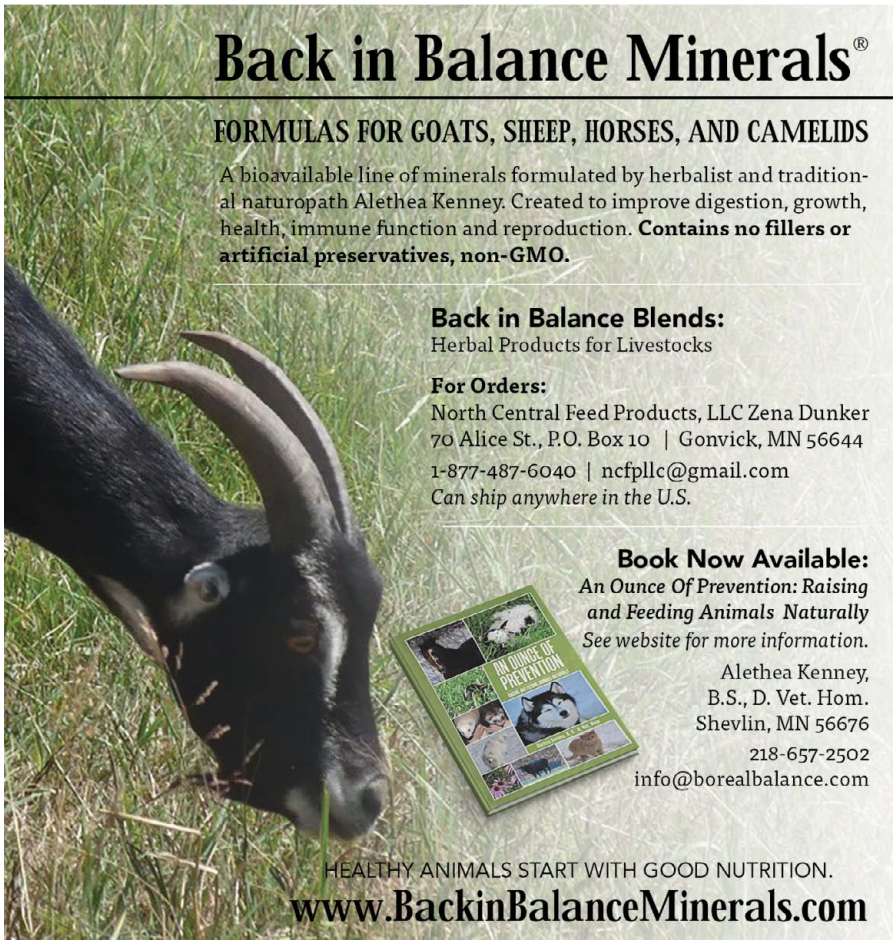
"Staying organized is a priority. I have lists, calendars, and more lists." She added that she's old, so it's all on paper.

All of us bring a lifetime of skills, training, and experience to the homestead life, no matter our age. What skills did Dana and David bring to Sugar Water Manor?

Dana's past includes running a non-profit early childhood center and a few years of running a marine rescue rehab and release center. She also started her own website and consulting business that is focused on social media and influencer marketing. In her opinion, her skills were varied, but none included the skills needed for actual day-to-day homestead activities with animals and gardens.



Sugar Water Manor features waterfront living, fishing, and kayaking.







David continues to work in marketing, with degrees in wildlife biology and economics. They have a plan that includes watching how other homesteaders do things, asking questions, and writing their own story of what worked for them. They believe in hiring the best partners to help them with what they still need to learn.

Of course, this savvy couple has a plan for the future, too. The farm, bed and breakfast, and lifestyle is their retirement plan. They plan to build a business where they can hire a manager to run the property.





Training, investing in their staff, and working to keep them is the plan. The county they live in is the poorest in the state. Creating employment opportunities for local residents is an impact they hope to make by keeping Sugar Water Manor thriving. In addition, Dana and David have weekly business meetings to review the business and homestead, look at the big picture, and make adjustments.

The advice from the Zuckers if you are considering a bed and breakfast business as a retirement plan: start small and keep assessing what you are doing. Do good and do more. Do not make homesteading about removing





yourself from the community; make it about being part of a community. Know your limits, emotionally, physically, and financially.

The work is hard, and Dana and David admit this readily. Dana is quick to add that she wouldn't have it any other way. She likens it to doing your favorite hobbies all day long. The renovations have been a strain, though. She said that has not been the best, but being with her animals, gardening, and sharing all of this with their guests has been wonderful. She loves allowing the guests to find peace here and have a taste of farm life.

If you are interested in information about Sugar Water manor, please visit the website, sugarwatermanor.com

Follow Dana Zucker on Instagram @momsgoodeats

Check in with Sugar Water Manor on Instagram @sugarwatermanor

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).

instagram.com/timbercreekfarmandhomestead
facebook.com/timbercreekfarm
timbercreekfarmer.com

Sub-Compact Tractor with a 20-Series Snow Pusher...
Unbeatable Team for Snow Removal!



Optional poly skid shoes

Models available to fit skid steer or John Deere mounts

- Available in 4-ft and 5-ft widths with either a cutting edge of ultra rubber or alloy steel
- Adjustable skid shoes of AR-400 material
- CNC formed 11-gauge moldboard
- Designed for Sub-Compact tractors up to 32 hp

Visit worksaver.com to learn more

YouTube

Built with Sunshine and Manufactured in the USA

WORKSAVER

Worksaver, Inc., P.O. Box 100, Litchfield, IL 62056-0100
Phone: 217-324-5973 • Fax: 217-324-3356
worksaver.com • E-mail: sales@worksaver.com

Designed. Engineered. Remarkable Value.

World Class Fencing at Affordable Prices

Powerflex Fence
A Resource Concepts LLC Company

www.powerflexfence.com



Permanent & Portable Fencing and Livestock Watering Supplies
Order on-line 24/7 or call for FREE Catalog
417-741-1230



PLAIN VALUES

To Provide for Their Futures, the Millers Looked to the Past

AN INTERVIEW WITH MARLIN AND LISA MILLER BY MARISSA AMES

Plain Values started with a family.

FIVE YEARS AFTER THEY GOT MARRIED, Marlin and Lisa Miller discovered they were unable to have kids. So, they started the adoption process. Two weeks after their home study approval, they were matched with their eldest son: three-and-a-half-years-old and on the autism spectrum.

Lisa taught first grade in a public school, where all of her students were Amish. But, two years after the Millers adopted their first son, she knew she had to make a change. The agency called about a baby girl that would be born with Down syndrome, and the Millers were one of the few families that had elected to submit their adoption profile to be considered to adopt children with Down syndrome. Their daughter was in the NICU for seven weeks and had multiple surgeries. The Millers almost lost her several times. She came home with a feeding tube and a steep learning curve. Lisa put aside her teaching career to care for her daughter's special needs, and she was so thankful

that she could be home during this crucial time.

Two years later, the Millers felt they were called to adopt another baby with Down syndrome. The NDSAN (National Down Syndrome Adoption Network) matched them with their third child: a boy, who was born prematurely and 18 hours away. They have since adopted one more son with Down syndrome.

The Millers needed a special combination: an income that provided for their family while allowing the time they needed to care for their children. Their answer lay in their heritage.

Plain Values for the "Plain People"

Marlin had grown up Amish. He worked as a representative for his local newspaper, and 80% of his clientele were also Amish, many of whom knew him from the past. He could "talk the language," and the Amish community embodied some pillars that Marlin and Lisa admired: concern for their families, caring for other people, and a focus on maintaining their heritage. So, the Millers prayed to identify a product that reached the Amish community.

As hard-working people with quality products, many Amish families have found prosperity, but their "plain" way of life means they are not connected with the ministries that can benefit from charitable donations.

Marlin says, "*Plain Values* is a stepping-stone for people who want to pray and send a check for the ministries they want to support."

The magazine, which publishes an issue each month, brings inspiring stories and donation opportunities. It's a wholesome and family-friendly way to connect a strong heritage with modern times. A sampling of stories from one issue includes a profile for a developing business, a story about experiencing Father's Day as a widowed mother, a recipe for homemade window cleaner, and an eye-opening story on human trafficking — an issue that even the Amish can't escape when trying to protect their children. "Prayers for the Nations" highlights nonprofits that need assistance to improve lives worldwide.

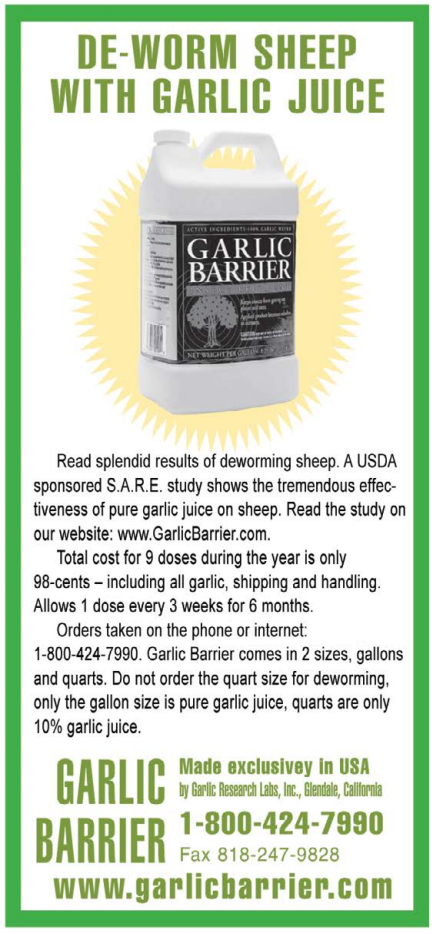
"Folks look forward to the magazine," says Marlin. "They trust and buy into what we are about, and what we are trying to do with the nonprofit work."

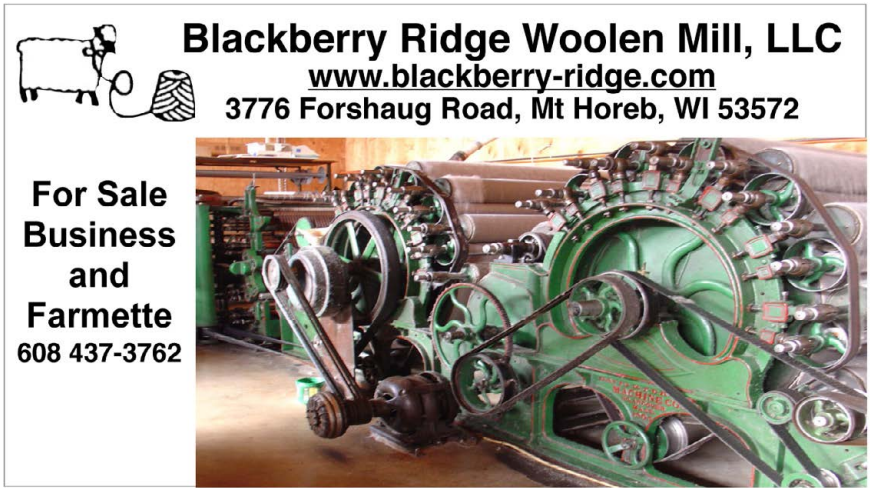
And then there's the blessing that Room to Bloom has become, for so many.

Marlin wanted to talk about adoption and the dignity of kids with special needs. "We never, in a million years, saw anything like Room to Bloom coming. The Lord has really molded it into what it is today." The nonprofit began two years ago. Marlin gifted *Plain Values* to the nonprofit as a fundraising tool and a mouthpiece. While talking about the needs of children overseas, those stuck in orphanages, and those needing surgeries to become more adoptable, it exposes points of view that readers haven't considered. "The adoption world has shifted since COVID began," says Marlin.

He had told Lisa that, as a bucket list item, "If we can play a small role in helping a kid with Down syndrome find their forever family, I couldn't care less what happens







after that. I want to be able to mark that off the list." And has that happened? "Praise the Lord, we have been a part — usually very small roles — in connecting families with kids for four or five adoptions." Room to Bloom has raised almost $350,000 to fund surgeries and grant to families adopting kids with Down syndrome.





The Homesteading Homefront

While the homesteading market has really only been a part of *Plain Values* for the past few years, traditions begin at home.

Lisa had always loved gardening and growing her own food alongside flowers and herbs. She had always wanted animals around. But once she resigned from teaching to be a stay-at-home-mom, she could turn her priorities to helping their kids learn and grow. That wholesome focus embodies homesteading itself.

Lisa spent hours on the floor with their kids, helping them to learn the things that other kids learn so fast. While creating games and activities, she read about nutrition and the importance of where food comes from for the kids' health. And she saw food choices affecting her oldest son's behavior. Slowly, changing one thing at a time, she began growing more of their own vegetables. Then they started to raise their own meat. While improving her children's diets, she saw the wonderful opportunity for the kids to learn how to help in the garden and with the animals. "The children are gentle and kind with the animals," says Lisa, because they saw how well their parents treated the animals. They learned how animals give to the family, and how the family gives back. Now the kids help with building coops and other farm structures, growing and taking on more responsibility.

"Our three-year-old is Chief Egg Collector," says Lisa, "grabbing eggs, petting chickens, washing eggs, then washing hands. Anyone who wants to collect eggs has to go through him, because he is so proud of it."

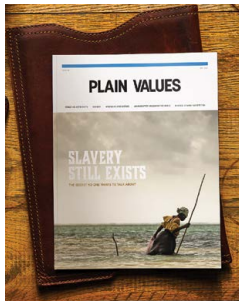
















Room to Bloom: Room to Grow

Recently, said Marlin, "We were featured in a newspaper with a million-plus readers each week. When this newspaper reached out to me, I realized that, if we didn't change our model from a free magazine to a paid subscription model, we could very possibly grow ourselves right out of business."

Many times, *Plain Values'* subscribers shared the magazine with their friends. Then the friends asked to be added to the mailing list. Marlin began receiving several hundred requests per month.

"When I saw that we would be thrown in front of a million-plus people, we changed to a subscription-based platform: $30 a year or $50 for two years."

Within six weeks, we picked up about 1,300 more subscribers.

"People are dying for encouragement and good news, and when presented with the opportunity to read it, they jump on it. People are tired of being screamed at, told that the old-school 'plain living' is old-fashioned and doesn't work. People want to return to a plain and simpler lifestyle. Homesteading and a moral set of values really appeal to people today, more than it has in a long time."

And it all comes around full circle, as so many homesteading ventures do.

"When people subscribe to *Plain Values*," says Marlin, "they are in actuality making a donation to the nonprofit. A couple of bucks goes to paying the printing and postage; everything else goes to the work of Room to Bloom."

With such a combination of heritage, values, prayers, family, and hopes for the future, we can see *Plain Values* growing and blessing so many more, within the Amish and homesteading communities — and more.

Senior Editor for Countryside Publications, **MARISSA AMES** runs a small homestead in Fallon, Nevada, where she focuses on saving and propagating rare poultry and goat breeds. She teaches homesteading skills for her local Grange chapter. Marissa and her husband, Russ, travel to Africa where they serve as agricultural advisors for the nonprofit I Am Zambia. She spends her free time eating lunch.



WHY ARE BEES IMPORTANT?

BY DOROTHY RIEKE

CLEOPATRA IS AN INTRIGUING HISTORICAL FIGURE, but her story is a sad one. She lived the life of a queen but may have died by her own hand, fearing her future. In reality, Cleopatra succeeded in winning the hearts of the most unapproachable and ruthless men of her time. This attraction may have been partly because Cleopatra took care of her skin. Cleopatra had one thing in common with today's women. She was concerned with the condition of her skin and her appearance. In fact, ancient sources relate the beauty of her skin and fresh complexion despite Egypt's sun and sand which had negative effects on the skin. Under these adverse conditions, she succeeded in keeping her skin in good shape.

Actually, she had access to one of the best skin care products which continues to be available today. Reportedly, she mixed honey with milk to make face masks and for baths. Today, make this same bath mixture by adding two cups of milk and ½ cup honey to bathwater. Both of these products exfoliate and moisturize the skin leaving it sweet-smelling and fresh.

Honey has an interesting history. Flowering plants appeared 130 million years ago. The bees arrived later. The oldest fossilized honeycomb dates back three million years ago. The first record of beekeeping dates to 2400 B.C. in Cairo, Egypt. Some of the oldest honey found was in Egyptian tombs dated back several thousand years. In fact, 3,000-year-old honey, found in an ancient Egyptian tomb, hadn't spoiled and was still edible. Honey is so acidic that it is difficult for spoiling bacteria to grow. A special enzyme found in a bee's stomach inhibits the growth of bacteria and other organisms.

Since that time, cultures around the world, including the Romans, Greeks, and Chinese, have used this substance in a variety of ways. Later, its use moved to England.

Many legends concerned bees. An old limerick, very popular years ago in England, mentions honey. "I eat my peas with honey; I've done it all my life. It makes the peas taste funny, but it keeps them on the knife."

A superstition concerned the actions of bees. Covering the hives was supposed to keep the bees from leaving when a death took place; having the bees in their hives was supposed to ensure that the dead person would live again.

Honey is mostly 70 to 80% sugar, and the rest is water, minerals, and protein. Honey has many potential health benefits because it has antibacterial properties. In fact, honey is the only known food that has all the ingredients needed to keep humans alive. It contains water, vitamins, minerals, and necessary enzymes to give the body energy. Pinocembrin is an antioxidant in honey that is effective in improving the functions of the human brain. Today, honey is used in chronic wound management and for combating coughing spells. It may also help heart arteries to dilate, increasing blood flow to the heart. It also is responsible for preventing blood clot formation.

In addition, honey is used as an alternative medicine for such conditions as wound-healing and even cancer, in some cases. Down through the years, doctors have used this substance to reduce the duration of diarrhea, prevent acid

reflux, fight infections, relieve colds and cough symptoms, and replace sugar in diets. Other practitioners suggest using honey for stress, sleep disturbance, bad breath, asthma, hiccups, stomach ulcers, dysentery, vomiting, high blood pressure, eczema, and dermatitis. These practices may not be part of doctors' educational knowledge; however, they, in most cases, are worth a try.

Today, honey is considered as a moisturizer, as an antibacterial, and as a flavoring. It is used in the production of face masks, hair lighteners, and hair conditioners. It also is good for treating acne-prone skin and for all skin types, especially for healing. In fact, honey can be used to treat wounds because it releases hydrogen peroxide.

Honey bees are all-important pollinators for flowers, fruits, and vegetables. They help other plants grow by transferring pollen between the male and female parts of plants. This allows plants to reproduce using seed and fruit.

In order to be effective at their jobs, these bees have 170 odorant receptors used to communicate within the hive and recognize the different types of flowers when searching for food.

There are three types of bees in each colony. The queen lays the eggs spawning the hive's next generation of bees. She also produces chemicals that guide the behavior of other bees. She may live up to five years.

All female worker bees forage for pollen and nectar from flowers, build and protect the hive, and clean and circulate air by beating their wings. If one sees a bee, it is a female bee.

The drones are male; they mate with the queen. Several hundred can be found within a hive during the spring and summer months. During winter, drones are forced to leave the hive.

> Botulism in honey is a major concern to infants and should be avoided. The digestive tract of infants has not developed all the protective features to keep botulism spores from reproducing. Therefore, honey should not be fed to children under one year old.

When the queen bee dies, workers create a new queen by selecting a young larva, a newly hatched baby, and feeding it a special food called "royal jelly." This food helps the larva to develop into a fertile queen.

Twenty to sixty thousand bees live in a colony. Nine of those bees care for the young. The queen's close workers bathe and feed her. Guard bees protect the hive. Construction workers build the beeswax foundation where the queen lays her eggs and where honey is stored. Undertakers remove the dead.

The bee foragers return with enough pollen and nectar to feed the community. A queen bee lays more than 2,000 eggs each day. In fact, she often produces her own body weight in eggs in a single day. Actually, it is possible for the queen bee to lay nearly 1 million eggs during her lifetime.

Unusual but true, it takes at least eight bees all their lives to make a single teaspoonful of honey. In fact, a single jar of honey weighing 454 grams requires about 22,700 trips to the flowers and back. Bees visit 2 million flowers and fly about 55,000 miles to make one pound of honey.

There are many varieties of honey. Each flavor and color depends on the source of the nectar bees gather. Popular honeys come from wildflowers, buckwheat, and clover.

The youngest worker bees make the beeswax from the honeycomb. Eight pairs of glands under the abdomen produce wax drops. The flakes harden when exposed to air. The workers work the wax in their mouths to soften it into pliable construction material.

Through the years, honey has been used in many different ways. One rather strange way was when ancients, such as Alexander the Great, were sometimes buried in honey. Later, those "candied" corpses may have been eaten as medicine.

Today, many of us are concerned because colonies of bees have been disappearing during the past 15 years. No one knows why. This "colony collapse disorder" causes billions of honey bees around the world to leave their hives, never to return. In some areas, over 90% of the bees have disappeared.

Bees provide an ecosystem that is pollinated, protected, and maintained. In other words, bees pollinate food crops. However, if this small percentage of wild bee species disappears, then 80% of our agricultural system may collapse. Seventy of the top 100 food crops rely on pollinators. This is equivalent to 90% of the world's nutrition. Without bees, humans can say "goodbye" to life as they know it now.

Solar Bleaching Beeswax

STORY AND PHOTOGRAPHY BY KRISTI COOK



THE PRACTICE OF BLEACHING BEESWAX has been around for thousands of years. And while modern science has developed various chemical processes to lighten beeswax, most of these methods are beyond the ability of most beekeepers. On the other hand, solar bleaching has been around for thousands of years and is still the most common and safest method of bleaching wax with a negligible learning curve, promising a lighter wax on your first attempt with just a few steps to keep in mind.

On my very first attempt at bleaching beeswax, I discovered a thing or two to help with the process, but overall, I discovered just how simple this process really is. First, the lightest end product comes from the wax cappings removed during the extraction process, with the final product very closely resembling the whiteness of virgin wax. The second-best end product came from the entire frame of this year's beeswax found in the honey supers where brood had never been raised. As the wax darkened through various seasons of honey collection and/or brood rearing, the bleaching process became less satisfactory when compared to first season honey super beeswax. However, in all but the most severely darkened wax, all of the waxes experienced bleaching when prepared properly.

The best results are achieved only when the wax is cleaned and filtered properly, regardless of the specific wax used. Any residual slum gum or other contaminants remaining in the wax will prevent the wax from achieving its lightest possible color. For this reason, it's advisable to learn how to properly filter your wax and to do so as many times as needed to produce the highest quality of bleached beeswax possible, especially if the finished product is intended for sale.

Once the wax is filtered, cut it into chunks or grate it into flakes. Chunks of beeswax bleach quite well provided the sun's rays are at their strongest, and there's enough time to allow for a longer bleaching process. The disadvantage to chunks of any size is the inability of the sun to penetrate deeply into the wax. Depending on how thick and how dark the chunks are, the inside may have experienced little to no bleaching. If this happens, you can either melt the chunks down to distribute the bleached portions evenly amongst the darker wax to produce a lighter, creamy color, or cut the chunks down further to allow more surface area to be reached by the sun for the next few days for a second round of bleaching. Repeat this process until the wax has achieved the desired effect or it no longer shows improvement.

On the other hand, if you'd like a speedy process

or simply don't have a lot of strong sunlight, grating the filtered beeswax into little pieces will be required. This produced the whitest wax for me when I used cappings wax and is my preferred method for bleaching my own beeswax. I have also found that even the autumn sunlight in my area is strong enough to thoroughly bleach the wax provided it is finely grated, so don't be discouraged if you don't have what you think of as strong sunlight. Give it a try anyway and take notes as to what works and what doesn't in your area.

The setup for solar bleaching is as simple or as complex as you'd like to make it. I've used an old cookie sheet, an uncapping tank, a hive body lid, and my solar wax melter with the lid left open as various containers for the wax. All work quite well and produce bleached wax within a week or two as late as October. However, my favorite for small batches is the cookie sheet lined with aluminum foil. The wax on the foil bleaches within a matter of days, making the process extremely fast. For larger batches, a larger container such as the uncapping tank or the solar wax melter (with the lid left open to prevent melting) or a plastic tote, all lined in aluminum foil will hold several pounds of wax, thus shortening the overall process if a lot of wax needs to bleached.

One note to remember when setting up your system is the low melting point of beeswax at 143-147 degrees F. The key here is to bleach the wax, not to melt it. As such, during the heat of summer, provide some shade in the form of netting or a light, airy cloth laid upon the wax. Also, don't forget the wax sitting outside when a rainstorm comes. If it's heavy rain, the wax may float out of the container, resulting in lost wax. (Don't ask me how I know this — twice.)

After the bleaching process has ended, store your wax until ready to use. Depending on how you plan to use your beeswax, you may find you need to alter your storage plan. For instance, if you intend to use your bleached beeswax in cosmetics that require small amounts of wax, storing the wax in flakes will make melting the wax down much simpler. If, however, you plan to make candles or sell blocks of bleached beeswax, chunks, and blocks may suit the situation better.

When storing beeswax, whether bleached or not, be aware that









beeswax does "bloom," meaning a frosty white look may appear over time to the outside of the bars or end products. This is a harmless collection of oils within the beeswax that simply migrates to the surface and appears to dust the outside with a white, powdery substance. This bloom may take months or even a year or longer to appear, but the product is left entirely unaffected by the bloom. To remove, simply rub the wax with a soft cloth or very gently apply light heat to the wax. Once removed, bloom will often take another several months to a year or longer to return.

Discovering how to bleach beeswax opens up new avenues for using your beeswax. Now, you can make beeswax candles in both the traditional yellow hue as well as in white or cream. Beeswax-based creams, soaps, and other cosmetics may be colored with lighter pigments more readily. And as an added bonus, if selling beeswax, you can now offer various price points with bleached wax demanding higher prices than traditionally colored wax.

As with all things honey bee-related, learning to bleach your own beeswax is both a fun skill and a skill worth having as you grow with your bees. Now the next question is, what will you learn next?

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 and articles.*

HOW TO MAKE A QUILT BOX

A quilt box is a great way to absorb the water that condenses from bees' respiration during the colder months. While bees can tolerate cold temperatures, the moisture can be deadly.

Quilt Box Components — What You'll Need:

☐ Empty super (no frames)

☐ Cloth – This will serve as the "floor"

☐ Clean pine shavings

☐ Staple gun







STEP 1: Cut the cloth to slightly wider than the outline of your super.

STEP 2: Tightly staple the cloth to the bottom of the super, placing a staple every ½" to 1".

STEP 3: Pack the quilt box with pine shavings.

STEP 4: Place your quilt box above an upper entrance. The upper entrance allows bees easier access to supplemental winter feed.

STEP 5: To allow the moisture to escape from your quilt box, place a Imirie shim above your quilt box. The cover is your final layer.

The moisture from the bees will meet the fabric and pass into the shavings, eventually escaping through the top shim.

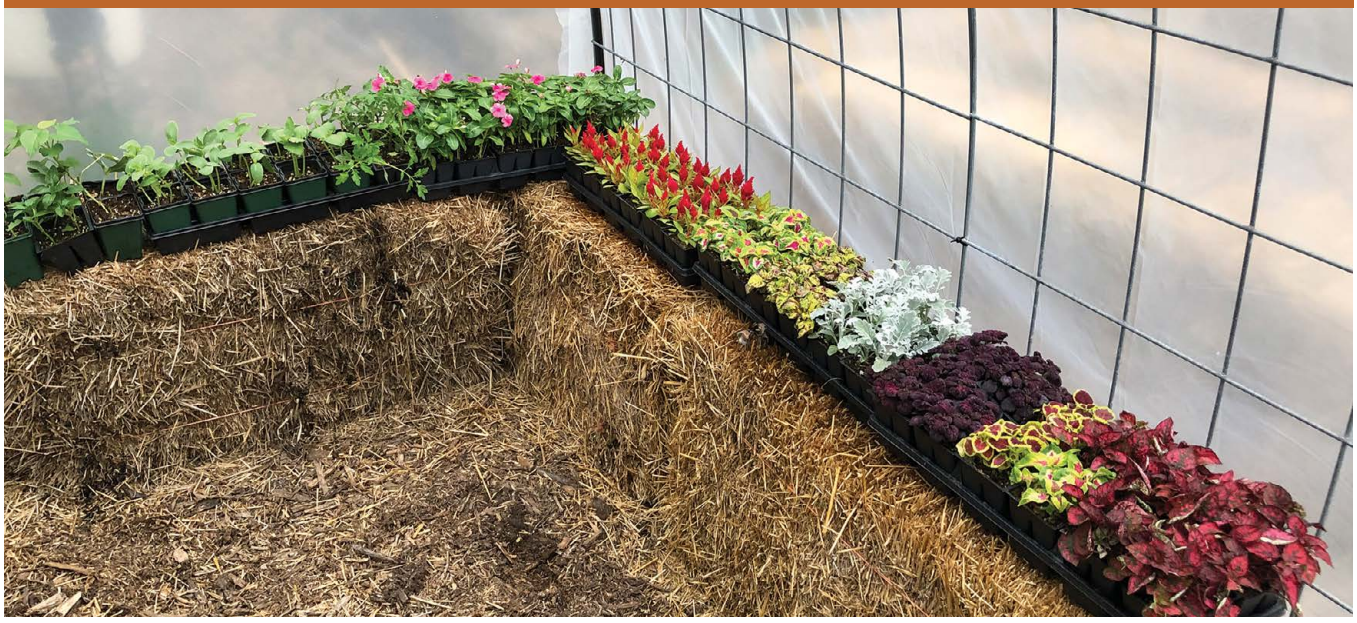
The best filling for your quilt box is a material that is clean, lightweight, and absorbent. Pine shavings are inexpensive and readily available. Avoid sawdust, straw, or leaves, as they don't properly absorb moisture or can ferment when wet.

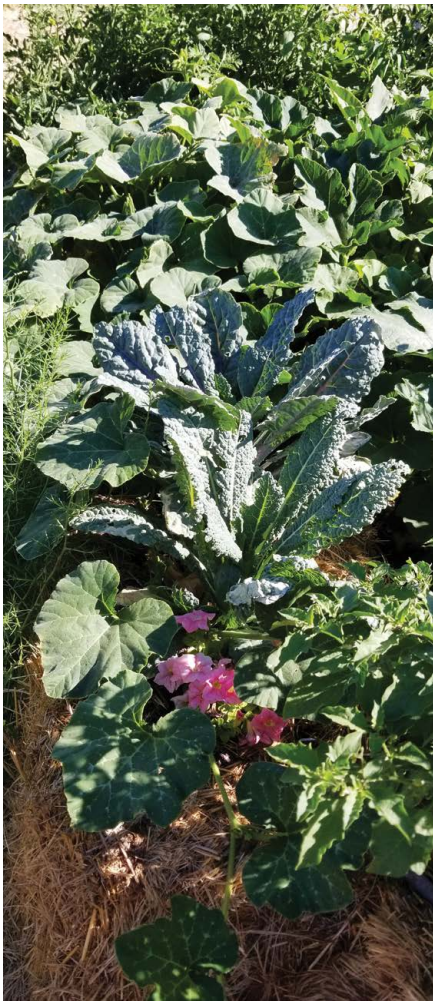
The floor of your quilt box can be any tightly woven fabric. Avoid loosely woven material that will allow particles to enter into the boxes below. An old pillow case (pictured here) works nicely. You can also use an old sheet; just make sure you use a tightly woven fabric.



Beyond Straw Bale Gardens: The Six-Week Greenhouse

BY MARISSA AMES





A NEW GARDENING TREND gathered steam in 2013: grow vegetables out of an agricultural waste product, with a method that eases the back while building soil for future gardens. Straw bale gardening drew a lot of skepticism. But it works.

I tried my first straw bale garden in 2015 after meeting Joel Karsten. I purchased his book, found some clean rice straw, and got to work. At the same time, a disabled friend gave it a try and discovered a way to cultivate food without relying on help from others after the initial garden setup.

Since then, I've moved away from that tiny city plot and onto an acre of land. I have about 1/5 of an acre, just dedicated to gardening. I also planted 40 bales this year. Why? Because I had the old hay that had gotten wet, so I couldn't feed it to my goats. I had the space. And all these years of straw bale gardening proved how much soil it creates. Even if the gardening year is sub-par, decomposition within the bales will boost my in-ground beds next year.

The straw bale gardening method can be used on existing soil, whether good or bad. It works on top of driveways, gravel, hard clay, or pallets. The bales can even sit on raised surfaces to bring the gardening surface even higher.

The Six-Week Greenhouse

Gardening where I live in Northern Nevada presents challenges, one of which is the short growing season. We're lucky if we get 120 frost-free days in a row, so frost-sensitive plants MUST be started ahead of time. I tend to plant 50 or so tomatoes, 30 pepper plants, 30 eggplants, and a lot of basil, so I'm not willing to spend $600 for plants. But seed-starting is another challenge. Those seeds all want specific temperatures for germination. Plus, once they sprout, they need good light FAST, or they get weak and leggy. Plant lights usually aren't enough; they crave the sunlight.

In *Straw Bale Gardens Complete*, Updated Edition,

Joel describes a cost-effective way to use the gentle heat created from decomposition as a way of warming those seed-starting trays. The clear plastic of a budget greenhouse frame provides sunlight right when the plants sprout.

It's a win. And it's something I had been doing for several years. Why didn't people know about this?

Joel calls it the Six-Week Greenhouse. Count back six weeks from your area's average last frost date. That's when you build a frame using two cattle panels, lumber, clear 4-mil plastic, and a few bales of straw. Condition the straw to begin decomposition — set seed-starting trays on the bales, filled with the sterile medium and the seeds. Lift the trays whenever you need to fertilize or water the bales, then place them back down. Decomposition provides that comfortable 70-80 degrees F for tomatoes, peppers, and eggplant.

In the old days, Joel explains, pioneers had no greenhouses, so they went on the south-facing hillsides, dug them out, filled the bases with fresh horse manure, and put window frames on the top to make cold frames so they could start seedlings. As manure decomposes, it gives off a lot of heat. The decomposing bales give off similar heat. Adding cement blocks, rocks, or concrete inside the greenhouse helps absorb heat during the day and radiate it at night.

At the end of that six weeks, if the weather looks good, peel the plastic from the greenhouse if you wish — plant tomatoes or vining crops in those bales and allow them to climb the cattle panels.

No, it's not a beautiful glass greenhouse. But it costs less than $100 to build, and if you reuse the frame next year, you only have to purchase more bales and more plastic.





Successful bale garden on Marissa's farm, using grass hay that got moldy and couldn't be fed to goats.



MATERIALS

- Two cattle panels: 50″x 16′
- Two 2″x 4″ boards: 104″ long
- Two 2″x 4″ boards: 84″ long
- Two 10′x 25′ rolls of 4 mil clear plastic
- Two 16′ lengths of polyethylene pipe or old garden hose
- Sticky-back 6′ zipper, such as Zipwall brand
- 3″ wood screws
- Zip ties
- Staples and staple gun
- Roll of clear packing tape or greenhouse repair tape





INSTRUCTIONS

1. Arrange the boards into a rectangle, with the boards resting on the 2″ sides. Nail or screw them together, so the 84″ boards rest inside the 104″ boards.

2. Stand your first cattle panel inside the wooden perimeter, so it forms an arch, with both ends of the panel touching the ground. Be sure the smooth side (long wires) is to the outside, and the crossbars of the panel are to the inside. The panel ends should rest against the 104″ side, forming a 6′ arch.







3. Position the second cattle panel beside the first to create a 9′ tunnel. Zip-tie the two panels together, with the sharp zip-tie ends pointing to the inside.

4. Use the fencing staples to attach the bottom edges of the cattle panels to the wooden frame.

5. Use zip-ties to attach one length of hose or plastic pipe to the edge of your front cattle panel. Repeat with the back edge and the second hose.

6. Set the frame in its permanent location. If wind is an issue, stake the frame to the ground. Or fix boards along the bottom, connecting the two ends, and set the straw bales on top of these boards to hold the greenhouse down in the wind.

7. Carry your straw bales into the frame and arrange them along the edges with room to walk through. You can fit six two-string bales inside or four to five three-string bales.

8. Covering the arch: Unroll one roll of plastic, so it lays across the arch. Attach the end of the plastic to the wooden perimeter, then pull the plastic taut over the frame, trim it to fit, and attach the other end. Now carefully unfold the plastic sheeting to neatly cover both cattle panels and staple it securely to the wooden frame, pulling the plastic snug and stapling every few inches. Now staple the front and back ends of the plastic to the hose.

9. To create the front and back walls: Using a few staples, attach the second roll of plastic to the top of the arch, at either the front or the back. Unroll it and trim at ground level. Unfold the plastic to either side and staple along the perimeter, into the hose and the wooden frame. Repeat on the other side to create both a front and a back wall. You can use the folds in the plastic as guides to be sure you have it on straight.

10. Seal the seams, where sheets of plastic meet, with the packing tape or greenhouse repair tape. This

is important since the staples won't hold forever.

11. To build the door: A Zipwall is a huge, sticky-back zipper. Peel off the first few inches of backing at the bottom part of the zipper, then stick it to the top-middle part of the front wall. Work your way down, peeling off backing and adhering the zipper to the plastic, all the way down. Then open the zipper and slit the plastic through the gap, creating the door.

Was this confusing? You can see a video at: *StrawBaleGardenClub.com/6WeekGreenhouse*

Conditioning the Bales

12. Sprinkle ½ cup of a high-nitrogen fertilizer onto each bale. Lawn fertilizers are great, but do not use fertilizers with weed and feed. Water that fertilizer into the bales very well.
13. Just water down the bales.
14. Repeat step 1.
15. Repeat step 2.
16. Keep doing this for about 10-12 days.
17. Sprinkle on ½ cup of 10-10-10 fertilizer — water in.

If you insert a compost thermometer into the bales, you will see the temperature rising after six or so days. Within the greenhouse, it takes even less time. Microbes, stimulated by the fertilizer, start to consume the straw and turn it into soil. This creates heat which warms the greenhouse. Once you feel a little heat coming off the bales, you can set your seedling trays on top of them and let the natural heat warm the planting medium.

For more complete instructions and explanation, visit our story at Countryside: iamcountryside.com/growing/straw-bale-gardening-instructions-how-it-works/ or visit Joel's website Straw Bale Garden Club strawbalegardenclub.com/.



Eggplant varieties grown in straw bales.

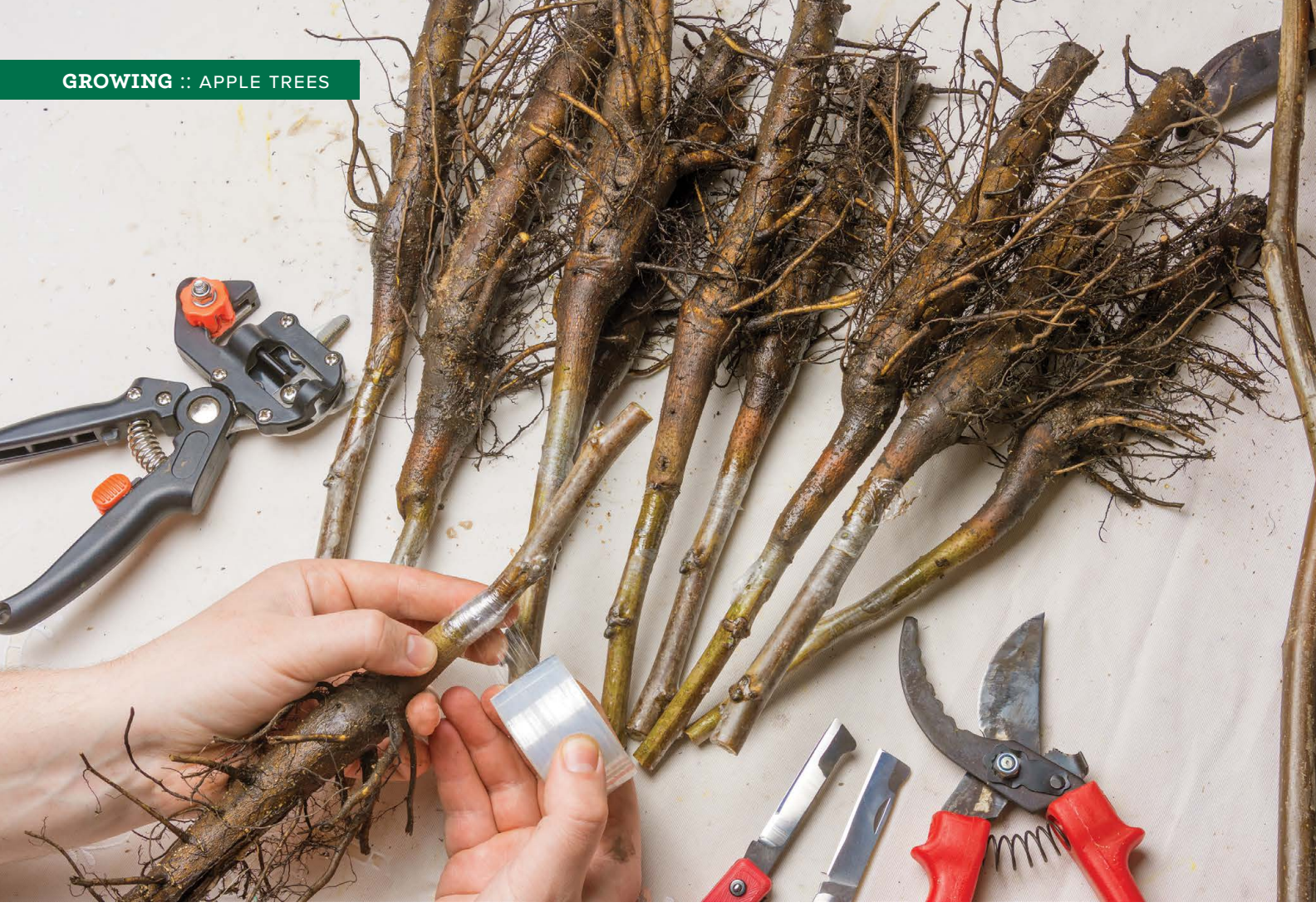
Need a Boost?

These instructions can be confusing, especially when it comes to gardening in straw bales when you're used to gardening in dirt. After a while, you will master the learning curve, and it gets simple. But until then, there is plenty of help available.

Since publishing his book and spreading the word about straw bale gardens, Joel has received many questions. One of the most prominent regards the type of fertilizer to use. What, exactly, does he mean by a "high-nitrogen" fertilizer, and just how bad for plants is fertilizer with weed and feed? (It's deadly.) And how can you do this organically? To address that, Joel's team created BaleBuster in both refined and organic formulas to take away the guesswork. BaleBuster sells in bags portioned for specific garden sizes: BaleBuster20 provides enough refined (conventional) fertilizer for 20 straw bales, while BaleBuster5 provides enough organic fertilizer for five bales. Both fertilizers also contain bacterial strains *Bacillus subtillis* and *Bacillus megaterium*, to aid decomposition, and spores for *Trichoderma ressie*, a fungus that helps plant roots absorb nutrients. The bacteria and fungi give bales a boost that you won't get if starting with clean, dry straw. The organic fertilizer uses blood meal for nitrogen, while the refined fertilizer utilizes conventional NPK. Both eliminate the need for the 10-10-10 fertilizer at the end of the conditioning process.

For additional questions, you can join the Straw Bale Garden Club. A free membership gives you access to videos, a community forum, and your questions answered by Joel himself. Paid membership levels also give you access to webinars and discounts for purchases such as BaleBuster. The top membership tier unlocks a half-hour live presentation by Joel, specifically for your group or class via Zoom.

Though the straw bale gardening trend seems to be on a decline, those who have tried it are still believers. I am. And I advocate any method that turns those old, "waste" bales into good soil for the future.



Why learn to graft fruit trees?

Because it can save you a LOT of money.

BY MARISSA AMES

THAT'S MY FAVORITE REASON. My second favorite: because of the immense "look what I did" factor.

Michael Janik, Reno's "Apple Guru," taught me to graft my first trees using the "whip and tongue" technique. In the class, I spliced two-inch twigs onto tiny rootstocks. These baby trees, less than 12 inches long, would be six feet tall within two years.

I interviewed Michael later, and he showed me his amazing tree: a Black Twig apple variety, grafted onto dwarfing rootstock, so the mature tree reached no higher than nine feet. Then, as the tree grew, he grafted more scions onto the branches, marking the varieties with gleaming aluminum tags. The tree held over 100 grafts, producing multiple apples: Honeycrisp, Golden Delicious, Prairie Spy, etc. And it sat beside his urban house, producing all these varieties in a tiny space.

THAT is why you learn to graft fruit trees.

Can't I Plant Apple Seeds?

Yes, you can. But it will most likely not grow to be what you expected. Those seeds contain so many genetic variables that you might get a tart fruit or a tiny crabapple. The tree might have a full top but inferior roots that don't hold up to the wind. And you waited 10 years, after planting the seed, to find out that the tree won't produce fruit good enough for a single apple pie.

Grafting trees allows you control over:

~ The variety, since a scion cut from a Honeycrisp tree will produce another Honeycrisp tree.

~ The size, as some rootstocks determine the tree's mature height — dwarfing, semi-dwarfing, etc.

~ The hardiness, as some rootstock endures cold and winds better than others. Some rootstocks are more resistant to pests and diseases in your area.

~ Cross-pollination. Some heirloom trees need to be pollinized by another apple tree blooming simultaneously; some do okay on their own but much better if pollinized by a secondary tree. Since apple trees need space, grafting several varieties onto a single rootstock allows those varieties to pollinize each other.

~ Repairing your plant. If your tree breaks, and you know how to graft, you can trim up the ends and reattach them, or you can add fresh scions to an established root system.

~ Your investments. While a good fruit tree may cost $25-75 at a nursery, rootstocks cost around $5 apiece, and you can order the scions for about $5 apiece or cut them off a friend's tree — for free.

~ PLUS: you can graft culinary apple scions to a crabapple tree that's already growing in your yard!

Now, since entire books have been published on grafting, I can't possibly cover it all in one article. So, I will focus on apples, for the purpose of gaining more trees or more varieties on one tree.

Grafting Fundamentals

Types of grafts include bark grafting, whip and tongue, saddle grafting, bridge grafts, splices, side-veneers, and inarch grafts. Each supports a different purpose, and some work better for different plants. For instance, when a friend ordered over 150 apple trees for her farm, she sat and cried when half of those trees arrived infested with Flathead Apple Tree Borer beetles. Then a friend suggested a bridge graft, which removes the infested part and inserts a live twig to serve as the tree's transplant system as it heals. A whip and tongue graft is perfect if connecting a scion and a rootstock of similar diameter; a cleft bark graft is better for grafting materials of different diameters. (For this article, I will be discussing the whip and tongue graft for apple trees.) Side-veneer grafts are used for camellias and rhododendrons.



A bark graft connects young scions to a damaged tree with a good root system.

While you can often graft trees of different species, the genus should be the same. That's why those "fruit cocktail" trees may feature peaches, plums, and cherries on the same tree (*Prunus genus*), but they won't bear apples (*Malus genus*). The closer the species are in traits, the more likely the graft will succeed. Beyond that, there are no rules regarding which species are and aren't compatible, so speaking with experienced grafters helps.

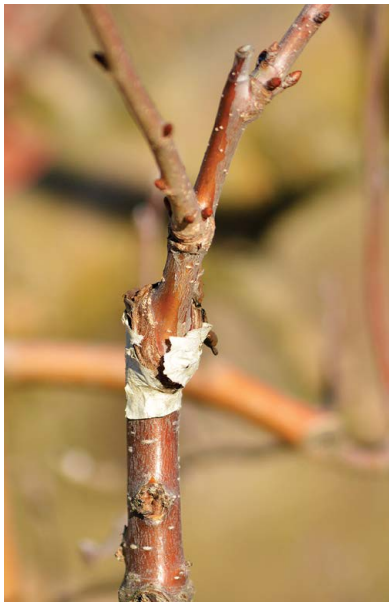
Grafting works best when the tree is in dormancy and sap doesn't flow. This dormancy differs by region, but it's often January to March before the buds become blossoms and leaves. Grafting later than this can reduce the chances of success. You can store scions in the fridge if you cannot immediately graft them onto rootstock.

The cambium layer (the green layer just inside the bark) is the tree's vascular system. Grafted ends must meet at the cambium layer; the more contact, the better. Using a sharp knife allows straight cuts so flat sides can meet for maximum contact. The whip and tongue technique allows multiple points of contact, so it's often recommended for beginners.

Scions are twigs cut from a parent tree that you want to replicate. These twigs should be healthy and have good buds since those buds become branches of your new tree. Often, one-year-old wood is best. Do not allow the scions to dry out; dipping ends in candle wax and storing them in the fridge can avoid drying.

After attaching the scion to the rootstock, protect it to avoid dehydration and disease while the graft heals. Many grafters will secure the graft with rubber bands and wrap it in parafilm to keep water and insects out. This material naturally ages and falls off as the tree heals and grows.

If any buds or branches appear BELOW the graft, these will be the variety of the rootstock or parent tree, not the scion. If you don't want that variety, trim them off when they appear.



The protective layer peels away as a grafted fruit tree heals and grows.

Pay attention to chill hours — the number of dormancy hours between 32 degrees F and 45 degrees F. Don't just select any scion in hopes that it will grow in your area. If you select an apple variety that needs 400 hours of dormancy, like the Ein Shemer, and grows it in Zone 7, it may blossom way too soon, meaning a hard frost will quickly destroy any fruiting potential. Most apples need 700-1,000 chill hours, making them better for northern climates. Consult a USDA zone map or speak with a local nursery to learn your area's chill hours.

Obtaining Rootstocks and Scions

Unless you have a local nursery that grafts their trees that is willing to sell some of their rootstocks to you, look online. Some companies only sell in quantities of 100 or so — and that's a lot of apple trees! Lately, small businesses like Skipley Farm will order the rootstocks then resell in smaller quantities. Pay attention to product descriptions so you order the rootstocks best for your climate, orchard size, and personal needs.

Those same businesses, which sell small-quantity rootstocks, may also sell the scions from their trees. This allows you to select multiple varieties to graft onto multiple rootstocks or onto one or two established trees.

Or — and this is the beauty of apple grafting — you can often inquire if someone will let you clip scions from their apples in your community. By doing this, you are already choosing apple varieties that work with your chill hours. Take sanitized pruners when you cut the scions, as dirty pruners can spread disease. Choose branches about one year old, with the same diameter as your rootstocks or the branches you intend to graft onto. While you can trim away undesirable parts, be sure the part you choose to graft is straight, with at least two vegetative (leaf) buds, and is about the diameter of a pencil. Once you clip the scion, wrap it in a damp paper towel and insert it in a plastic bag. Then, remove the paper towel and dip the scion ends into melted candle wax when you can. This seals in the moisture and allows scions to store in your refrigerator for at least a month, sometimes up to three months.



Good scions are straight and have several pointed, vegetative buds, not flower buds.

The Whip and Tongue Graft

Whip and tongue grafts create a larger area for the cambium to touch and a notch to hold the graft into place. Holding the scion or rootstock, use a sharp knife to make a diagonal cut. Make a matching diagonal cut on the other stick so the two sides align. Now, carefully touch your blade to the middle of that diagonal cut and wiggle the knife down, creating a vertical notch. (Be careful; cut fingers are a standard mishap for beginners.) Set your knife aside, gently insert the "tongue" of each end inside each other, then maneuver the twigs, so the cambium layers align.



Now, hold the graft in place while you wrap it in a material that secures it, such as a length of a rubber band. Then take a protective material such as parafilm, stretch it a little, and wrap it around the graft to ensure no air, moisture, or insects can get under the film.

Some grafters wrap in parafilm first, then in the rubber band. That's how I do it. After practicing with the parafilm, some grafters will buy a stretchy tape that seals the graft and holds it together at the same time.

How long do the protective elements stay on? As Michael Janik told me, "Until they fall off." If they were secured well, they will eventually fall off on their own as the growing tree pushes against them.

MY NIEDZWETZKYANA

A Handy Solution to a Frustrating Problem

BY MARISSA AMES

LAST SPRING, I PLANNED TO teach an apple grafting class. I found a supplier and discussed ordering rootstocks. And I asked friends if I could collect scions from their trees, and they graciously said yes.

Fast forward a month — almost time for the class — and both miscommunication and problems from the pandemic meant I had a fridge full of scions and no rootstocks. The class didn't happen. What would I do with the scions? Feed them to my goats?



Around the same time, my shipment from Trees of Antiquity arrived: A Smokehouse apple tree, a Pink Pearl apple tree, and a Niedwetzkyana: a rare and stunning heirloom from Kyrgyzstan that has dark pink blossoms and apples with brilliant crimson flesh.



One of my little goats nibbled the bottom branches of the Niedwetzkyana tree before I could put it in the ground. The branches sat as little inch-long nubs extending from the trunk.

But … I had scions. This was perfect!



The Niedwetzkyana blossoms had started to bud out, which is NOT ideal for grafting. This should have been done two months earlier. Would it work? It was worth a shot!



I trimmed up those nubby branches with a sharp knife and a set of pruners and selected scions to match. Cutting the whip and tongue ends, I fit them together. Then I wrapped the grafts in parafilm and secured them with rubber bands. Snapping a photo, I posted on Instagram: "Wish me luck!"

Well, as luck would have it — one survived! Had I grafted the scions earlier, I would have had more success. But soon, buds appeared on the distal end of the graft. The light white-and-pink blossom confirmed that it was not a Niedwetzkyana flower but one that I had harvested from a friend's tree.



Next year, around February, I'll try it again: I'll find scions from a tree that blooms early, which is necessary since heirloom Niedwetzkyana blossoms need to be pollinized from apple trees of a different variety. I'll graft them at a more optimal time. And I'll wait for those buds and blooms.

Wish me luck!

Viola Violet

2022 Herb of the Year

BY RITA HEIKENFELD



WHEN WE WERE KIDS, there was a small field of springtime wild purple violets at the end of our suburban street.

My sisters and I picked bouquets to give to our mom, and she made a lovely, simple centerpiece by putting the violets in a canning jar on the kitchen table.

Wild wood violets, particularly the common ones you see everywhere, are one of the harbingers of spring. Violets never fail to make me smile, remembering those carefree childhood days.

Viola (*Viola odorata*) is the herb of the year for 2022. The family is extensive — there are wild yellow and white violets along with the purple. They're distantly related to their cultivated cousins including rainbow-colored pansies and Johnny-jump-ups.

During Victorian times, flowers had powerful meanings. A white violet meant "innocence," while a purple violet was associated with love and fertility.

Easy to identify by their heart-shaped leaves and drooping flowers with five petals, wild violets reproduce through seeds and rhizomes. If you pull a violet up, root and all, you'll see tiny rhizomes hanging on.

After a rain or at dusk, I love how the violets protect themselves by closing up and drooping down. Sort of like they're nodding.

The white and purple violets are edible, either raw or cooked. The yellow violets should not be eaten, as they may cause gastrointestinal upsets. The violet that I love most is the common purple violet, and that's the one I'll focus on today.

Violets are considered weeds by some folks. Not in my world! We make it a rite of spring to pick as many violets as we can. Great exercise, too!

Violet petals and leaves added to a salad of wild-harvested greens, including chickweed, garlic mustard, and wild onions makes for one tasty and nutritious meal. A nutritious vinaigrette can be made subbing in violet vinegar for regular vinegar.

Smear a bit of violet jam or jelly onto a warm scone. Heaven!

Wild violet syrup is lovely as a healthful sweetener for herbal teas. It's yummy drizzled over pound cake or ice cream. Pour some into sparkling water for a "mocktail."

The beauty of violets is not just skin deep. They have impressive medicinal qualities, as well.

The leaves and flowers have been used for respiratory illnesses associated with stuffiness, sore throat, and coughing.

Violets help relieve pain due to their salicylic acid content, similar to what makes aspirin a good pain reliever.

Can't sleep? Sip a cup of warm violet tea from both the leaves and flowers to ease tension. The color will be pink to blue depending upon the soil's acidity.

Violets are known as a moist and cooling herb since the leaves, when used externally, soothe swelling and skin irritations.

Both petals and leaves are rich in vitamins A and C. The lower leaves, harvested early, are especially nutrient-dense.

VIOLET JELLY

Make extra to give as unique, edible gifts. First, you'll need to make an infusion.

Ingredients for Infusion

Place four cups of packed violet blossoms, no stems, into a bowl.

Pour four cups of boiling water over the flowers. Weigh down to keep petals under the water.

Infuse for 12 hours or up to a day.

Strain through a fine strainer, pressing down on solids. You should have three cups infusion; if not, add water.

Ingredients for Jelly

This recipe makes about six jars eight ounces each.

Use any size glass canning jars with proper lids and rings.

3 cups wildflower infusion
¼ cup strained lemon juice
1 box (1.75 oz.) powdered pectin
4½ cups granulated sugar

Instructions for Jelly

Boil jars for 10 minutes on a rack in a large pot filled with water. Keep in hot water until ready to fill. In a small pan, keep lids and rings in hot water.

Place the infusion, lemon juice, and pectin in a six to eight-quart pot. Over high heat, bring to a rolling boil (one that cannot be stirred down), stirring constantly. Continue stirring, add sugar all at once and bring back to a rolling boil and boil for one minute.

Pour into hot jars to within ¼ inch from top.

Remove any foam.

Wipe rims with a clean, wet cloth.

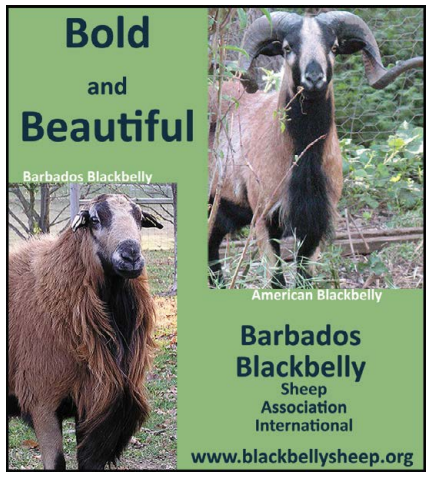
Place lids on jars, screw on rings.

Process sealed jelly in a boiling water bath for five minutes. Let cool away from drafts.

Check seals after one hour.

Refrigerate unsealed jars. Store sealed jars in pantry for up to one year.





The Answer

"There is definitely a part of you that is superior to all confusion and that part is superior to it right now." This is one response to a number of questions asked by a professional counselor of Vernon Howard. There are five special letters giving numerous insightful answers to life's perplexing problems. The letters are of a very lofty nature which will lead you to a much higher way of living.

Order this booklet by Vernon Howard today!
Send only $5 (Shipping included) to:
New Life • PO Box 2230-AP • Pine AZ 85544
www.anewlife.org

BIOTIC INDUSTRIES INC.
www.biotic.com

Biotic Industries is committed to the development of products that reduce the workload of farmers while helping to increase their profits.



CALL BIOTIC TODAY! (931) 437-2514

NANCY'S VIOLET JAM

I first tasted this when my friend, Nancy, brought me over a small jar.

It was such a beautiful, gourmet treat. The original recipe came from Jim Long of Long Creek Herbs, Nancy told me. This is my latest adaptation.

Ingredients

2 cups packed violet blossoms, no stems
¼ cup lemon juice
2¼ cups water, divided
2 cups sugar
1 box (1.75 oz.) powdered pectin

Instructions

Put one cup of water and blossoms in a blender and blend well.

Add juice. Add sugar and blend again to mix well. Stir pectin into 1¼ cups water in saucepan and bring to boil.

Boil for one minute.

Pour into violet paste in the blender on low speed.

Blend again and pour into containers.

Cool, seal, and store in the refrigerator or freezer.

Keeps for three months in the refrigerator; six months in the freezer.



BEAUTIFUL VIOLET SYRUP

This freezes well for up to six months.

Ingredients

1 cup packed violet blossoms, no stems
1½ cups boiling water
¾ cup honey or to taste

Instructions

Put violets in a bowl and pour boiling water over.

Weigh down to keep flowers submerged. Infuse three to four hours.

Pour infusion with petals into a heavy saucepan or double boiler.

Add honey and simmer over low heat until the honey is completely dissolved.

Strain to remove petals.

Cool, then store in the refrigerator. Keeps for several months. Or freeze for up to six months.

NOTE:

✎ Be sure to only pick plants from pesticide and herbicide-free areas and wash plants before eating.
✎ Always make an identification when harvesting wild edibles.
✎ In our woods, vining purple vinca/periwinkle thrives. From a distance, the flowers look a bit similar to violets, so be extra cautious. Vinca is not edible.

Wild violets are not the same as African violets (*Saintpaulias spp*), a common houseplant that is not edible.



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.

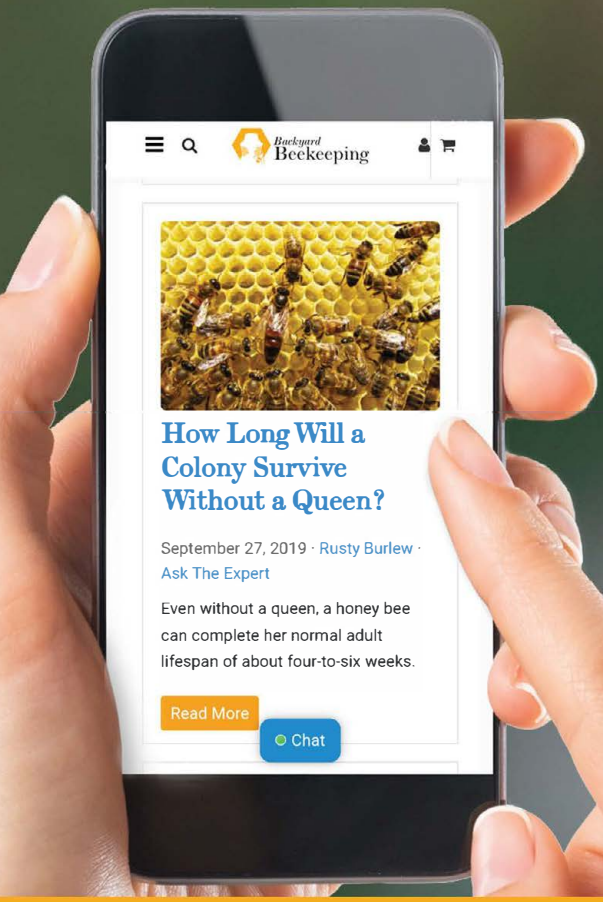
abouteating.com column:
rita@communitypress.com

Backyard Beekeeping

JOIN A COMMUNITY OF PASSIONATE BEEKEEPERS, LIKE YOU!

MEMBERSHIP INCLUDES:

- *BACKYARD BEEKEEPING* MAGAZINE (DIGITAL)
- LIVE CHAT WITH EXPERTS
- HIVE HIGHLIGHTS
- DIGITAL BACK ISSUES
- 10% OFF BEEKEEPING BOOKS
- SPECIAL PARTNER DISCOUNTS



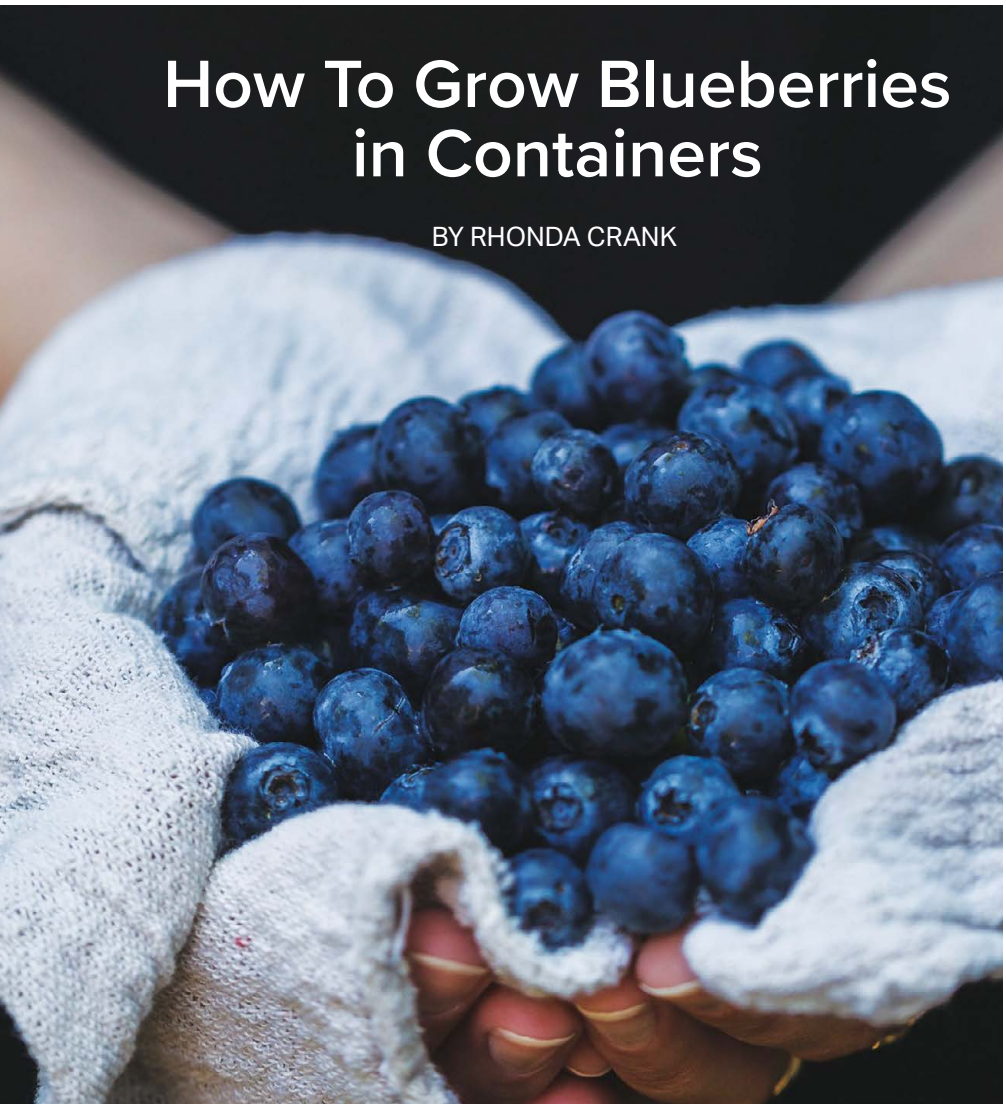
DIGITAL PLUS ALSO INCLUDES:

- ANNUAL ANTHOLOGY (PRINT)
- LIFE IS BETTER WITH BEES TOTE & STICKER
- *BEEKEEPING THROUGH THE SEASONS* (PRINT)

BACKYARDBEEKEEPING.IAMCOUNTRYSIDE.COM/ALL-MEMBERSHIP

How To Grow Blueberries in Containers

BY RHONDA CRANK



BLUEBERRIES ARE ONE OF THE MOST NUTRITIOUS and versatile fruits you can eat. They fit almost every diet regimen you can think of.

Fortunately, blueberries are one of the easiest fruits to grow. Each blueberry bush produces five to seven pints of berries each season. The standard is three bushes for every person as a minimum. I prefer six to eight bushes per person. We eat a lot of blueberries!

Blueberries are Nutritious

Besides all the delicious things to make with sweet blueberries: pancakes, muffins, smoothies, etc., their bountiful nutrition makes them a mainstay for a healthy immune system. This is especially important during the current health crisis.

Blueberries not only contain protein and fiber, but they're also an excellent source of vitamin C, vitamin K1, and manganese. They contain smaller amounts of vitamin E, vitamin B6, and copper.

Everyone is talking about getting more antioxidants in their diet. Blueberries are loaded with anthocyanins, quercetin, and myricetin; these support many of your body systems and help prevent disease.

Growing Blueberries in Containers

Most people plant their blueberry bushes directly in the ground. I prefer mine in raised bed planters. For people who are limited on gardening space, those who want a smaller harvest, or for those who prefer to have berries at a more accessible height, growing blueberries in containers could be the answer.

Container Size Requirements for Blueberry Bushes

To start with, you'll need a container twice the diameter of the pot your blueberry bush is in when you purchase it. If you purchase a bare root plant, you'll need a container twice the root system's diameter.

Depending on the age of the bush, you will have to repot it at least once. A mature blueberry bush needs to be in a container at least 24 inches deep and 30 inches wide. The best time to repot one is in late January or early February before the plant begins its spring growth.

Age When Blueberry Bushes Bear Fruit

Blueberry bushes bear fruit at two to three years of age. They reach full fruit-bearing production around six years old. At 10 years, they are considered fully mature. That may seem like a long time, but if healthy and properly tended, they can live up to 50 years!

I recommend buying two-year-old blueberry bushes to get an earlier harvest than you would with planting a one-year-old bush. I always pull the blooms off the blueberry bushes the first year after planting. This allows them to establish healthy root systems and a strong bush without using energy for the fruit-bearing. I've always had great results doing this.

Which Blueberry Bush to Plant

There are four basic groups of blueberry bushes. Within each group, there are several varieties.

1. Highbush Blueberry — The most common variety. It can be subdivided into Northern Highbush and Southern Highbush. They can grow four-to-seven-feet tall and can reach five feet in diameter.
2. Lowbush Blueberry — Best suited for cold climates. It's the shortest of the varieties, reaching only two feet and two-to-three feet in diameter.
3. Hybrid Half-High Blueberry — As a hybrid, it has the highbush and the lowbush characteristics. Its max height is four feet, reaching four feet in diameter. It does well in cool, mild climates.
4. Rabbiteye Blueberry — Best-suited to hot climates. It will reach up to 10 feet in height and 10 feet in diameter. They are considered the oldest group of blueberry bushes.

Number of Bushes Needed for Pollination

Blueberry bushes are self-pollinating. However, having more than one increases the yields and lengthens their fruit-bearing season.

Exception: Both the lowbush and the highbush have two varieties that are NOT self-pollinating.

Be sure to check the bush label or ask the nursery worker to ensure you are getting the type of bush you want.

Best Soil for Blueberry Bushes

With all plant life, soil is essential for healthy plants with high yields. Blueberry bushes prefer acidic, well-draining soil. Growing blueberry bushes in containers makes it easy to manage all of the soil conditions blueberries need.

If you fertilize, use organic fertilizer for acidic-loving plants such as azaleas. If you notice their leaves are turning yellow, you may want to fertilize them.

Sun Requirements

Blueberries require at least eight hours of direct sunlight to be their healthiest and most productive. Their ideal spot shelters them from wind and provides full sunlight. Avoid planting them near trees. Trees not only produce shade, but their extensive root systems will take up the water and nutrients in the soil before your bushes can.

Water Needs

Always water plants in the morning before the sun is high. If you must water in the evening, avoid watering the leaves and only water the soil around the plant. Watering when the sun is on the plants will cause them to burn. Watering the leaves at night makes the plants susceptible to fungus and disease.

Blueberry bushes need moist soil. They don't do well in soggy soil. When they enter the fruit-bearing stage, they need four inches of water a week. The rest of the year, they only need one inch of water a week.

Pests and Disease

You'll be glad to know that wildlife is your biggest concern. Birds and deer love the bushes for the berries and the leaves. You can win the war by using netting and electric fencing.

As far as insects and diseases go, only a few, such as maggots, fruit worms, and a few funguses, even bother with blueberry bushes. I use a non-toxic neem oil spray so that beneficial insects aren't killed. This spray is an effective fungicide and pesticide, even killing stink bugs!

For ½ gallon of spray:
- Spray bottle (½ gallon or smaller)
- 1 tablespoon pure, cold-pressed, raw neem oil
- 1 teapoon pure baking soda
- 1 teaspoon castile soap or mild dishwashing soap

Add all these to your spray bottle then add enough water to finish filling the bottle. Shake well and spray. Shake well before each use.



Now you know how to grow blueberries in containers and get the best crop possible. Get out there and make your own blueberry thrill!

RHONDA CRANK is Southern born farm girl. Going barefoot in the garden, working with her animals, and all things homesteading bring her joy. She and her husband are organic homesteaders using wisdom and skills their grandparents taught them, with a little modern ingenuity mixed in. In 2014, Rhonda created The Farmer's Lamp in response to the many questions they were being asked about their lifestyle. Her passion is sharing their experience and how-to-knowledge through her website, books, videos, and articles. They desire to help others on their own homesteading journey.



Choosing the Best Chicken Coop Size for Your Flock

BY JANET GARMAN

ARE YOU THINKING ABOUT the best coop size for your flock? This requires evaluating a few factors. Obviously, a large flock packed in a small coop makes no sense. Did you know that a small flock in a large coop can also be the wrong choice?

Factors Influencing Coop Size

One size coop does not fit all. The factors that influence the best chicken coop size include the breeds of chickens, the number of chickens in the flock, community or HOA guidelines, and the size of your property.

Starting with property size, also think about the accessibility of your backyard. Buying a ready-made coop is a great option but delivery might be a concern. If your property does not have access to the backyard because of other buildings or permanent fencing, it will take some modifications to deliver the coop.

Build-it-yourself coop kits are usually in a small size. These are great in most backyard situations. For a small flock of three or four chickens, these tiny coops can be the perfect solution. Small coop kits are attractively designed and easy to assemble. I recommend adding additional hardware cloth and latches to the kit. It is important to use the best chicken coop security features possible.

What Breeds are Suited to a Small Coop?

Bantam breeds are smaller versions of larger chicken breeds. They lay eggs that are a little smaller but still delicious! These are often a perfect choice for a backyard flock. Up to six Bantams can exist comfortably in a small coop. Standard-size chickens can use a small coop for roosting at night, but it does not give them much room to move around during the day. In addition, cramped coop living can lead to pecking order issues and bullying. Small coops can only house two or three standard-size hens.

Homeowners Associations (HOA) and local ordinances may restrict the size of a backyard flock to a low number. Check with your local zoning board if you are thinking about raising chickens.

Benefits to a small coop include it being easy to clean. The coop part is usually above the included run. This limits the amount of bending you must do when gathering eggs or cleaning the nesting and roosting area. A drawback is that there isn't much extra room for food and water during bad weather. We put our small coops inside a 10'x10' chain-link enclosure and covered the top. This gives the flock more room to move about during the day, when we are working, and protects them from aerial predators.

What Is the Space Recommendation for a Coop?

If your chickens can be out of the coop, either free-ranging or in a chicken run for most of the day, the coop

Cramped coop living can lead to pecking order issues and bullying.

size recommendation is two to four square feet of space per chicken. If your flock needs to be confined regularly for longer periods of time, the recommendation is seven to eight square feet of space per bird.

When your chickens are cooped up for longer periods of time, the space per chicken should be increased. Although I do not recommend keeping chickens inside the coop as a rule, occasionally, there are extremes due to weather or predators that require more time cooped up. For this reason, I'm not particularly eager to overcrowd my coops.

Is a Medium Chicken Coop Just Right?

Medium-sized coops often resemble a garden shed or other outbuilding on the property. This size coop is perfect for a flock of 10 to 12 chickens. A medium-size coop allows you to add a chicken or two occasionally without overcrowding. There may not be much space inside for long-term coop living, but there is space for food and water when it is necessary.

When should you build or buy a large coop?
1. You have over a dozen full-size chickens.
2. Your flock consists of some large-breed chickens: Brahmas, Jersey Giants, Cochins, and others.
3. You are tired of building new structures to house your chicken-buying tendencies.
4. Plans for the future include acquiring more chickens or hatching more fertile eggs.

I love our largest coop. It is a redesigned garden shed and has plenty of room to move around. It is easier to clean because of this factor. A big fenced-in run surrounds the large coop. The chickens have access to the coop during the day for egg-laying, hiding from predators, or sheltering from the weather. This was our original coop on the farm and has served us well.



Unfortunately, as chickens have died off, the flock has shrunk in size.



The Drawback to a Small Flock in a Large Chicken Coop

There is now a flock of 11 where there once were 30. In the summer, this is not a concern. In the winter, less body heat being produced overnight and fewer chickens to huddle together on the roost may mean some birds get cold. Of course, we minimize drafts and bed the coop heavily to counter any heat loss. This year, there will not be a problem, as a dozen new pullets will soon be calling the large coop their home.

Additionally, a large coop gives me flexibility on how to use the space. I have rearranged the coop many times. By adding a wire enclosure inside the coop, I was able to integrate pullets and let them safely meet the older hens. I have also housed our sturdy brooder in the coop, freeing up space in our feed and supply shed.

As with everything, having a flexible plan before you start is the best scenario. Buy or build the space you will need for your flock. The best coop size will comfortably house your chickens and provide enough space and protection for them in the event of bad weather or other circumstances. The best coop for chickens does not mean a large palace for a flock of three backyard chickens.



The Dangers of Heat Lamps

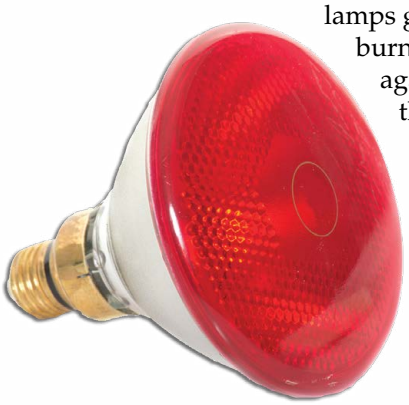
Do Your Chickens Need Heat?

BY REBECCA SANDERSON

EVERY WINTER, CHICKEN OWNERS trying to do their best end up losing their coop and flock to a heat lamp fire. These devastating stories serve as a warning against heat lamps, yet people still use them. Some chicken owners will tell you that chickens never need a heat lamp while others swear by them. Is there a definite answer to the oft-asked question of whether or not chickens need heat in the winter? Well, there is no one answer because every situation is different. However, perhaps this article can help you decide if and how to heat your own chicken coop.

Why Heat Lamps are Dangerous

It seems that heat lamps are the first choice of many livestock owners who need additional heat. This is probably because they often have the lowest upfront cost (although not necessarily the lowest extended cost with electricity) and are offered in most feed stores. They have been commonplace for years, so many livestock and chicken owners accept that they are the answer even while knowing the danger. These heat lamps get very hot; hot enough to burn your skin if you brush up against them. It is no wonder that when combined with the dryness of straw or shavings and animal dander, a stray piece of straw or feather could easily combust. The design of these lamps is often not easy to secure in a stable way without being dangerously close to materials that could combust. There are simply too many ways in which these heat lamps can fail, whether it be a drop of water causing the bulb to explode, a screw coming loose and sending hot parts crashing to the floor, or even as simple as extension cords overheating and causing fires.



Another Argument Against Heat Lamps

According to some studies, chickens can have permanent eye damage when exposed to continuous light such as having a heat lamp on all night. This also applies to brooding chicks and the use of heat lamps with them. Continuous light is also believed to trigger aggression leading to more bullying and feather pecking. Although some suggest red heat lamp bulbs in order to lessen the effect on day/night rhythms, eye problems were actually found to be worse with the red lights.

Do Chickens Need Heat?

There is a huge argument amongst chicken owners on whether or not chickens need supplemental heat during winter. One side states that chickens are descended from jungle birds and are therefore not built for cold temperatures. The other side states that farmers went without electricity and heat in their coops for hundreds if not thousands of years, so of course the chickens don't need heat. Neither side is 100% correct.

Yes, chickens were originally domesticated from birds that lived in the jungle areas of southeast Asia. However, that process began at least 2,000 years ago (some historians speculate up to 10,000 years ago) and chickens have been selectively bred for various

purposes since then. That is a very long time to selectively breed for certain qualities including a much higher tolerance for cold than the chicken's early ancestors. That being said, there are certainly some breeds of chicken that have been developed for colder climates and are much better-suited to a winter with below-freezing temperatures. Breeds such as Silkies, Egyptian Fayoumi, and varieties such as Frizzles are not well-suited to cold weather. Due to their feather structure or even body type, they cannot insulate well enough. There are many cold-weather chicken breeds that thrive in winter and even keep laying eggs. They typically are larger-bodied with dense feather coverage and were developed in places with harsher winters. With proper coop design, they should be fine with most winter temperatures.

If these hardy breeds are not your style, then you will need to consider adding safe supplemental heat to your coop. Be aware that any electricity will add risks of your chickens pecking or even mice eating through a wire. This can also result in a coop fire. Make sure that any wires are well away from your chickens and out of the way of other gnawing critters. Radiant heat plates are quite safe and can be hung above the roosting area or set to the side. These may have a high upfront cost, but they are much better on electricity usage than a heat lamp. An oil-filled radiator is one more option as long as it has a shut-off feature in case of being tipped over. Ceramic bulbs can also give heat without extra light, but they may still be a fire hazard. Chickens do not need as much heat as humans because they wear their down coats all the time. Just a few degrees difference can help your less-hardy chickens during the winter months.

If you live in a particularly cold climate (I'm talking – 20 degrees F or colder) you may consider a little heat on the colder nights even if you have hardy breeds. Be aware of your chickens. Check on them frequently to see how they are faring during winter. If they are huddled together even during the day, they may need help. However, if you have a properly-sized coop for the size of your flock, you may be surprised at the temperature difference that the birds simply being in there will bring. Other factors can help such as insulation. An easy insulation is hay or straw bales stacked against the outside of the coop, but do watch for pests that these may attract. Other little aids include feeding some scratch grains in the evening so that the digestion process can help warm your chickens through the night.

> There is a huge argument amongst chicken owners on whether or not chickens need supplemental heat during winter. There is no one answer because every situation is different. However, they are probably not feeling the cold as much as you think.

Conclusion

For the most part, your chickens can manage cold temperatures on their own. I cannot say exactly what temperature is too cold because that will vary for breed of chicken, age of chicken, humidity in your area, and many other factors. The most important factor is how your chickens are reacting to the cold. However, they are probably not feeling the cold as much as you think.

RESOURCES

- *T McCluskey, W., & Arscott, G. H. (1967). The influence of incandescent and infrared light upon chicks. Poultry Science, 46(2), 528-529.*
- *Kinneaer, A., Lauber, J. K., & Boyd, T. A. S. (1974). Genesis of light-induced avian glaucoma. Investigative Ophthalmology & Visual Science, 13(11), 872-875.*
- *Jensen, A. B., Palme, R., & Forkman, B. (2006). Effect of brooders on feather pecking and cannibalism in domestic fowl (Gallus gallus domesticus). Applied Animal Behaviour Science, 99(3), 287-300.*

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.

FLOCK FILES

Fowl Cholera



By Lacey Hughett

Fowl cholera is a highly contagious bacterial infection that affects multiple species of wild and domestic birds. Turkeys and waterfowl are more susceptible than chickens, and older birds are more susceptible than younger. Onset is sudden, with a high mortality and morbidity rate. Chronic infections also exist and are more likely to be asymptomatic. Fowl cholera is found worldwide.

P. multocida spreads from the excretions of the mouth, nose, and eyes of an infected bird. The largest carriers are chronically infected and asymptomatic birds, but wild birds can infect home flocks.

Bacteria can survive on exposed feed bags, shoes, crates, or equipment. Mammals such as rodents or pets may carry the disease into the coop/run. The bacteria can be killed by most disinfectants, heat, sunlight, and drying.

One of the first signs of fowl cholera is a deceased bird. As more birds contract the disease, symptoms may become more obvious. Acute symptoms include fatigue, ruffled feathers, diarrhea, anorexia, discharge from the nose and mouth, and a rapid respiration rate.

Chronic infection presents as widespread, pus-filled lesions, including in locations such as the respiratory tract, eyes, wattles, and face. Lungs may become consolidate or hard to the touch. The oviduct and body cavity will be inflamed and full of fluid. Inflammation and arthritis are found in the joints, feet, and tendons.

Although preliminary diagnosis is possible based on clinical manifestations, bacteria must be identified to confirm. Several avian bacterial infections can produce lesions similar to fowl cholera.

Prevention in large-scale flocks involves attenuated vaccines but should only be administered to healthy birds. Vaccines are not available for small flocks.

Drugs may manage disease but do not eradicate the bacteria. The flock will always carry the disease, so fully stopping infection means culling the remaining chickens, disinfecting living areas, and waiting a few weeks before adding new birds. Prior to any antibiotic use, contact your local veterinarian. Incorrect dosing or drug usage can lead to resistance.

What is it? A highly contagious bacterial disease.

Causative agent: Gram-negative rod-shaped bacteria *Pasteurella multocida*.

Incubation period: 5-8 days.

Disease duration: Acute: Very short duration usually ending in death of the bird. Chronic: Affects the bird for the rest of their life.

Morbidity: Can be up to 100%.

Mortality: Very high.

Signs: Acute: anorexia, depression, cyanosis, rough breath sounds, mucous discharge, and white or green diarrhea. Chronic: Joint, wattle, foot, or tendon swelling, wry neck, or fluid and pus in the eyes or sinuses. Post-mortem: There may be hemorrhages on the heart, serous membranes, abdominal fat, or gizzard. The liver may be enlarged with necrotic spots.

Diagnosis: Post-mortem exam and culture by a veterinarian.

Treatment: Antibiotics obtained through a veterinarian, usually sulfa drugs, tetracyclines, erythromycin, streptomycin, and penicillin.

All information vetted for accuracy by Dr. Sherrill Davison, Poultry Specialist at University of Pennsylvania School of Veterinary Medicine.

Feed them like you *love* them...



FAMILY OWNED
KALMBACH FEEDS
EST. 1963

Complete, Nutritious, Extraordinary Feed For Your Backyard Hobby Farms.

AVAILABLE AT YOUR LOCAL DEALER OR ONLINE AT:
kalmbachfeeds.com/where-buy • amazon.com • chewy.com



EZ MILKER MAKES COLOSTRUM RETRIEVAL OR MASTITIS TREATMENT EASY

BY HEATHER SMITH THOMAS

DAIRY COWS ARE USED to being milked. Beef cattle are not. Yet sometimes you need to milk one to get colostrum for her newborn calf. The Udderly EZ milker invented by Buck Wheeler was originally for milking mares — whose small teats can be difficult to milk by hand. It was a trigger-operated pump, held with one hand. A soft flange fits over the teat, snugly against the udder, with a bottle attached. A few squeezes of the trigger create vacuum and suction — and quickly fills the bottle with milk.

The mare milker was so successful that Wheeler created Udderly EZ milkers for sheep, goats, camels, and cattle. Beef producers find it useful for obtaining colostrum, milking out a cow with mastitis, etc., since it is so much safer and easier than trying to milk the cow by hand and is much more effective.

The Ultimate EZ Milker is an updated version connected to a compressor. It can milk more than one teat at a time if desired, safely and efficiently. It has an adjustable suction vacuum, and the silicon inserts are tapered and gentle on the teats with a perfect fit. This automatic milker is quieter than other electric milkers and gentle enough to use on animals with painful mastitis.

Dr. Richard Phipps, a large animal veterinarian and rancher in Banner, Wyoming, says the beef industry can benefit from this tool. "Some people might think it would hurt the udder if used very often, but it has less suction power and pull than a calf suckling, and the pulsation makes it easy on the teat," he explains.

"The pulsation is in tune with the heartbeat and also prevents continuous sucking pressure. A calf does the same thing, giving intermittent slurps. It's like you sucking on a straw; you can't suck continuously because you have to stop and breathe. Intermittent sucking action of a calf releases pressure on the cow's teat and udder; pulsation on this milker does the same thing," he says.



Can milk all sizes of teats.

"I've put a stethoscope on the udder when using the pump, and every time there's a burst of milk going into the jug, there's a heartbeat. Pulsation is essential. You don't want a continuous suction vacuum on the teat because it might cause injury. The pulsation releases the pull on the udder just enough to let it relax," explains Phipps.

If a cow has mastitis, he uses the pump to draw all that junk out and get the quarter milking again. "This can also help if a cow has plugged teats at the start of lactation, and not just for mastitis. It is also handy to collect colostrum to freeze for emergencies," he says.

"If a wild heifer doesn't want to mother her calf, you can put her in the squeeze chute and get all of her colostrum and feed it to her calf. The old-fashioned way was to rope



Ultimate EZ SS Bucket / 300 Watt Inverter.

or restrain the cow and milk what you could by hand, but that's not very effective." The cow is stressed and won't let down her milk; you don't get as much.

"With this machine, the pulsation helps relax the cow and stimulates milk let-down, like when a calf suckles. It's a natural kind of action and triggers the release of oxytocin in the cow."

If he has a cow with big teats when she calves, he puts the large teat cups on those big teats and milks them down to where the calf can get on them and take over. "Before, we were doing it by hand, and it was a lot harder."

He uses the EZ milker frequently — at home and on client cows. His Ultimate EZ™ Electric Milker that he takes with him uses the 300-Watt Inverter with Milwaukee 18-Volt, 6-Amp battery, making it totally portable.

"My wife uses one all the time on our ranch because she takes care of the cows when I'm off doing my veterinary work. When a 100-pound gal can operate this thing to obtain eight or nine gallons of milk in 20 minutes, this shows how well it works," he explains.

"I have a cow right now in my barn that has a sensitive udder and won't let her own calf suckle; she prefers the milk pump. It's more comfortable because the calf is always pulling, tugging, and bumping her udder." If the udder is tight and full, a calf nursing and bunting creates discomfort.

John and Ruth Owsiany own a farm in southeast Michigan and have used the EZ milker on their Angus-Simmental beef cows at calving time since 2012. They liked it so well that they bought a second one in 2016 to ensure they always have a spare.

"We have 80 cows, and in the past, when they would calve, if there was any question about whether the calf would nurse the cow soon enough, I milked by hand to get colostrum to feed the calf. We'd bring the cow into another part of the barn, run her through a squeeze chute and get colostrum. Some cows with small teats are hard to milk by hand," he says.

"If a cow calves in the evening, we just milk her, feed the calf, and go back to the house not worrying about him not nursing." In cold weather, some calves don't get up and nurse soon enough before they get chilled. It only takes a few minutes to milk the cow and feed the calf. If a cow has extra colostrum, they freeze it for emergencies or use it for another newborn calf.



Owsiany's colostrum collection in Michigan.



Feeding colostrum to a calf.

"We had one calf that went about six hours before it nursed. It was born in the middle of the night. We thought it was sucking the cow, but it wasn't. We checked the cow closer and realized that the calf hadn't suckled. This milker is handy to get colostrum and get it into the calf," he says. It's a lot faster than trying to milk by hand. Some beef cows are hard to milk by hand or won't let their milk down.

"Other ranchers in our area, and even our veterinarian, buy commercial colostrum for calves that can't nurse, but those products aren't as good as real colostrum," he says. The best colostrum is from one of your own cows because they have been exposed to all the diseases on your farm and create antibodies against those specific diseases.

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.



Boer Goats

Beyond the Meat

BY LACEY HUGHETT

Photos by Carli Fripp.

WHAT ARE BOER GOATS even good for? They're good for meat. Goat tacos. Food for human consumption. They're like all the other species meant for slaughter, correct? Cornish chickens, Angus beef, and Yorkshire pigs.

As a person who personally knows several Boer goats, let me begin to correct this assumption.

Boer goats are loving. They are sweet. They have a wide array of silly personalities common among goats. They are snack hogs and chronic personal space abusers. They are also known for giving slobbery, whiskery goat kisses, and getting into mischief.

Boers are one of the best-known meat breeds, but they are significantly more than that as well. Due to selective breeding, Boers grow remarkably fast and have a meaty carcass. A good line of Boers will reach butcher age by three months. Should one search "Meat Goat" in any major search engine, around 90% of the photos will be of Boers. However, I invite you to notice their sweet faces and how superbly fluffy they are as well.

Boer goats are loving. They are sweet. They have a wide array of silly personalities common among goats. They are snack hogs and chronic personal space abusers. They are also known for giving slobbery, whiskery goat kisses, and getting into mischief.

Did you know Boers are great mothers? They are arguably one of the best breeds when it comes to mothering instincts, not only in my own experience but from what I've read about them as well. I run a herd of Boer crosses specifically for this reason. Kidding season is a stressful time for even the most experienced of goat owners. I have come to appreciate the ability and natural instincts my Boer moms show.

I've had one goat, Wednesday, from the time she was a kid. She has had four kidding seasons here and not once have I witnessed the act during those four years. I always try to catch her kidding, but every year I go out to the pen to find her nonchalantly chewing her cud, a new baby or two at her side, looking at me like, "Oh, what, this little thing? Yeah, I just birthed it. You missed it. Again." I've never felt so judged by a goat for being a slacker until I met Wednesday, but I am so grateful she can handle the job without me.

Although typically considered a meat breed, something I hear often is, "Can you milk Boer goats?" My answer? Yes! After the moms have their kids, they don't just become obsolete for another season. Boers have a very creamy, rich milk. It has a high butterfat content and is comparable in taste to the best milking breeds. I don't find my girls difficult to milk, and they are perfect for my homestead.

Boers have a smaller milking window than milking breeds. A good milk goat can lactate for up to 10 months, whereas Boers begin to dry up around six months. I enjoy the shorter milking window.

Milking is a time-intensive chore and needs to be done at least once a day while the doe is lactating. I give kudos to anyone who milks for 10 months straight, takes two glorious months off, then does it all over again. I love fresh milk, and I love utilizing what my girls give me. But 10 months. Whew. Not for me. Even my goats would laugh at me at that point.

Many farmers are moving toward using Boer goats for companion animals or pets. Anyone who has ever wondered how long Boer goats live, rejoice, for they can live up to 20 years. Females typically outlive the males, but overall, Boers seem to have a high resistance to common diseases and can outlive most other breeds with proper care. This makes them great choices for pets due to their considerable lifespan and mellow attitude.

Boers are also excellent goats for showing. Many people opt to show Boers not only because of their longevity but also because of their "gentle giant" personae and gorgeous array of coat colors. We've all seen the traditional Boer with the white body and red head. However, the breed standard as defined by the American Boer Goat Association states, "The typical Boer goat is white-bodied with a red head, but no preference is given to any hair color." Boers come in any color imaginable, with so many beautiful combinations. They can be dapple, have moon spots, be polka-dotted, black, brown, red, white, tan, or any variation of these. Owning a herd of Boer goats is like having a pack of affectionate, delightful flowers. Flowers that give milk, love, and kisses.

I asked a few Boer breeders what their favorite thing about Boers is and received some valuable responses. Carli Fripp of Fripp Family Farm answered, "I love the size, build, and durability of the Boer. They are tough and resilient to parasites and



Get your cozy slippers and moccasins, now. We also carry hats, mittens, and gloves and everything sheepskin including the latest from Emu products. Americas bestselling footwear.

Visit us at: 10828 Caledonia Road
Belvidere, IL 61008
815-895-9678
www.completesheepshoppe.com





predators." Kristin from Bleating Heart Farm added, "They have so much personality! Very friendly, calm demeanors, and extremely loving. They have so much more to offer than being a commodity."

With anything, there are some downsides to owning Boers. I can certainly think of a few, and I will address them to nip any hearsay in the bud now. All good arguments offer a fair assessment and representation of both sides.

• Boers are big. While you are around these magnificent creatures, you will always be fighting the urge to go for a ride. So will your kids. You must be prepared for this reality and be the adult. Say no.

• Boers are expensive. Once you have one or two Boers, you'll want to buy more. You'll spend all of your money on your goats, or you'll be planning to buy more goats. You'll also want to buy them all the snacks because they beg and they plead with their eyes. You'll be in the aisle at your local feed store and flashback to your Boer guilting you the last time you came back without a snack and be forced to buy a little something-something. Every. Single. Time.



Boers are phenomenal cuddlers and incredibly affectionate. You'll consider the repercussions of having a lap goat. (Are there any? Really?) You'll decide it's worth it, then have to explain why you and your 300-pound companion goat are knees-deep into the first season of *The Walking Dead*, eating popcorn together on the couch when your significant other comes home.

• Boers are phenomenal cuddlers and incredibly affectionate. You'll consider the repercussions of having a lap goat. (Are there any? Really?) You'll decide it's worth it, then have to explain why you and your 300-pound companion goat are knees-deep into the first season of *The Walking Dead*, eating popcorn together on the couch when your significant other comes home.

• Boers get you. You'll wonder if the airlines will accept an emotional support goat. You'll actually call your local airport to ask. You'll be upset when they say no.

• Boers are brilliantly resourceful. They know how to get out of places and squeeze into other places they can't quite fit into yet also can't get back out of. They know.

• Boers are confident. They pose for pictures. Your other goats will look drab compared to these meaty supermodels.

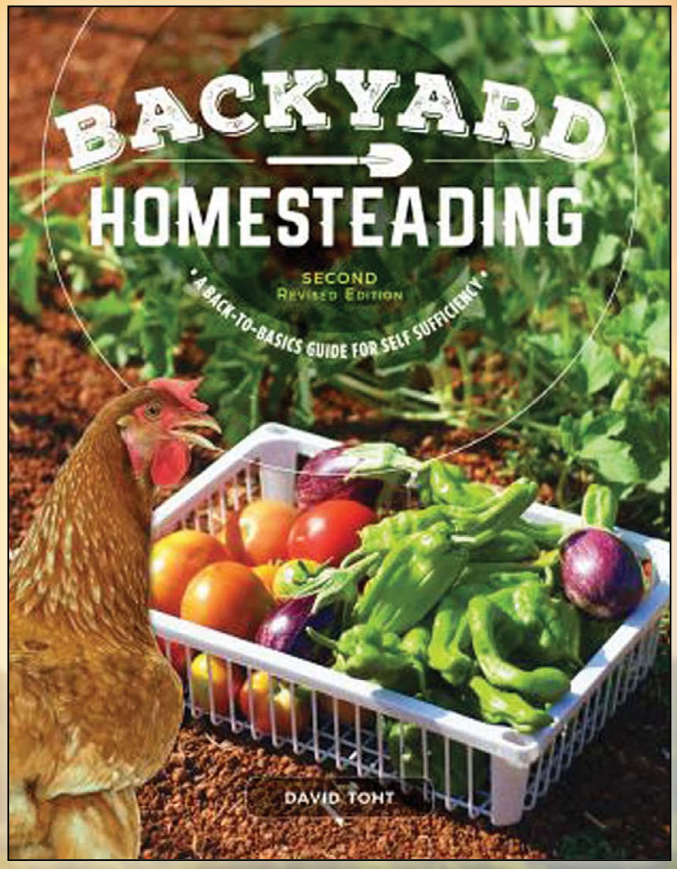
The good clearly outweighs the bad when it comes to owning Boer goats. There is little more endearing on a farm than a fluffy, chunky, boundary-pushing animal trying to get at the crackers in your jacket pocket because she knows she can get away with it. Boers are the perfect all-around lovable goat. They are excellent pets, companion animals, milkers, meat producers, and entertainment. When shopping for your next goat, consider the Boer because they're more than meat.

LACEY HUGHETT is an artist, author, mom, and homesteader based out of Reno, Nevada. She focuses on sustainability, heritage breed preservation, and ethical animal raising. She has been raising poultry since she was six years old. She can be found on Instagram and Facebook at Hughett Heritage Farms.

A Back-To-Basics Guide To Self-Sufficiency

BACKYARD HOMESTEADING

2nd Revised Edition



Turn your backyard — no matter how small — into a sustainable and self-sufficient homestead for raising livestock and cultivating homegrown food! Take control of the food you eat and the products you use — even if you live in an urban or suburban home. Practical instructions for growing fruit and vegetables, raising chickens and other animals, keeping bees, preserving food, making beer & wine, and more.

To order visit: shop.iamcountryside.com

Or call: 970-392-4419

FROM START TO FINISH

BY STEPHENIE SLAHOR, PH.D.





WORK WITH TEXTILES HAS moved to the machinery and technology age, but in the early days, textiles were created and crafted by hand, using the simplest of tools and devices. Many people still enjoy shaving the fleece from their sheep, llama, or alpacas, or saving trimmed-off dog hair, then carding it to help clean it and straighten the fibers for spinning them into yarn. Whether with a simple hand-twirled spindle or a cute spinning wheel (that doubles as a nice conversation piece decorating the house), the resulting yarn has that distinctive character of "homespun," ready for weaving, knitting, crocheting, or other crafts.

The "olden" days created some rather unusual names for the people who worked in creating fabric — names now mostly unheard but which were once common in everyday vocabulary. Here are a few of them.

Working with fleece to create wool meant someone had to be a "carder" or "comber" to straighten the fleece fibers in preparation for spinning. A "spinner" or "spinster" actually did the work of spinning the wool into yarn. The term "spinster" was later used to mean an unmarried adult woman because she usually was still at home with her parents, doing the task of spinning the wool for the family and making extra yarn to trade or sell to others. A "webster," "weaver," or "wayer" used a loom to weave the yarn into cloth. The "fuller" finished and cleaned the cloth once it was woven.

Another word used when working wool or flax is "distaff," the rod that holds the un-spun fibers to prevent their tangling. The fibers are fed, by hand, from the distaff to a spindle or spinning wheel and spun into yarn. Because women usually were the spinners, the word "distaff" came to be associated with women, with even Chaucer and Shakespeare using the word to designate females. It's still used as a noun to name the tool used in spinning but is also used as an adjective to designate the female side of a family or group.

Flax yielded fiber for linen cloth. A "flax rippler" broke off the flax seedpods. The "hatchler," "flax dresser," "hackler," or "heckler" combed or carded the flax with a hatchel or hechel. (While we now think of a "heckler" as an audience member who taunts a performance, that usage didn't come about until the

mid-1800s.) A "burler" removed any knots or burls that were in the cloth. And a "teagler" used a thistle or tool to raise the nap on the cloth.

Next came the "slopster" whose job it was to cut the cloth into pattern pieces. And the "litster" dyed the cloth. The "sartor," "fashioner," "tailor" (male), or "tailoress" (female) turned the cut pattern pieces into clothing.

Even though the entire process was almost all handwork, it was efficient enough that relatively inexpensive, ready-made clothes were available to those who could not afford higher-end clothing. Such inexpensive clothing was sold in a "slopshop" by a "slopshop dealer" or "slopshop keeper." Employees of that person were known as "slop workers." (Alas, also back then in the same 14th century, slop could also mean a mud hole, slime, or other gooey substance that was liquid or semi-liquid, and that's the definition that carries over to today when we say something is a pile of slop or sloppy. So you probably don't want to name your clothing shop a "slopshop" or call your employees "slop workers!")

While clothing is vital, there are some other accouterments just as vital, and that's where some more unusual occupational names came in.

The "currier" or "barker" was the person who tanned animal skins into leather.

The "cordwainer" made shoes out of some of that leather, and the "soler," "snobscat" or "cobbler" repaired the shoes.

A "peruker" or "perruquier" made wigs for gentlemen who wanted to look fashionable in their social and business lives.

And when things wore out and were discarded, along came the "chiffonier" who picked through the rags and sold what's still known as "junk!" That word also derives from the 14th century and referred to old cable or line discarded from a ship. It's probably from the Old French "junc" for reeds or rushes — in other words, something common and not of much value.

And now you know!

DR. STEPHENIE SLAHOR'S *farm and ranch background includes cattle, horses, mules, donkeys, dogs, cats, sheep, goats, rabbits, birds, chickens, geese, turkeys, and tortoises — but not necessarily all at the same time! She would be one of the first to agree that, indeed, "Variety is the spice of life!" Her degrees are a Ph.D. and a J.D., which, she says, "cost a fortune in time and money, but well worth it!"*







Fencing Your PASTURE PIGS

BY JODI CRONAUER

YOU'VE DONE YOUR RESEARCH and found the perfect pasture pig for your farm. Knowing what pigs you want to raise is the first step. Now, let's talk fencing!

Raising pigs outdoors is the healthiest way to raise your animals. Whether you keep traditional hogs or grazing pigs, fencing is a primary concern. Knowing what your animals will do and how they will behave in their pens will assist you in getting the correct fencing. When raising traditional hogs outdoors, you are providing a better quality of life than pigs raised solely indoors. You have to understand that these pigs will dig and root in the soil because that is what they were built to do. Fencing has to be done with that in mind. That doesn't mean it can't be done, in fact, it has been done for hundreds of years, but extra precautions when designing fencing must be taken. Growing up, my grandmother raised traditional Yorkshire pigs outdoors. They had a tendency to nose the ground along the fences, and if her primary fencing had been electricity, they would have shorted it out on a continual basis.



Raising pasture pigs that graze the ground and do not root like traditional pigs will open you up to more variety in your fencing.

Hog panels are built 16' long and are constructed of heavy gauge wire. They have smaller holes near the bottom of the panel, which are useful for keeping small piglets inside. Because they are built very sturdy, they hold up to the scratching and rubbing that pigs do on a daily basis. T-posts or other wood posts are needed to hold them in place, but you can put up a small 48' x 48' enclosure rather quickly and have the confidence to know your pigs should be safely contained. This small enclosure works well as a temporary pen for a winter or spring sacrificial pasture. It also works well as a paddock for your sow to farrow in. The pros of using hog panels are that you will have a sturdy fence that can contain both adults and piglets. The cons are it can be costly if using hog panels to enclose a larger pasture area.

Another option for fencing is using wire fencing. There are many different options of wire fencing available, which gives you the ability to use the wire that works the best on your farm. T-posts or wooden posts will again be needed to secure the fence. The difference in spacing will be different with wire fencing as compared to hog panels. Due to the fact that this wire is not as strong or sturdy as hog panels are, the posts will need to be positioned much closer together.

A large benefit of using wire fencing is that it is less expensive than using hog panels to enclose a large area. The problem with using

wire fencing is that it isn't as sturdy and if the pigs scratch or rub on the fence, then they are more able to bend it. A lot of times, farmers will install a strand or two of electric fence just inside to deter the pigs from rubbing, bending, or climbing on it.

The third option for fencing is to use an electric fence. Now, electric fence comes in many different types and styles, so picking what works the best for the animals that you are raising is the key to being happy with your fences. There are smooth wire, high-tensile, and electro-netting fences.

When using smooth wire or high-tensile electric fencing, you will need to use either T-posts or wooden posts again to secure the wire. Proper placement of the posts is extremely important to prevent sagging. With smooth wire, the posts tend to be closer together because tightening the lines is not as easy as using high-tensile wire. Therefore, the lines will stay marginally loose in comparison and requires additional posts to prevent sagging. High tensile wire has good tighteners that are very easy to use and can be tightened more efficiently. Bigger spaces between posts are not a problem due to the tighter lines. In either circumstance, a good grounding system is a must and will aid in the effectiveness of your electric fence. Electro-netting fence comes with its own set of poles that are easy to install by simply pushing them into the ground. It is easy to move, easy to install, and, if functioning properly, keeps the animals in their pastures. Electro-netting fences come in many varieties, styles, and heights, so you can pick the one that fits your animals the best. Personally, on our farm, we use electro-netting fencing for all of our maternity ward paddocks. We use the feral hog fence, 10x24x12 from Premier 1. For many reasons, we prefer this netting over the others



available. These reasons include: the bottom line being a ground line, so if the fence sags a bit, it doesn't short itself out. The spacing on the bottom of the fence is smaller than the top, so even small piglets cannot usually go through. Piglets learn right from birth that they should respect the electric fences. One other reason we prefer this exact fence is that it is tall enough to keep even our 450-pound boars in, if need be, and is short enough to step over to visit with the pigs easily.

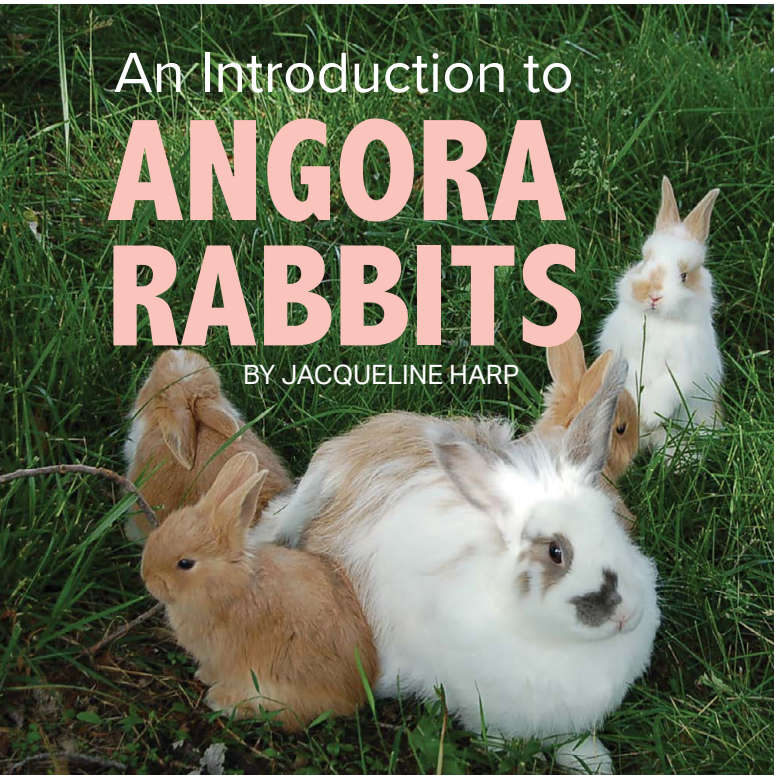
All electro-netting fences, just like smooth wire and high-tensile fences, require a good ground system, so make sure you put in a ground system that fits the requirements of your land and the soil type you have on your farm.

The pros of electric fencing are that the pigs respect electricity a lot and stay in their pastures very well, provided the electricity is working properly, and you have a good grounding system in place. The added pro to electro-netting fence is that you can move it around very easily and in a short amount of time. The cons to using electric fencing are that if your electricity goes out or stops working, the pigs will know about it almost immediately and will let you know. The other problem with only relying on electric fencing is that when you live in a climate that gets a lot of snow, the pigs will not ground as easily when walking on a lot of packed down snow and won't get a shock as easily. At our farm, the sows tend to always respect the fences, whereas the boars get smart and realize they can take a walk and visit everyone once we get too much snow in the winter. We have to make smaller, temporary winter paddocks with hog panels or wire fencing for this reason.

Regardless of the type of fencing you decide will work the best on your farm, there will be pros and cons. Knowing what they are in advance and making an educated decision will help prevent you from starting over or changing things in the future.

Green grass and pastures make for happy, healthy pigs. Good fencing that keeps your animals where you want them makes for a happy and enjoyable farm!

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. 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). https://shop.iamcountryside.com/products/raising-pigs-on-green-pastures



An Introduction to ANGORA RABBITS

BY JACQUELINE HARP

ANGORA RABBITS CAN BE AN adorable and productive addition to a homestead because of their wonderful capacity to produce a fiber that is highly sought-after by hand spinners and mills. Before jumping into raising Angora rabbits, however, it is important to realize that it is a fiber-producing animal, therefore, consistent grooming and care is needed to produce healthy rabbits and usable fiber. The fiber produced by an Angora rabbit is called Angora wool. Angora wool makes luxurious yarn, prized for its softness and warmth.

Meet the Rabbits

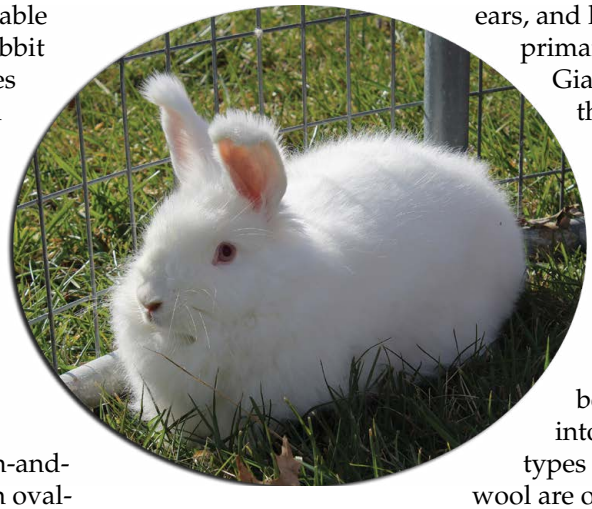
The American Rabbit Breeders Association recognizes four breeds of Angora rabbits — French, Satin, English, and Giant Angoras. Because most people raise Angoras for their wool, it is important to select the breed that meets your fiber needs.

A French Angora weighs between seven-and-a-half to nine-and-a-half pounds. It has an oval-shaped body, and its face, ears, and legs are wool-free. The coat comes in a variety of colors, including the "broken" pattern — a white coat with spots of color. The wool is soft, with a fair amount of guard hair throughout the fleece. Guard hair makes grooming easier, and it gives a radiant "halo" appearance to yarn spun from the fiber. This rabbit produces about four to 16 ounces of wool. Wool can be harvested by shearing, but because the French Angora sheds naturally (molting), their wool can also be harvested by plucking.

A Satin Angora weighs between six-and-a-half to nine-and-a-half pounds. It has an oval-shaped body, and its face, ears, and legs are wool-free. The coat comes in many colors. The wool has a natural shine, often described as "holographic." Thus, yarn spun from Satin Angora fiber displays a beautiful sheen that is almost three-dimensional. This rabbit produces only about eight ounces of wool, making the fiber rare, and it commands top dollar from fiber enthusiasts. A Satin Angora can be sheared, or plucked when molting.

An English Angora weighs between five to seven-and-a-half pounds, making it the smallest of the four Angora rabbit breeds. It has a round body with wool furnishings covering the entire body. Furnishings are the tufts of wool found on the face, ears, and legs. The furnishings give this rabbit a delightful, living pom-pom look when in full coat. The coat comes in many colors. The wool has minimal guard hair, making the yarn spun from it the softest of the four Angora rabbit breeds. The furnishings and lack of guard hairs make English Angoras a bit of challenge to groom, as the wool tends to felt on-body. This rabbit produces four to 16 ounces of fiber. An English Angora can molt, so its wool can be harvested by plucking or shearing.

A Giant Angora weighs over nine-and-a-half pounds, with some reaching 12 pounds, making it the largest of the four Angora rabbit breeds. It has a large, round body, with lightly furnished face, ears, and legs. White is the primary coat color. Each Giant Angora provides three types of wool: fine under-wool (also called down), awn fluff, and awn hair. If the awn hair is especially coarse, it can be removed by a mill in a process called "dehairing" before being turned into yarn. The three fiber types in a Giant Angora's wool are often blended together to create a strong, but very soft yarn. This rabbit produces one to two pounds of fiber per year. Giant Angoras cannot molt, thus, their wool can only be harvested by shearing.



Housing

Angoras require much less space than larger fiber-

producing animals such as sheep or alpacas. Each rabbit needs appropriate cage space, called a hutch, typically 30"x30"x18" for an English Angora, the smallest of the four breeds; add space for larger rabbits. Housing should be well ventilated, but not drafty, with adequate lighting and protection from the elements. Having a safe play area or covered run where your Angoras can get supervised exercise is also a nice feature.

Cleanliness is a critical factor in the care of any rabbit. Cages should have a collection pan for droppings that should be emptied daily. To prevent sore hocks, each cage should have a plastic sitting board, and that board should be cleaned every other day. Rabbit feed and hay should be kept free from pests such as mice and raccoons, which can ruin feedstuffs and spread disease.

Another useful aspect of Angora rabbits is that all their organic waste — urine, poo (called pellets), and hay — makes outstanding compost material for the garden. Dried Angora pellets can be sprinkled directly into the garden, or bagged and sold to gardeners. Angora rabbit urine needs to be composted before use.

Feed and Water

To water your Angoras, suspended water bottles are the best, as they keep chin and throat fibers from becoming wet and matted. A four-inch-wide small animal feeder for pellets is easy to clean and prevents food waste. In order to produce quality wool, Angoras need a high fiber diet with at least 18% protein. Pre-made pellets are available, or you can formulate your own mix. High quality hay should be available at all times for your Angora to nibble on, and using small animal hay racks minimizes waste. You may wish to provide a small bit of unsweetened, dried papaya once a week as a digestive aid and preventative for wool block. Angora rabbits love treats, but use them sparingly. A slice of fresh apple is a welcome sight for an Angora after a grooming session.

Angora Wool Care

Grooming is the most significant element in caring for Angora rabbits. A well-groomed rabbit provides usable fiber and stays healthy. As a general rule, Angora rabbits should be lightly brushed at least once a week, and plucked or shorn once every three months. Wool can be harvested by shearing mechanically with electric shears or sharp scissors, by hand with combs, or by plucking the fibers by hand during shedding season. With careful handling, all methods of wool harvesting can be a safe and positive experience for the Angora rabbit.





Checking for Allergies

It should be noted that some people are allergic to Angoras, similar to sensitivity to cat or dog hair. Angoras are self-grooming, and their saliva collects on the wool; some people may be sensitive to it. On the other hand, Angora rabbit wool is lanolin-free, making it a friendly fiber for those who are allergic to sheep wool. Before bringing Angoras to your homestead, it would be wise to confirm that you are not allergic. Furthermore, it is a good practice to label fiber products made from Angora wool so those with Angora wool allergies can chose to stay clear of those items.

Conclusion

When considering Angoras for your homestead, you only need a small space and a few Angoras to bring beauty and productivity. You may want to start with one rabbit, to learn the care and grooming, while benefitting from the fiber harvest and added fertility for your garden. While Angora rabbits do require a mindful approach to their management, the rewards are well worth it.

JACQUELINE HARP is a freelance writer and multimedia fiber artist who spins, felts, weaves, crochets, and knits in every spare moment possible. She is also a certified Master Sorter of Wool Fibers through the State Univ. of N.Y. (Cobleskill) Sorter-Grader-Classer (SGC) Program. Find her on Instagram: @foreverfiberarts



CHICKEN SOUP IS GOOD MEDICINE

BY GAIL DAMEROW

AS COLD WEATHER LINGERS, my thoughts invariably turn to that ultimate comfort food — chicken soup. Could it be a coincidence that it's also the time of year when I'm looking for ways to repurpose spent layers and surplus cockerels? And could it be a coincidence that chicken soup not only is warming and good for the soul, but also offers relief for the sniffles that ride in on winter weather?

Chicken soup was known to have healing properties as far back as the 12th century, when Egyptian physician Rabbi Moshe ben Maimonides extolled the virtues of chicken broth for its ability to relieve respiratory symptoms caused by the common cold. More recently Stephen Rennard, MD, chief of pulmonary medicine at the University of Nebraska Medical Center in Omaha, proved that chicken soup helps break up congestion, eases the flow of nasal secretions, and inhibits the white blood cells (neutrophils) that trigger inflammatory response to the cold virus that makes your nose stuffy and your throat sore.

"There's something in chicken soup that is anti-inflammatory," claims Patty Quinlisk, MD, the chief epidemiologist for the Iowa Department of Public Health. "In other words, it has the same action as Tylenol or an aspirin would. It basically stops the immune systems from overreacting."

Despite the growing body of knowledge about the miraculous effects of chicken soup, scientists have yet to determine what exactly about chicken soup is so incredibly soothing when you're suffering from a cold. Researchers so far have been unable to come up with a definitive answer as to what makes chicken soup such good medicine. Here are 10 of the many theories:

1. IT'S THE CHICKEN. The protein in chicken contains the amino acid cysteine, which is related to acetylcysteine, a drug used to loosen thick mucus clogging the airways in patients suffering from bronchitis and other respiratory ailments. Cysteine released by chicken into the broth thins accumulated mucus, making it easier to cough up. Furthermore, cysteine, along with two other amino acids in chicken protein (glutamic acid and glycine) create the powerful anti-oxidant glutathione. Among its many other benefits, glutathione enhances the body's immune function.

2. IT'S THE ONIONS. Onions are among many foods containing the flavonoid quercetin, a powerful antioxidant, as well as a natural antihistamine and anti-inflammatory. Quercetin has many uses as a medication, including boosting energy and fighting viral infections. Red onions are among the best natural sources of quercetin.

3. IT'S THE GARLIC. Garlic is well-known to have broad-spectrum anti-microbial properties. Studies have

shown that eating garlic can reduce the duration of a cold by 60 to 70%. Not only does it help you fight a cold, but garlic's ability to boost the immune system has the potential to reduce the frequency and number of colds you get. Garlic also contains small amounts of a large number of nutrients the body needs to maintain health.



4. IT'S THE CARROTS. Carrots are a terrific natural source of beta-carotene. The body converts beta-carotene into vitamin A, or retinol, which is essential for maintaining healthy mucous membranes that prevent disease-causing microbes from entering the body. Retinol also improves the ability of white blood cells to fight infection by destroying harmful bacteria and viruses.

5. IT'S THE CELERY. Celery is high in anti-oxidants, including vitamin C, which helps keep the immune system healthy, and magnesium, which soothes the nervous system to help you fight a cold by letting you get a good night's sleep. Celery also contains lots of natural chemicals collectively known as phytonutrients, which have anti-inflammatory properties that help alleviate lung infection.

6. IT'S THE FLUID. Fighting a fever causes your body to lose fluids, which can lead to dehydration. The resulting dehydration can make your cold worse, which in turn makes you more dehydrated. Chicken broth helps fight a cold by working to keep you hydrated. When you have a cold, staying hydrated helps prevent mucus from thickening and becoming difficult to cough away. Note, too, that thickened mucus is a sign of dehydration.

7. IT'S THE STEAM. The vapors coming from a cup of hot chicken broth help loosen a stuffy nose and open up a congested throat, relieving upper respiratory symptoms. Steam from chicken soup has been proven more effective than vapors from plain hot water. So don't overlook the importance of inhaling those aromatic vapors while you're enjoying a bowl of chicken soup.

THE SOLUTION TO HIGH HEAT BILLS





CLASSIC EDGE™ TITANIUM HDX OUTDOOR WOOD FURNACE

UTILIZE THE RENEWABLE ENERGY SOURCE JUST OUTSIDE YOUR DOOR.

A Classic Edge HDX outdoor wood furnace is the only one with the FireStar controller to make operation easy and automatic. You can remotely monitor the furnace from anywhere, receive texts when it's time to add wood, and more. It is also the easiest outdoor furnace to maintain, ensuring you years of reliable service.

*US Internal Revenue Code Sec. 25(D) effective Jan. 1, 2021, for heating a residence. For more details visit CentralBoiler.com. Information provided here as a convenience and may not be relied upon as substitute for professional tax advice. Consult a tax professional with any questions. | ad7722

LEARN MORE AND FIND YOUR NEAREST DEALER AT CENTRALBOILER.COM

CENTRAL BOILER®

8. IT'S THE SOOTHING ODOR AND GREAT FLAVOR. When you have a cold you probably don't feel much like eating, at a time when your body needs plenty of nutrients to fight infection. The comforting odor and homey flavor of chicken soup pique the appetite. And if you feel just too weary to eat soup with a spoon, you can strain out the solids and get all the same benefits by sipping the broth from a cup.

9. IT'S THE WARM FUZZIES. Eating chicken soup that was made for you by your grandmother, your mother, your spouse, or your best friend just plain makes you feel good. And so does the pleasure of knowing that all the ingredients, including the chicken, were grown not far from your kitchen.

10. IT'S THE SYNERGY. Since scientists have been unable to come up with a single definitive reason as to why chicken soup works so well in helping alleviate cold symptoms, some speculate that the whole is greater than the sum of its parts. A little of this and a little of that combined in one bowl creates the magic and mystery that is chicken soup.

The Proof is in the Soup

Just as nearly everyone has a different opinion about why chicken soup works, nearly everyone has their own favorite chicken soup recipe. Here is my family's favorite:

CHICKEN SOUP
1 quart chicken broth
⅓ cup cooked chicken, shredded
⅓ cup onions, chopped
⅓ cup carrots, chopped
⅓ cup celery, chopped
1 clove garlic, crushed
1 teaspoon salt
⅛ teaspoon pepper

Combine ingredients in a saucepan and simmer until the vegetables are just tender.

The correct way to serve chicken soup is a subject of much discussion. Some people insist on straining out the solids and serving them separately from the broth.

Among those who serve all the ingredients in the same bowl, some add rice. That's my preference. I find that adding about ½ cup cooked rice to the above recipe is just right.

My husband feels that noodles are the only way to go. Accordingly, when I'm making soup for his pleasure, I add ½ cup of thin noodles. I like to cook the noodles directly in the soup broth, but folks who prefer their pasta on the chewy side cook the noodles separately and add them at serving time.

My mother was a huge fan of dumplings. To make Mom's dumplings, you'll need:

⅓ cup all-purpose flour
½ teaspoon baking powder
1 tablespoon chopped chives or parsley
⅛ teaspoon salt
½ tablespoon soft butter
3 tablespoons milk

Combine the first four ingredients. Cut in the butter. Stir in the milk just to moisten. Drop bits of dough into the simmering soup by the teaspoonful. Cover and simmer for 20 minutes. To ensure tender dumplings, do not lift the lid until the time is up.

And don't wait until you catch a cold to enjoy a bowl of homemade chicken soup.



GAIL DAMEROW enjoys cooking and eating soup made from chickens and vegetables grown on her farm in Tennessee's Upper Cumberland. She the author of *Storey's Guide to Raising Chickens* and other books available from Countryside bookstore.

71 Recipes for Making & Using Probiotic-Rich Ferments

- Dairy & Plant-Based Yogurts
- Cultured Butter, Cream, & Cheese
- Healthy Soups, Drinks, & Desserts



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. In *Homemade Yogurt & Kefir*, cheesemaker and small-scale dairy producer Gianaclis 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.

shop.iamcountryside.com • 970-392-4419

Homemade Orange Marmalade

with Canning Tips

BY ANN ACCETTA-SCOTT



CANNING ORANGE MARMALADE announces that winter has arrived and citrus fruit is now abundant. Though the canning season ended months ago, there are still items which need to be put-up and enjoyed at a later date, like this orange jam. Is it really a jam? Well, depending on what recipe you find, it could very well be. However, a jam does not compare to homemade orange marmalade, so homemade orange marmalade you shall receive!

The process for making this preserve is tedious, regardless of the recipe you choose to follow. Some recipes call for the removal of the pith whereas other recipes state to remove the seeds, but utilize the entire orange. Which method you select is up to you, and in truth, each method I've tried has produced a delicious product.

Here are the methods one can use to make homemade marmalade:

- The three-day process
- Overnight soak
- Same day marmalade

For the sake of creating a great tasting homemade marmalade in a short amount of time, the same day recipe is the one I'll be sharing. However, feel free to give the other methods a try!

The World of Marmalade

Homemade orange marmalade should not be confused for orange jam; these are two different items. Marmalade consists of not only the orange segments but also the peel. However, jam is made with only the segments of the orange.

Orange jam is truly a tasty preserve but it does not contain that special ingredient which marmalade does, the zest of the peels. You may not believe that the orange peel would make such a difference in preserves or fruit, but it does.

Orange Varieties

Seville oranges are naturally sour in flavor which makes them ideal for making marmalade. The sugar helps to off-balance the sourness of the orange.

Seville oranges are hard-to-come-by in many parts of the world, which is why marmalade of today is made using various types of oranges and other citrus. It is not uncommon to find lemons, grapefruit, and even tangerines added to, or made into, marmalade.

Navel oranges are available throughout the year, however, other varieties become more accessible closer to the winter months when the fruit and other citrus items are in season.

- *Blood oranges* — this variety makes a beautiful marmalade due to the rich color of the segments. It is also quite sweet and juicy.
- *Cara Cara oranges* — a variety of the navel orange which is sweet and quite juicy.
- *Valencia oranges* — this orange contains few seeds, is very juicy, and has a thin skin; excellent components for making homemade orange marmalade.

In addition to the citrus mentioned, tangerines can also be used to make homemade marmalade. Feel free to mix tangerines with any of the orange varieties mentioned above.

- Clementines
- Mandarins
- Satsumas
- Tangerines

Kumquats also make for a delicious marmalade. This citrus fruit is tart and balances quite well with the amount of sweetener required. Additionally, the skin of the fruit is ideal for making marmalade.

HOMEMADE ORANGE MARMALADE

Before beginning, wash the fruit well taking care to naturally remove the wax from the skins of the fruit. Wax is added to citrus to help prolong the shelf life and make the fruit appear more appealing to the consumer.

Traditional marmalade is made with high amounts of sugar, however, honey makes for a great substitute. When substituting sugar for honey, it is best to incorporate the honey slowly. Taste the mixture often to ensure the flavor is to your liking. It is best to begin by adding one cup at a time.

Ingredients

- 3 pounds oranges
- 1 large lemon
- 6 cups water
- 6 cups sugar or honey

Equipment:
- Steam canner or hot water bath canner
- Non-reactive heavy bottom 8 quart pot
- Measuring cups
- Jar funnel, air bubble remover, ladle
- Cheesecloth and food string
- ½-pint size canning jars (6 total)

Instructions

1. Before beginning, wash and remove the wax from the skins of the oranges.

2. Using a vegetable peeler or paring knife, remove the outer skin of the fruit, taking care to not include the pith.

3. Coarsely chop the zest of the oranges to the consistency which you will enjoy in your marmalade and set aside. Thin strips will make





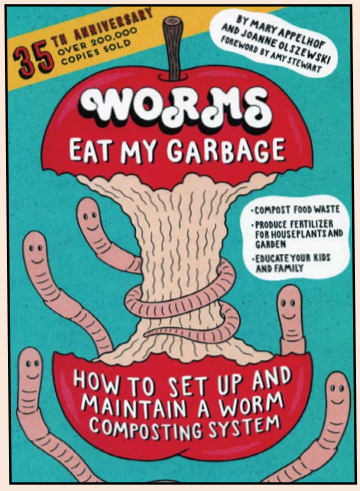






WORMS EAT MY GARBAGE

How to Set Up & Maintain a Worm Composting System



To order visit:
shop.iamcountryside.com

Or call:
970-392-4419

Type of Pack	Jar Size	0 - 1,000 ft	1,001 - 6,000 ft	above 6,000 ft
Hot	1/2-pint	5 mins	10 mins	15 mins

the marmalade more spreadable, however, a chunkier marmalade can also be achieved.

4. Discard the blossom and stem end from the zested oranges.

5. Over a mixing bowl, remove the segments from the membrane. Once all the segments are removed, squeeze membranes to extract any remaining juice. Reserve the membranes and the seeds to use as a natural pectin.

6. In a non-reactive, heavy-bottom pot, combine the zest, fruit segments, juice, sweetener, and water. Bring the ingredients to a boil and stir often. Allow the mixture to boil until the sugar dissolves.

7. As the mixture is reaching a boil, make a pectin bag using the membranes, seeds, cheesecloth, and food string. Place the ingredients onto a double layer of cheesecloth and tie together. Add the pectin bag to the boiled mixture.

8. Continue to boil, bringing the marmalade to 220 degrees F. Maintain 220 degrees F for 5 minutes. During this time, do not stir the mixture.

9. Remove the pectin bag and take a minute to scrape any extra marmalade back into the pot. Discard the bag.

10. Test to see if the mixture will set: place a dish into the freezer to chill, add a small amount of the orange mixture to the chilled plate, and run a spoon through it. If the mixture parts and you can see the plate, it is ready to be canned. If not, continue to boil for five more minutes and test again.

CANNING ORANGE MARMALADE

Much like jams and jellies, marmalade is made shelf-stable using a hot water bath or steam canner.

1. Prepare the canner.

2. Fill hot pre-sterilized jars with hot marmalade, making sure to leave a ¼-inch headspace.

3. Using a clean, damp, dish towel, wipe the rims of the jars, add warmed lids and rings to finger tight.

4. Process jars in the canner based on the altitude which you reside. Refer to the chart above.

5. Allow jars to cool for 12 to 24 hours and check that the lids have sealed.

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.*

Website: afarmgirlinthemaking.com

Instagram: instagram.com/afarmgirlinthemaking/

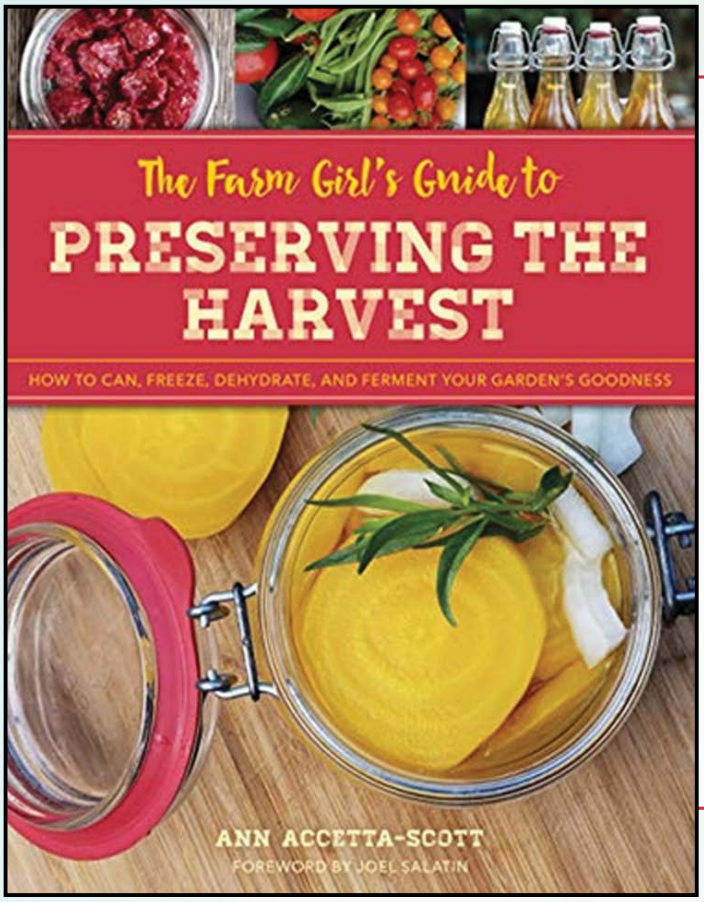
YouTube: youtube.com/afarmgirlinthemaking/

Facebook: facebook.com/afarmgirlinthemaking/

The Farm Girl's Guide to Preserving the Harvest

How to Can, Freeze, Dehydrate, and Ferment Your Garden's Goodness

By Ann Accetta-Scott



This guide takes home preservers through the beginning, moderate, and advanced stages of preserving. Newcomers can start with a simple jam and jelly recipe using a hot water bath canner, while others may be advanced enough to have mastered the pressure canner and are ready to move onto curing and smoking meat and fish.

With more than 30 delicious and healthy recipesand Ann's expertise and encouragement, the home preserver will build confidence in the most common methods of preserving.

shop.iamcountryside.com ~ 970-392-4419

Sourdough from Scratch

BY JENNY UNDERWOOD



BAKING BREAD HAS TO BE one of my favorite things to do (and eat), and while I love all types of bread, sourdough is my absolute number one! Why? It's versatile, simple, and amazingly delicious, not to mention super healthy for you. It's also incredibly cheap to make because it doesn't require many ingredients. With all of these reasons to love sourdough, you may be thinking, but what about a starter? Aren't they hard to make and keep? I'm so glad you asked.

First off, sourdough bread has been around for a long time. No one knows exactly, but I'm betting pretty close to the beginning of time. How someone thought to make sourdough or if it came about by accident isn't known either, but I do know that sourdough is a simple and easy starter to make and keep happy. Here's how to make a delightful starter with just a few ingredients. (Note: I use pineapple juice because it helps your starter get going faster and produces a sourdough that isn't too sour.)

~ ¼ cup flour (I use freshly ground Prairie Gold, but you can use anything you want as long as it's all-purpose.)
~ ¼ cup pineapple juice
~ Wide mouth canning jar

Mix the flour and juice together to form a thick batter. Pour in the canning jar and cover with a piece of muslin or clean dishcloth fastened on with a rubber band. (There are special lids with mesh for canning jar ferments, and that's what I use and love.)

Allow the mixture to sit in a cool, dark place. Add ¼ cup of flour and ¼ cup of juice each day for five days. Stir each time and replace the lid. By around the fifth day, it should start bubbling. Your starter is now active but immature.

Now you can start adding one cup of flour and one cup of water at your feedings. You will feed the first full feeding without discarding, but after that, you will need to discard one to one-and-a-half cups each time and add back equal amounts of flour and water. In the beginning, it will encourage a very active starter if you do this daily or every couple of days. After four to six weeks, you will have a mature starter that you can feed just once a week, which can make a delicious sandwich loaf without any added yeast. Before it's mature, you can still make lots of yummy loaves of bread that don't require such a high rise.

SOURDOUGH PIZZA CRUST

~ 1 ½ cups sourdough starter
~ 1 ½ cups cool water
~ 3-5 cups flour
~ 1 tablespoon raw sugar
~ 2 tablespoons olive oil
~ 2 teaspoons sea salt

Mix together the sourdough starter and water. Then add two cups of flour and sugar. Mix well and let sit covered for an hour. Then add in oil, salt, and enough flour to form a thick dough. Either knead in an electric mixer or by hand for two minutes adding flour as needed. Remember, it's easier to add in flour if it's too wet but harder to add moisture if it's too dry. Sourdough is a stickier dough and benefits from not adding too much flour.



After it's smooth, coat in olive oil and place in a covered bowl to ferment. If possible, allow eight hours, but if you can't wait, you can roll it out and use it after an hour. It's perfect to do this the night before and bake for breakfast or lunch or mix it up in the morning and have for supper.

Now it's time to roll out the dough onto greased pizza stones, iron skillets, or pizza pans. (This makes two large thin crusts or two smaller thick crusts.) Cover with sauce, cheese, and toppings and bake at 420 degrees F for 20 minutes or until golden. You'll never go back to regular pizza crust after this!

You can also use a sourdough starter in place of milk in biscuits or pancakes. Simply add the starter in where it calls for milk. Add the baking powder or starter right at the end because it will cause a tremendous rise when it reacts together (because of the acidity), and you want that to happen when it is going in the oven or pan, not sitting on the counter.

For the perfect sandwich bread, you need your mature starter. You can make this before your starter is mature, but it won't rise much.

~ 1 ½ cups sourdough starter
~ 1 ½ cups water
~ 1 tablespoon raw sugar
~ ¼ cup olive oil
~ 3-5 cups flour
~ 2 teaspoons salt

A word on ingredients here — I use freshly ground 100% whole wheat Prairie Gold flour, pink Himalayan salt, extra virgin olive oil, raw sugar, and unchlorinated water. Of these, the unchlorinated water is an absolute must, but you can use whatever flour, sweetener, oil, and salt you prefer.

Mix your starter and water together. Add in one cup of flour and sugar. Mix well and let sit until bubbly (45-60 minutes). Add in oil, salt, and enough flour to make a thick dough. Knead on bread setting in an electric mixer for two minutes or by hand until smooth. When I use my mixer, I only knead the two minutes, pour my sticky dough onto a floured counter, and knead by hand until smooth.

Divide into two pieces. Roll out about an inch thick, then roll up jellyroll-style and tuck in the ends. Place in greased loaf pans, turning to coat with oil, and cover. Let rise in a warm place for eight hours or overnight.

Bake in an oven at 385 degrees F for 30 minutes or until golden. I put mine in the cold oven then turn it on as it seems to help the dough rise more.

Brush the tops with melted butter. Allow to sit in pan five minutes, then remove to a baking rack to cool. Cool for at least 30 minutes before cutting for your best results. Store in a large plastic bag, aluminum foil, or bread box. It will keep for several days.







One of the great things about sourdough is it allows me to eat bread without digestive problems. My husband can eat sourdough too, without getting heartburn. I've also read that sourdough positively affects blood sugar levels because it slows the release of sugars. For me, it's a huge time saver, money saver, and it tastes awesome! How can you go wrong with food like that?



SUBSTITUTIONS IN RECIPES

BY RITA HEIKENFELD

IF THE PANDEMIC HAS TAUGHT us one crucial skill with homemaking, it's flexibility, especially regarding food preparation.

I can't tell you the number of times I've had to substitute one ingredient for another because we were sheltering in place and out of the ingredient called for, or the grocery was out of a particular item.

Every cloud has a silver lining, though, and what has happened is that I've become more confident about replacing ingredients.

I wanted to share some of the best substitution tips that I've used. I know some will be familiar to you; others may be new discoveries.

Here's a list of substitutes for common ingredients:

BROTH: BEEF/CHICKEN/TURKEY

✓ One bouillon cube stirred into one cup of boiling water or one teaspoon jarred "Better than Bouillon" to one cup of water.

✓ Two to three teaspoons of soy sauce and enough water to make one cup. Use less salt in the recipe since soy contains sodium.

DAIRY

Cheeses

✓ Cheddar: Colby or Monterrey Jack. For a spicier kick, try a Mexican blend.

✓ Parmesan: Romano is a good swap, but use a little less, as Romano is stronger-tasting.

✓ Mascarpone: Full-fat cream cheese.

✓ Brie: Camembert tastes almost the same and is less expensive.

✓ Full-fat cream cheese. Lighter fat cream cheese can usually be substituted, but not nonfat.

Fresh Milk

✓ Powdered milk mixed with water according to package directions but add an extra teaspoon for each cup.

✓ Evaporated milk. Mix with an equal amount of water.

Heavy Cream/Whipping Cream

✓ Melt ⅓ cup butter, cool just a bit, and whisk into ¾ cup of milk.

✓ This can be used in most recipes, like casseroles, soups, sauces, etc., but it cannot be a swap for cream that needs to be whipped.

Sour Cream/Yogurt

✓ Swap equal amounts of Greek or natural yogurt for sour cream. Yogurt has less fat than sour cream, so be careful when cooking with it. Use low heat.

✓ Don't use nonfat yogurt because it may have added stabilizers and thickeners.

✓ Swap equal amounts of sour cream for yogurt.

✓ Note that yogurt is tangier than sour cream, and the texture of baked goods might be a little less tender since yogurt has less fat.

Buttermilk

✓ Stir in one tablespoon lemon juice or one tablespoon clear vinegar into one cup of milk. Let sit for about 10 minutes to allow the juice or vinegar to curdle the milk a bit.

HERBS/SPICES

✓ Substitute ⅓ the amount of dried herbs for fresh in recipes (one teaspoon dried equals one tablespoon of fresh). Dried herbs have the moisture taken out, so the herb is stronger than fresh.

✓ The exception, in my opinion, is rosemary. Use equal amounts fresh or dried.

Fresh Garlic

✓ For the most part, sub in ⅛ to ¼ teaspoon garlic powder for each clove fresh. Go by taste.

Tip:

Mince fresh garlic, then freeze in glass containers. It will last up to four months.



Fresh Onion

✓ Dried onion flakes work well. Use about ¼ cup dried onion flakes to equal one cup of fresh chopped onion.

✓ Onion powder can be used as a flavor substitute, too. One tablespoon equals one cup of fresh chopped onion. You'll get the flavor but no texture.

Fresh Ginger Root

✓ ¼ teaspoon or so of ground ginger equals one teaspoon fresh grated ginger.

✓ The flavor of ground ginger vs. fresh will be less complex, and the texture will be smoother.

Tip:

Freeze ginger root whole or grated. (Peel before freezing.) It will last up to three months.



Pumpkin Pie Spice

✓ Make your own! Stir together one teaspoon cinnamon with ¼ teaspoon each of nutmeg and ginger powder and ⅛ teaspoon ground cloves.

GRAINS

Self-rising Flour

✓ Self-rising flour is simply flour with leavening and salt added to it.

✓ For each cup of self-rising flour, whisk together one cup all-purpose flour with 1½ teaspoons baking powder and ¼ teaspoon salt.

Tips:

Make sure baking powder is fresh enough to leaven!

Stir in one teaspoon of baking powder into warm water. It should fizz immediately. If it doesn't, toss it out.



Waterwise Inc • PO Box 494000 • Leesburg FL 34749-4000

☑ YES! *Please rush my FREE (No Cost/No Obligation) Waterwisdom Report about H2O scams and how to have the very purest drinking water...* CTY

Name _____

Address _____

City _____

State _____ Zip _____



Rice: Brown for White

✓ You can substitute back and forth. Brown rice takes more liquid and has a longer cooking time.

✓ Quinoa is a good substitute for rice. Read labels. Some quinoa needs rinsing before cooking to remove the bitter-tasting natural compound that coats the seeds. (This coating wards off insects from eating the tiny seeds).

Cake Flour

✓ Cake flour has a lower protein/gluten content than all-purpose, which makes for tender baked goods. Make your own!

✓ Measure one cup all-purpose flour. (Take a whisk and whisk the flour a bit if it has been sitting in a container. This makes for a more accurate measurement.).

✓ Remove two tablespoons of flour from the cup.

✓ Stir in two tablespoons of cornstarch.

✓ Sift or whisk three times. This mixes the ingredients and aerates it to make it more of the same consistency as cake flour.

Cornstarch

✓ All-purpose flour can be subbed in. But it has only half the thickening power of cornstarch. Now it won't give foods the somewhat opaque shine that cornstarch does, but it works.

✓ For every tablespoon of cornstarch, substitute two tablespoons of all-purpose flour.

SWEETENERS

✓ Honey for sugar. Honey has a lower glycemic index than sugar, which means it doesn't raise blood sugar levels as quickly. It's also sweeter than sugar.

✓ For every cup of granulated sugar, use ¾ cup of honey.

Tip:

Honey lasts just about forever but sometimes crystallizes. Bring it back to a fluid state by warming it in the microwave.

Brown Sugar

✓ Mix one cup of granulated sugar with two tablespoons of molasses to make dark brown sugar.

✓ Can you swap dark brown for light brown sugar? Yes, you can. Dark brown sugar has twice the amount of molasses in it than light brown sugar. This gives foods a more toffee and caramel-like flavor.

Tips:

Make rock-hard brown sugar soft again.

The molasses in brown sugar lose moisture if the sugar is not kept in a tightly sealed container. This makes it hard.

Place a wet paper towel on top of the sugar and microwave on high for 10-20 seconds.

MISCELLANEOUS

Wine Vinegars

✓ For every cup of wine vinegar, mix together one cup wine with ¼ cup vinegar.

✓ For white wine vinegar, use white wine and clear vinegar.

✓ For red wine vinegar, use red wine and cider vinegar.

Tomato Sauce

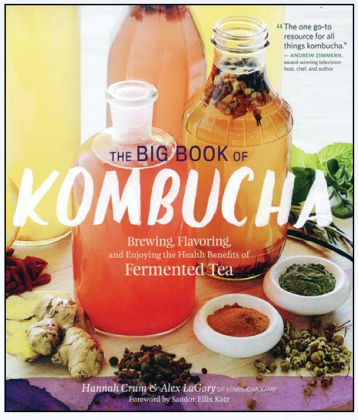
✓ Use tomato paste mixed with water: equal amounts.

Have you had to substitute ingredients, too? If so, I hope you'll share with us here at *Countryside*.



The Big Book of KOMBUCHA

By Hannah Crum & Alex LaGory



Brew your own kombucha at home! With more than 400 recipes, including 268 unique flavor combinations, you can get exactly the taste you want — for a fraction of the store-bought price. This complete guide, from the proprietors of Kombucha Kamp, shows you how to do it from start to finish, with illustrated step-by-step instructions and troubleshooting tips.

shop.iamcountryside.com

970-392-4419

GIVE THE GIFT OF *COUNTRYSIDE*!



Someone on your list deserves ***Countryside*** so they can expand their knowledge of and love for living off the land.

SAVE UP TO 33%

That's right, you can give *Countryside* magazine for just $19.97 for six issues — that's $10 off our regular price. And YES, you can renew at that price, too!

Gift #1:

Name: _____

Address: _____

City, State, Zip _____

Gift #2:

Name: _____

Address: _____

City, State, Zip _____

Gift #3:

Name: _____

Address: _____

City, State, Zip _____

From: **(☐ please renew my subscription at this special low rate.)**

Name: _____

Address: _____

Email: _____

Charge my

Visa/MC # _____

Exp. date: _____ CVV#: _____

Phone: _____

☐ Check or money order enclosed.

One* subscription = $19.97
Two* subscriptions = $39.94
Three* subscriptions = $59.91
Four* subscriptions = $79.88
Five* subscriptions = $99.85

**Six issues each subscription*

Use another sheet of paper if you would prefer not to cut this magazine OR if you'd like to give more than 3 gift subscriptions.

MAIL TO:
Countryside Gifts
P.O. Box 1690
Greeley, CO 80632

or call 970-392-4419

*Canadian & International subscriptions please add $12 per 6 issues.



BY PATRICE LEWIS

Everywhere, it seems, we are blitzed with articles on the rising cost of food prices and the hardship it levies on the typical family. Food prices vary by state and by season, but on average, a family of four is likely to spend about $1,100 per month on food. If this figure makes you gasp, here are some creative ways to cut your food bill.

Eat Lower on the Food Chain

Rediscover the joys of rice and beans. Lentils and rice are very inexpensive, even more so if you buy in bulk. Combined with spices, these foods will make an excellent, balanced, nutritious meal for next to nothing. Add a bit of meat and veggies into a stir-fry and you have a delicious and filling dinner. Check out cookbooks at the library to learn how to liven up rice and beans, and eat like kings.

Plan Ahead

Plan your meals at least a week in advance. This is probably the single most under-used trick for eating cheaply. So many people think "Hmmm — what will we have for dinner?" while driving home from work, then stop at the grocery store and purchase high-cost pre-packaged foods. Instead, sit down with your family and plan out the week's meals. This way you can purchase all of your ingredients once a week when you're not hungry, stressed, or tired.

Cook from Scratch

Scratch cooking has earned a bad reputation for being time-consuming and complicated, but it's far easier if you do two things. First, find some recipes that are fairly simple and that your family enjoys. And second, keep standard ingredients on hand. A scratch meal isn't made any simpler if you have to make a hasty dash to the grocery store for some forgotten item. With a well-stocked pantry of basic ingredients, scratch cooking is quite simple.

Don't Be Wasteful

Don't waste food. Bring leftovers to work or school for lunch (microwaves are everywhere). Put leftovers in the freezer in a big bowl until you have enough for soup or "leftover pie." Remember, if your kids turn up their noses at leftovers, it's probably because you're the one modeling it.

Frozen Convenience

Make your own "convenience foods." The freezer can be your best friend in this case. Double up your batches next time you're making something freezable, such as lasagna or quiche. Homemade spaghetti sauce is startlingly easy and freezes beautifully. Whatever your family enjoys eating, see if you can find a fast, freezable, and homemade version for nights when you're too frazzled to cook.

Make Bread

Bread machines have become almost cliché in terms of unused and therefore unnecessary kitchen appliances (hence the multitude of machines available at any large thrift store). But if you actually use a bread machine, it can save you an extraordinary amount of money over the years. And no, you don't need to buy those hideously overpriced little boxes of pre-mixed "bread machine" ingredients; regular flour will do.



Go Slow

Get a slow cooker (again, try your local thrift store). Seldom will you find a kitchen item that offers greater benefits to busy working people. Throw in the ingredients for soup or stew, turn it on low, and go to work. When you come home (to a house filled with rich, delicious smells), all you have to worry about is the "extras" for the meal — vegetables, rice, bread, or whatever else will round out the dinner.

Bulk Up

Buy your staples in bulk, in the largest possible quantities. Rice, beans, flour, oatmeal, sugar — all are available in 25-lb. or 50-lb. bags. (Try the big box stores such as Costco or Sam's Club, or locate a restaurant-supply store that sells to the public.) Obviously not everyone has the room to store huge amounts of dried foods; but even unusual places, such as under the bed or in the attic or basement, can be used to store dried bulk food. Take into consideration pests and moisture. Repurposed bakery buckets are great for bulk food storage.

Get a Knife

It staggers the mind how much money people spend merely to save themselves a little slicing 'n dicing. Pre-sliced lunchmeats, pre-grated cheese, packaged melon balls, pre-shredded lettuce … the list goes on. Get some knives and a cheese grater and some kitchen scissors, learn to slice and dice your own foods, and watch your food bill get sliced too.

Drink Water

Learn to drink water. And not bottled water, either. How much of your monthly food budget is wasted on sodas, sugary juice mixes, or other non-nutritious fluids? Even if your tap water is undrinkable (and some is), a five-gallon jug of water from the grocery store is far cheaper than the equivalent volume of soda/juice/bottled water.

Grow Your Own

Readers of this magazine don't have to be told the benefits of growing or raising your own food. By trading surplus with neighbors, you can increase the variety of fruits and veggies. Preserve (can, freeze, dehydrate, pickle, etc.) any extras.

Compare Unit Prices

On the shelf tag for most grocery items is a small number indicating the unit price, whether it's dollars per pound or cents per ounce. This is a handy tool for determining which of two comparable items are cheaper per unit. If house brand cereal costs $0.40/ounce and name brand cereal costs $0.60/ounce, clearly it's a better deal to purchase house brand cereal — assuming the taste is comparable (and they usually are). If a block of cheese costs $4/lb and a bag of shredded cheese costs $8 for 16 ounces, clearly it's far cheaper to purchase the block cheese and grate it yourself. These little unit price numbers are one of the handiest ways to determine the true cost of an item in order to compare it to a comparable item.



These are just a few suggestions for how to lower your food bill. If money is tight, you'll need to go further — avoiding restaurants or take-out food, keeping a price book to track costs for individual items, and minimizing or eliminating junk food purchases.

Keep in mind, the tradeoff for saving money is a bit more work. But in this economy, it's important for everyone to understand thrift and how to accomplish it. By following these simple tips, you'll get a lot more bang for your buck at the grocery store. As an added advantage, all of these strategies are environmentally friendly because they produce less packaging and less waste. Save the earth, save your budget.

PATRICE LEWIS is a wife, mother, homesteader, homeschooler, author, blogger, columnist, and speaker. An advocate of simple living and self-sufficiency, she has practiced and written about self-reliance and preparedness for almost 30 years. She is experienced in homestead animal husbandry and small-scale dairy production, food preservation and canning, country relocation, home-based businesses, homeschooling, personal money management, and food self-sufficiency. Follow her website http://www.patricelewis.com/ or blog http://www.rural-revolution.com/.



You Can Use Salt as a Disinfectant

BY RHONDA CRANK

FOR MILLENNIA, THE USE of salt as a disinfectant has been part of everyday use. There are records of salt being used to kill bacteria, fight infections, and clean and treat wounds as far back as Hippocrates. Ancient cultures like the Egyptians, Romans, and the Greeks used salt to treat various things from mouth ulcers to wounds incurred in battle.

Which Salt is Used as a Disinfectant?

Of course, when we say salt, we do not mean the common table salt used in most of the U.S. today. Over 90% of common table salt is extracted from brine (salty water) or from byproducts of petroleum production.

The salt is processed at extremely high temperatures which strips all the vital minerals. Then additives are bound with the salt to keep it from clumping and to make it white. Some of the most common additives are chlorine bleach, Ferrocyanide, talc, and silica aluminate.

The salt used as a disinfectant is dug from the earth, true salt. It's important to know this before attempting to use salt as a disinfectant in your home or for your family. You may use common table salt for all cleaning applications, but I would not use it internally.

Salt as a Disinfectant in History

Salt has been used to preserve meat for millennia as it draws out liquid creating a dry environment prohibiting and killing bacteria. This process is called salt-curing or corning. Brining is another method of using salt to preserve meat by killing the bacteria in a saltwater solution.

Throughout history, salt was used to scrub tables after butchering, as part of the sanitizing of the cooking area, all dairy tables and equipment, and even pots and pans. Scrubbing these bacteria-prone areas with salt is proven to kill bacteria and prevent further growth.

Because we are so used to chemical cleaners and sanitizers, it's hard to imagine a time when salt combined with water was used to disinfect everything from fruits to baby bottles. Using salt is an easy, safe, effective, and inexpensive way to clean and sanitize.

Salt Healing

The antibacterial and antiseptic properties of salt help many skin conditions like psoriasis, eczema, and acne. Hot saltwater baths increase blood flow and draw out infections, soreness, and impurities through the skin.

If you soak in a tub of saltwater, your skin will not wrinkle. Try it, I did. The saltwater bath density is similar to the saline in your blood, so your skin can hold its hydration instead of dehydrating it.

There are said to be over one trillion (yes, trillion!) microscopic organisms in the world. Bacteria make up most of these. Don't get alarmed, less than 1% of them are known to cause disease.

Almost all of them are destroyed by proper hygiene and can be easily killed with salt. Yep, they were right when they told you to wash your hands.

In the old days, large jars of salt were kept around the home and yard. There was a jar in the area where food was prepared. One in the dairy room to use for equipment and in butter and cheese making. There was one in the barn for cleaning udders, one in the

outhouse so a handful could be thrown in after use. Also, one in the laundry area, one for bathing, and other areas.

How Salt Kills Bacteria

The process of salt-killing bacteria is called osmosis. A simple explanation is: sodium chloride is in a higher concentration outside bacteria's cell walls than inside the cell. To be in equilibrium, water is drawn out of the cell into the salt area in effect dehydrating the cell.

Dehydration causes the cell to lose its composition causing protein and enzyme collapse within the cell leading to the rapid death of the cell.

Salt as a Disinfectant in Wound Care

The use of saltwater to cleanse wounds and promote healing works by the same process of osmosis. As the bacteria cells die, they are "washed out" with the liquid drawn from them and the surrounding tissues.

If you've had a saline IV treatment, then you received a saltwater infusion. Saltwater as a gargling solution for sore throats, mouth ulcers, and bacteria in the mouth and gums also works by the process of osmosis. It is a double-action as it also increases the pH of your mouth killing bacteria and stopping future growth.

How to Use Salt as a Disinfectant

There are as many ways to use salt as a disinfectant as there are uses. Use it as a dry scrub on surfaces. A poultice can be used for wounds or skin conditions. A saltwater solution makes a gargle, a bath, foot soak, or solution to be applied with cotton balls.

To make a saltwater solution:

- Mix one teaspoon of salt for every eight ounces (250ml) of water.



- To use as a gargle, a minimum of 30 seconds is recommended and repeat as often as needed.
- For use on a wound, gently pour over the affected area until clean and cover with a sterile bandage. Rinse again whenever you feel like it or when you remove the bandage.
- For laundry, mix one tablespoon of salt to every 34 ounces (one liter) of water. It makes an effective wash for face masks.

It's easy to make saltwater disinfectant wipes. Simply tear strips of cloth or sturdy paper towels into the size of wipe you want. Some people pour the solution over a whole roll of paper towels. I find reusable paper towels made from bamboo work well.

To make the solution, combine two teaspoons of salt with 18 ounces (a half-liter) of water.

Then add your pieces to the jar or canister you're using to store them or pour the solution over the entire roll of paper towels.

Let the paper towels soak until the liquid is absorbed.

Then store in an airtight container for use as needed.

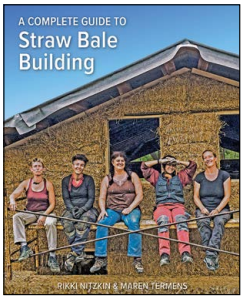
For an extra measure, add a few drops of any essential oils known for healing and disinfecting properties. My favorite is rosemary.

Using salt as a disinfectant is not new. It's an easy, effective, safe, inexpensive alternative to modern chemicals. Happy, healthy, healing to you!



A Complete Guide to Straw Bale Building

NEW!



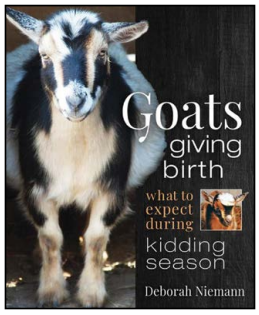
By Rikki Nitzkin

A complete guide to design and build these natural homes in different climates.

320 pages; $33.96

Goats Giving Birth

NEW!



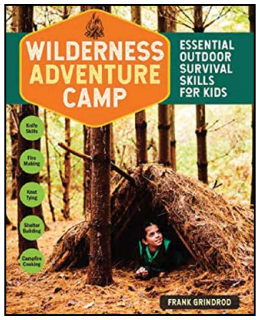
By Deborah Niemann

Help Your Goats Birth Happy Thriving Kids

128 pages; $17.99

Wilderness Adventure Camp

NEW!



By Frank Grindrod

Essential Outdoor Survival Skills For Kids

160 pages; $14.41

Raising Pigs on Green Pastures

NEW!

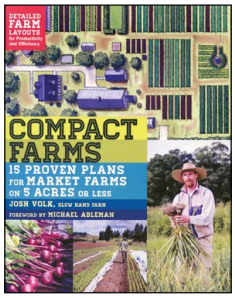


By Jodi Cronauer

Covering: farrowing, watering, wintering, and marketing.

126 pages; $24.30

Compact Farms

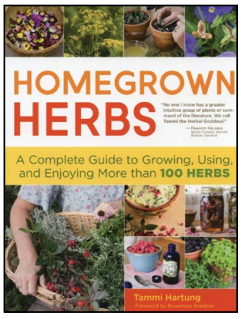


By Josh Volk

15 Proven Plans for Market Farms on 5 Acres or Less

226 pages; $16.96

Homegrown Herbs

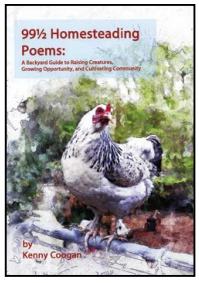


By Tammi Hartung

A Complete Guide to Growing, Using, and Enjoying More Than 100 Herbs

255 pages; $16.96

99 1/2 Homesteading Poems



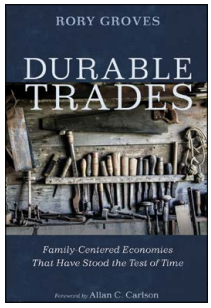
By Kenny Coogan

Inspiration and Advice Through Themed Poems

84 pages; $6.98

Durable Trades

NEW!

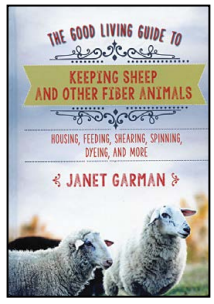


By Rory Groves

Family-Centered Economics That Have Stood the Test of Time

318 pages; $22.47

The Good Living Guide to Keeping Sheep and Other Fiber Animals



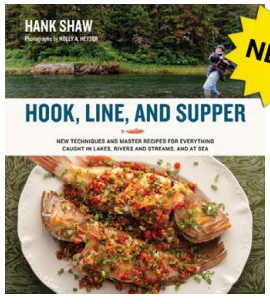
By Janet Garman

Housing, Feeding, Shearing, Spinning, Dyeing, and More

176 pages; $13.49

Hook, Line, and Supper

NEW!



By Hank Shaw

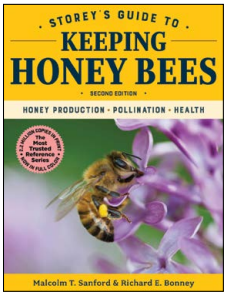
Quite possibly the only fish and seafood cookbook you'll ever need.

New Techniques and Master Recipes For Everything Caught in Lakes, Rivers, and Streams and at Seas

336 pages; $28.01

Sign up for our FREE newsletters to stay up-to-date on our new books and sales: iamcountryside.com/homesteading/newsletter

Storey's Guide to Keeping Honey Bees, *2nd Edition*



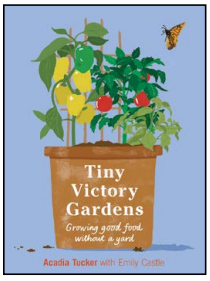
By Malcolm T. Sanford & Richard E. Bonney

Honey Production, Pollination, Health

224 pages; $21.21

Tiny Victory Gardens

NEW!

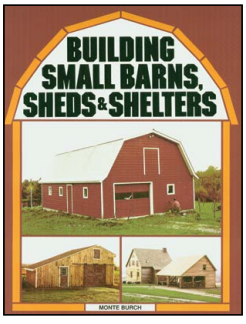


By Acadia Tucker, Illustrated by Emily Castle

Growing Good Food Without a Yard

168 pages; $16.96

Building Small Barns, Sheds, & Shelters



By Monte Burch

Build Low-Cost Barns, Sheds, and Animal Shelters

248 pages; $15.96

Homemade Yogurt & Kefir

NEW!

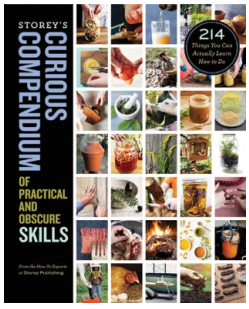


By Gianaclis Caldwell

71 Recipes for Making & Using Probiotic-Rich Ferments

224 pages; $16.96

Storey's Curious Compendium of Practical and Obscure Skills

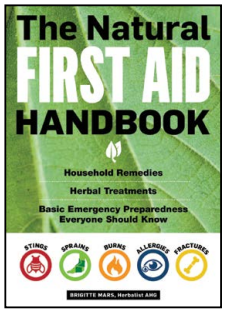


By How-To Experts at Storey Publishing

This Compendium Will Educate, Fascinate, Spark Conversation, and Inspire New Hobbies

Hardcover; 344 pages; $25.46

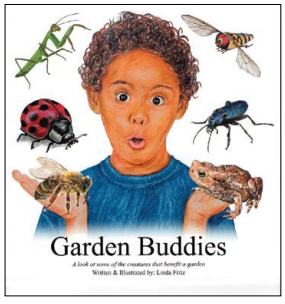
The Natural First Aid Handbook



By Brigitte Mars

Basic Emergency Preparedness Everyone Should Know

192 pages; $11.01



Garden Buddies

NEW!

By Linda Fritz

This Picture Book takes a look at Some of the Creatures That Benefit a Garden

32 pages; $13.46

Beginner's Guide To DIY & Home Repair

NEW!

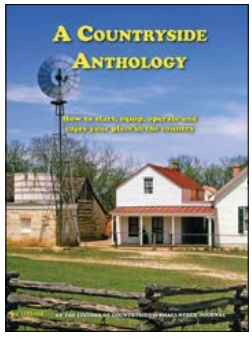


By Jo Behari & Alison Winfield-Chislett

Essential DIY Techniques for the First Timer

160 pages; $15.29

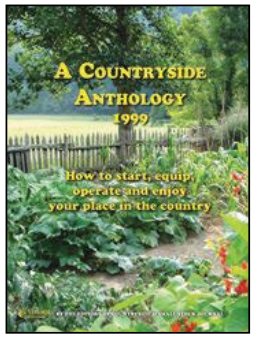
Countryside Anthology 1998



Valuable Information in this Collection of Articles From an Entire Year's Worth of *Countryside* Magazine

416 pages; Was $19.95 NOW ONLY $3.99

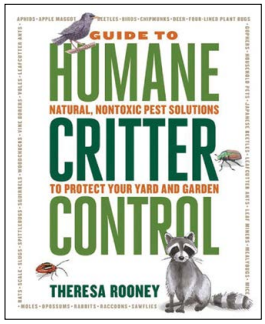
Countryside Anthology 1999



Valuable Information in this Collection of Articles From an Entire Year's Worth of *Countryside* Magazine

422 pages; Was $19.95 NOW ONLY $3.99

Guide To Humane Natural Critter Control



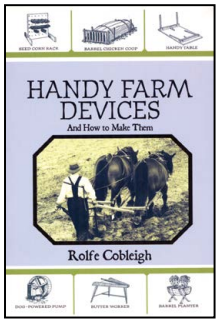
By Theresa Rooney

Keep Critters and Pests Out of Your Yard and Garden with Heart

147 pages; $17.99

Handy Farm Devices

By Rolfe Cobleigh

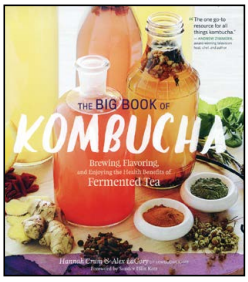


Hundreds of Clever Ways to Transform Those Odds and Ends Into Very Useful Gadgets and Tools

304 pages; $8.96

The Big Book of Kombucha

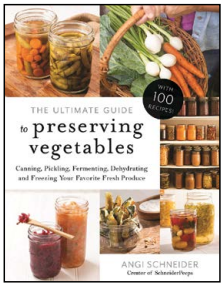
By Hannah Crum & Alex LaGory



How to Brew Your Own Kombucha From Start to Finish, with illustrated step-by-step instructions and troubleshooting tips.

383 pages; $22.91

The Ultimate Guide to Preserving Vegetables

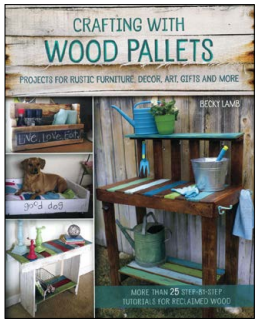


By Angi Schneider

Canning, Pickling, Fermenting, Dehydrating, and Freezing Your Favorite Fresh Produce

320 pages; $22.50

Crafting with Wood Pallets



By Becky Lamb

Projects For Rustic Furniture, Decor, Art, Gifts, and More

119 pages; $15.26

Essential Oils

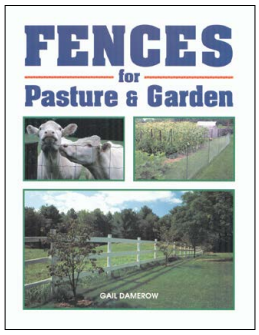


By Stephanie L. Tourles

An Introduction to the 25 Most Versatile Oils For Health and Wellness

248 pages; $14.41

Fences for Pasture & Garden

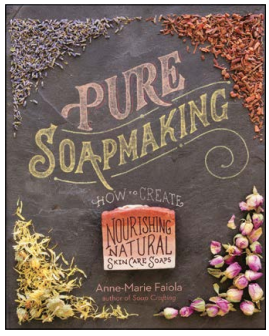


By Gail Damerow

A Practical, Easy-to-Use Guide to Selecting, Planning, and Building Fences That Work

154 pages; $14.41

Pure Soapmaking



By Anne-Marie Faiola

How to Create Nourishing Natural Skin Care Soaps

240 pages; $16.96

Cheesemaking Made Easy DVD

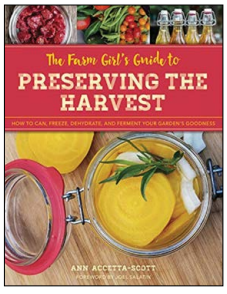


By Kate Johnson

3 Videos to Help You Achieve Immediate Succes in Artisan Cheesemaking

$26.99

Farm Girl's Guide to Preserving the Harvest



By Ann Accetta-Scott

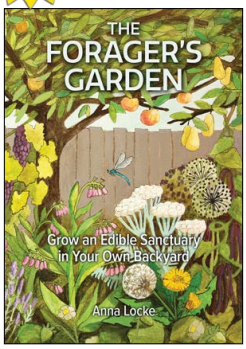
How to Can, Freeze, Dehydrate, and Ferment Your Garden's Goodness

264 pages; $22.46

For a complete list of books visit: shop.iamcountryside.com

The Forager's Garden

NEW!



By Anna Locke

Grow an Edible Sanctuary in Your Own Backyard

176 pages; $12.71

40 Projects for Building Your Own Homestead



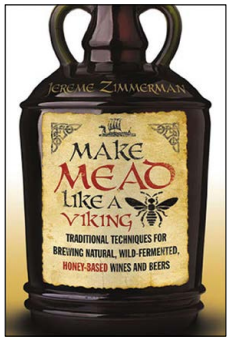
By David Toht

A Hands-On, Step-By-Step Sustainable Living Guide

255 pages; $15.26

Make Mead Like A Viking

NEW!

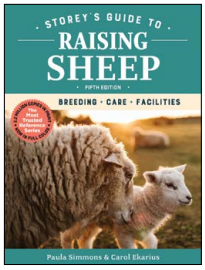


By Jereme Zimmerman

Traditional Techniques for Brewing Natural, Wild-Fermented, Honey-Based Wines and Beers

240 pages; $21.21

Storey's Guide to Raising Sheep 5th Edition



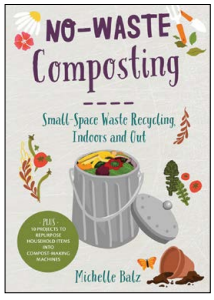
By Paula Simmons & Carol Ekarius

Breeding, Care, And Facilities for Sheep

368 pages; $16.96

No-Waste Composting

NEW!



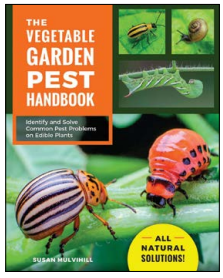
By Michelle Balz

Small-Space Waste Recy-cling, Indoors and Out

128 pages; $20.69

The Vegetable Garden Pest Handbook

NEW!



By Susan Mulvihill

Identify and Solve Common Pest Prolems on Edible Plants

208 pages; $24.29

Feel free to use another sheet of paper, or call 970-392-4419 to place your order today!

Order Form

Title _____ Quantity _____ Price _____

_____

_____

_____

_____

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

E-mail: _____

Visa ☐ MC ☐ Discover ☐ AmEx ☐

No.: _____

Expiration: _____ CVV # _____

Phone: _____

Total Books $ _____

S&H $4* $ _____

*Call for Priority & Foreign Rates (970-392-4419)

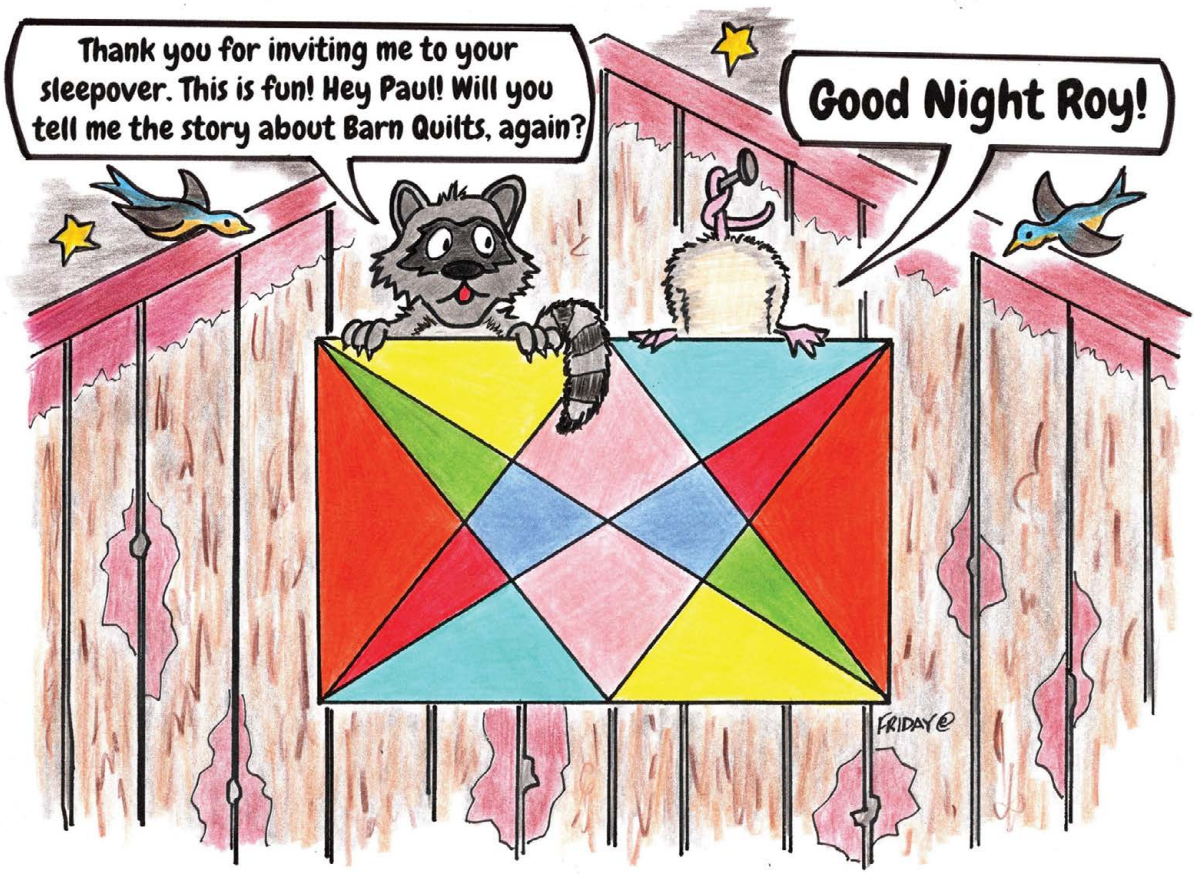
Subtotal $ _____

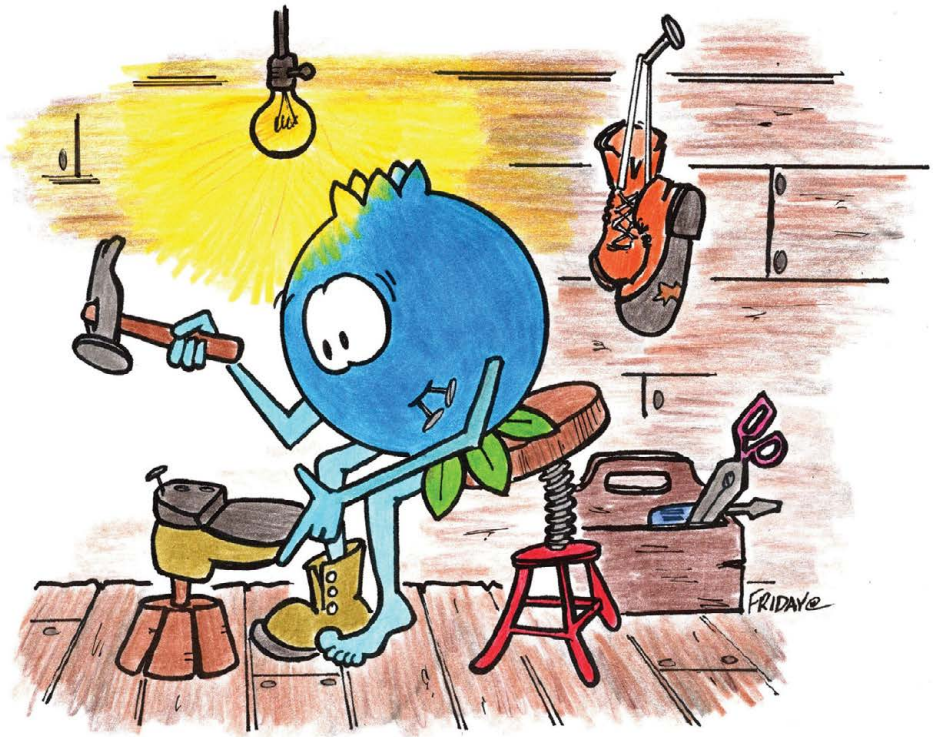
CO Residents add 2.90% sales tax $ _____

Total $ _____

Mail your order to:

Countryside Bookstore
P.O. Box 1690,
Greeley, CO 80632





blueberry cobbler

JANUARY/FEBRUARY READER CONTEST

Q	N	Z	C	S	Q	I	C	D	T	M	J	I	X	O	A	P	P	L	E	R	K	Z	F
W	H	H	H	I	T	Z	D	U	Y	F	V	V	A	S	O	U	R	D	O	U	G	H	D
W	F	V	I	H	D	E	S	G	K	X	G	Q	W	P	C	H	X	R	T	T	V	V	M
Z	N	F	C	R	Z	V	S	T	Q	E	H	R	S	V	V	I	O	L	E	T	H	I	D
A	Y	D	K	H	P	E	P	S	U	U	S	N	E	D	T	L	I	U	Q	N	R	A	B
D	Y	W	E	W	Q	S	G	C	I	F	Y	E	E	G	A	Y	F	K	P	D	U	U	L
N	F	F	N	Q	E	O	A	Z	L	B	Z	I	B	R	N	S	V	L	O	R	U	L	Z
M	X	C	S	H	W	R	R	M	T	N	Z	G	E	R	M	I	U	I	X	D	W	W	N
T	Y	H	O	O	E	S	O	J	B	B	X	L	F	G	A	K	C	D	R	U	R	P	I
D	J	G	U	M	Q	D	G	N	O	H	O	S	R	Y	T	T	C	N	K	Z	A	D	S
I	E	A	P	E	X	F	N	G	X	H	U	E	H	W	H	A	W	P	E	Q	L	L	R
S	P	J	C	S	X	A	A	L	C	A	E	S	D	B	C	Q	P	O	H	F	A	M	H
I	C	A	G	C	A	A	V	B	S	N	R	R	L	D	U	H	I	O	E	N	O	Z	S
N	X	K	E	H	N	H	D	J	H	W	F	U	L	A	G	N	B	C	N	C	W	C	L
F	A	E	L	O	K	K	Q	O	V	R	E	G	P	E	O	U	S	G	R	M	U	R	L
E	G	U	A	O	I	S	U	R	F	B	R	E	M	T	F	G	S	E	H	A	G	V	I
C	P	O	B	L	L	S	Z	X	E	A	Z	Z	A	S	U	K	O	P	T	R	H	M	B
T	C	R	W	P	E	H	A	R	F	L	Y	S	L	E	M	B	C	B	R	M	U	A	D
A	D	X	A	E	B	E	R	T	Q	T	H	L	T	M	M	I	A	H	Z	A	U	N	O
N	Y	R	R	B	W	Y	I	L	W	U	X	Y	A	O	I	Q	P	I	D	L	N	V	O
T	Q	L	T	D	D	N	S	A	K	G	Z	A	E	H	L	T	F	T	X	A	B	V	F
D	H	U	S	E	G	L	Z	S	A	E	M	K	H	V	I	O	Y	M	N	D	E	I	C
G	A	J	U	G	T	E	Q	C	B	O	Q	F	M	F	X	M	V	Y	D	E	K	X	Z
N	D	N	I	B	L	L	V	S	S	N	O	I	T	U	T	I	T	S	B	U	S	F	O

GRAFTING
HOMESCHOOL
HOMESTEAD
FOOD BILLS
SUBSTITUTIONS
SOURDOUGH
MARMALADE
BARN QUILT
BLUEBERRY
VIOLET
FENCING
BOER
CHOLERA
HEAT LAMP
QUILT BOX
STRAW BALE
GREENHOUSE
APPLE
ANGORA
DISINFECTANT
SALT
COOP
CHICKEN SOUP
BEESWAX

Name: _____ Address: _____

Email: _____ Phone: _____

The winner will be chosen randomly from all of the submissions returned by February 1, 2022. The winner of the September/October Reader Contest was Pam Waters, Arkansas. Congratulations to you, Pam! Enjoy your new camp mug.



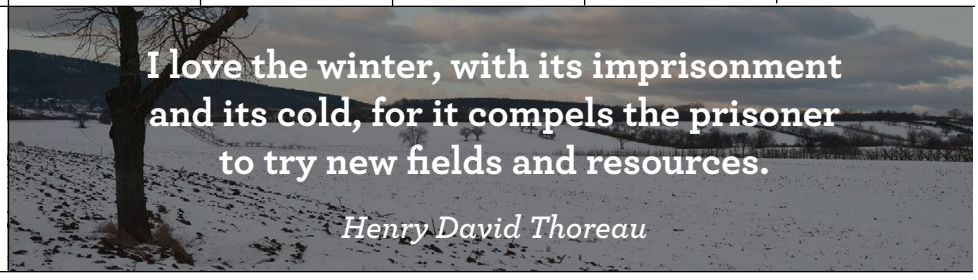
Win a *Countryside* Mug! To submit, either:

Print, fill out, and mail to:
Countryside Reader Contest
P.O. Box 1690 Greeley, CO 80632

Print, fill out, then take a picture and email to:
editor@countrysidemag.com

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

January

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
						Check plants that were brought inside before frost, for spider mites, whiteflies, scale, and aphids. Plant your bedding plant seeds as the moon turns new tomorrow. **1**
Make sure your bees have enough ventilation to prevent condensation within the hive. Make sure they have enough honey for the winter. **2**	The dark moon is right for vaccinating the animals due to give birth in February. Trim their feet, and clip udders and hind quarters before birthing. **3**	Explore marketing options for Chinese New Year, which takes place early in February. **4**	Plan ahead for the next two or three years. Breeding ideas and creative crop decisions can often use as much lead time as you can give them. **5**	Epiphany (Three-Kings Day) is usually celebrated on or near January 6. Milk-fed lambs and kids are often in demand for this market. **6**	Weigh your livestock (newborns and mothers) at birth, and at least every 30 days thereafter in order to assess and deal with feeding and health issues. **7**	Heavy winter lice infestations can decrease weight gains dramatically and they especially threaten the health of pregnant animals. **8**
Foxes and coyotes look for mates as the days lengthen. Owls are establishing their territories and nesting. Pines often begin pollination near this date. **9**	Today is Plough Monday, a traditional day to begin the farm and garden year. Explore the "Hothouse Market" for lambs and kids now. **10**	The major lambing and kidding season now starts throughout the nation: more lambs and kids are born in the next eight weeks than in any other months. **11**	Most lamb and kid growth occurs in the last weeks of pregnancy. Provide your ewes and does special feed and care during this time. **12**	Experiment with heated water to encourage hydration for your horses as well as for other livestock. **13**	Prepare landscaping, garden, and field maps, including plans for double cropping, intercropping, and companion planting. **14**	Provide fresh, warm water for your chickens daily, especially during the coldest weather. **15**
Tomorrow's full moon, while it will encourage sap to flow, will also bring severe weather to the country. **16**	Pre-Lenten parties often create demand for lambs and kids for cookouts throughout the month ahead. **17**	Christmas cacti can be saved and propagated during the warmer months. You may be able to turn one cactus into a lucrative business. **18**	Get ready for the January thaw. Check your sump pump in advance of water in the basement. Make sure drain hoses are clear of ice. **19**	Consider winter supplements for livestock: molasses, slippery elm, and willow bark, flaked oats, seaweed, and mashed raw carrots. **20**	Review your records: animals that gave birth last year after full moon could well do it again. **21**	Double-check to see that all the lambs and kids have actually been born! Reach in, wearing a rubber glove, and make sure. **22**
Watch for late abortions in weak animals after full moon. Always check teats for milk flow as kids and lambs are born. **23**	Check your chickens, turkeys, and ducks for mites. Keep coops and pens clean through the winter and use pesticides carefully. **24**	Opossums and raccoons become more active as Deep Winter wanes. Once you see them, then you know that the next phase of the year is on the way. **25**	Today is the first day of the season of Late Winter. Its thaws accelerate the swelling of buds and the running of sap. **26**	Plan for self-sufficiency in fish with a small pond. You can dig one in your backyard and raise tilapia or catfish. **27**	Average temperatures in all areas of the U.S. climb one degree, a major statistical move toward spring. **28**	The upcoming Easter Market is a major marketing time for lambs and kids. Explore the Passover Market, too. **29**
Winter fertilizing provides a little insurance against spring rain delays. The frozen soil of winter also resists compaction from heavy equipment. **30**	Reserve your spring chicks for March, April, or May so they can gain weight and be ready to lay by Late Summer. **31**					

Poor Will's COUNTRYSIDE

almanack

FOR WINTER AND EARLIEST SPRING OF 2022

BY W. L. FELKER

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		The celebration of Chinese New Year begins today and lasts through February 3. Sell decorations at your winter farmers garden stand. **1**	Spray broad-leafed evergreens with anti-drying agents to prevent winterkill. Aconites and snowdrops begin the bulb flowering season. Divide and move them now. **2**	Spray trees with dormant oil when temperatures are in the upper 30s or 40s. The best early chance of those temperatures occurs February 15 – 23. **3**	As the cold grows deeper, provide a little extra hay and root crops for your rabbits, extra grain for your sheep and goats. **4**	Take cuttings to propagate shrubs, trees, and houseplants; they should do well as the days lengthen. Force bulbs and branches for indoor markets. **5**
To maximize weight gain in lambs and kids, think about letting them nurse as long as they want. Milk-fed newborns often produce more meat. **6**	Frost seeding of dormant pastures and lawns may be started this month. Spread the seeds and let the freezing and thawing plant them. **7**	Prepare for drought by making sure your soil has sufficient potassium and phosphorus. **8**	Apply fertilizer to trees and shrubs. **9**	Explore the "club market" for lambs, kids, and other animals. Let your local 4-H clubs know what you have available. **10**	Reserve your guard guinea fowl chicks from breeders; that way maybe you can replace your donkey by the time the coyotes get hungry. **11**	The 16th is full moon day. Expect snow and cold. Keep track of animal and family behavior at this time, as well. Full moon madness is common among many creatures. **12**
Clip, dip, strip and sip newborns: Clip the navel to an inch; dip it in iodine; strip the teat so the animal gets a sip of colostrum. **13**	Be ready for broody hens that don't want you to take their eggs. Be sure to pick up eggs regularly. You can replace the eggs with frozen vegetables. Surprise! **14**	Regular fecal samples will help you keep track of your pregnant animals. Herbs to help with birthing: peppermint, thyme, and chamomile. **15**	Plan to bake your hot-cross buns to sell at Mardi Gras (Fat Tuesday) celebrations on March 1. **16**	Plan now to market to those who celebrate Meatfare Sunday and Jamaican Independence Day toward the end of the month. **17**	If queen bees stop laying eggs after a cold spell, feed your bees pollen substitute until flowers start blooming again. **18**	Designate lambs and kids to use for the graduation cookout market that develops between April and June. **19**
To improve the condition of a rundown animal, old-time lore suggests feeding a daily amount of dill, fennel, anise, and celery seeds. **20**	Plan your victories at the county and state fairs: blue ribbons are the result of consistent year-round management and training. **21**	Mares could show signs of estrus (a three-week cycle) as the days grow longer. You may wish to use ultrasonography to detect estrus. **22**	When the first knuckles of rhubarb emerge from the ground, it's time to plant onion sets and seed cold frames with spinach, radishes, and lettuce. **23**	Prune trees and shrubs just before bud-break during the moon's third or fourth quarter. Don't prune flowering plants. **24**	Prepare your container garden for early vegetables and flowers and check the pH in your lawn. **25**	Tomorrow is Meatfare Sunday for Orthodox Christians this year. Demand may rise for lambs and kids (and, perhaps, for broody chickens). **26**
Today is Dominican Republic Independence Day. Explore the Hispanic market in urban centers near your location. **27**	Traditional supplements to ward off abortion in livestock include rose hips, hawthorn berries, raspberry leaves, tansy leaves, and hollyhock root. **28**					

February

THE SUN Perihelion, the point at which the Earth and the Sun are closest to one another, occurs on January 4 at 2:00 a.m. The Sun enters the Late Winter sign of Aquarius on January 19.

On the 18th day of the year's second month, the Sun reaches Cross-Quarter Day, the halfway point to equinox, entering Pisces at the same time and initiating the season of Early Spring, a six-week period of changeable conditions infiltrated ever so slowly by warmer and warmer temperatures that finally bring the first trees and the earliest bulbs to bloom.

PHASES OF THE SANDHILL CRANE MIGRATION MOON AND THE TUFTED TITMOUSE MOON

As sandhill cranes complete their late autumn migrations to the south, tufted titmice begin their winter mating calls, "teee, teee!" Mourning doves and cardinals join the chickadees and song sparrows as the morning chorus grows in intensity. The volume and complexity of birdsong creates an audible gauge with which to measure the advance of spring.

THE PLANETS Mars, in Ophiuchus, rises after midnight and leads Venus (still bright in the west on New Year's Eve), in Sagittarius, out of the southeastern sky before dawn. Saturn is visible briefly in the southwest at the beginning of the month in Capricorn. Jupiter, in Aquarius, is the bright Evening Star in the southwest.

In February, Mars moves retrograde from Ophiuchus, joining Venus in Sagittarius, both planets dramatic Morning Stars before dawn. Saturn in Capricorn completes the morning procession, while Jupiter remains in Aquarius setting in the far west near sundown until the middle of the month, when it disappears until the middle of March and reappears in the morning sky.

THE STARS As January wanes, Orion moves more westerly in the mid evening, and to the upper left of that vast group of stars, past Castor and Pollux, the markers of Gemini, you may be able to make out the stars of the constellation, Cancer, its shape almost like a person without hands walking along behind Gemini.

In the last week of February, the early night sky tells of Spring. Looking east, you can almost forget that cold Orion fills the west. Just a little to the right and down from the Big Dipper, May's Regulus is shining in the constellation Leo. The faint stars of lanky Hydra spread along the horizon. Due east, the brightest star is Arcturus, which will be overhead this time of night when the first fireflies appear.

THE SHOOTING STARS The Quadrantid meteor shower occurs between January 1 and January 5 and reaches its best (up to 40 meteors in an hour) on January 3 and 4. Look for these meteors in the eastern sky, near the constellation Bootes after midnight. Orion will be over in the west by that time.

METEOROLOGY High-pressure systems are due to cross the country on or around the following dates: Jan. 1, 5, 10, 15, 19, 25, 31, and Feb. 3, 6, 11, 15, 20, 24, and 27.

Lunar perigee on January 1 and the new Tufted Titmouse Moon on January 2 will intensify the New Year's cold front. Look for precipitation on New Year's Eve and a brisk beginning to the year.

Full moon on January 17 will bring deep cold to the middle of the month, but in the aftermath of that frigid time, the waning moon will accelerate the January Thaw just before the January 25 high-pressure system.

Lunar perigee on January 30 and the new Mourning Dove Moon on February 1 will spoil or delay the Groundhog Day Thaw, bringing a stormy phase to Late Winter.

Sap will start to run, and conditions should improve between the 7th and the 13th as lunar apogee and the weakening moon exert less influence on the weather. Full moon on the 16th, however, will bring back Late Winter with a vengeance.

As the moon wanes, Early Spring is expected to be mild and pleasant until the moon moves to perigee, its position closest to Earth, on February 26, and March's new moon threatens Snowdrop Winter as February comes to a close.

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. Activity is likely to increase at new moon and full moon and at perigee (when the Moon is closest to Earth), especially as the barometer falls in advance of cold fronts near those dates.

DATE	ABOVE	BELOW
January 1 – 7	Afternoons	Midnight to Dawn
January 8 – 17	Evenings	Mornings
January 18 – 25	Midnight to Dawn	Afternoons
January 26 –31	Mornings	Evenings
February 1 – 7	Afternoons	Midnight to Dawn
February 8 – 16	Evenings	Mornings
February 17 – 23	Midnight to Dawn	Afternoons
February 24 – 28	Mornings	Evenings

January 1: Lunar Perigee (when the Moon is closest to Earth): 6:00 p.m.

January 2: The Sandhill Crane Migration Moon becomes the new Tufted Titmouse Moon at 1:33 p.m.

January 9: Second Quarter: 1:11 p.m.

January 14: Lunar Apogee (when the Moon is farthest from Earth): 4:00 a.m.

January 17: Full Moon: 6:48 p.m.

January 25: Last Quarter: 8:41 a.m.

January 30: Lunar Perigee (when the Moon is closest to Earth): 2:00 a.m.

February 1: The Mourning Dove Moon new at 2:06 p.m.

February 8: Second Quarter: 8:50 a.m.

February 10: Lunar Apogee (when the Moon is closet to Earth): 10:00 p.m.

February 16: Full Moon: 11:56 a.m.

February 23: Last Quarter: 5:32 p.m.

February 26: Lunar Perigee (when the Moon is farthest from Earth): 5:00 p.m.

THE SCKRAMBLER
JANUARY/FEBRUARY
WEATHER

DUOLC	RRHUCINAE
INAR	OOADNRT
NOWS	NIWD
TAHE	AHIL
DOLC	ZDARIBZL
ORTSM	ODOLF
HTNUEDR	GDRUOTH
GINNHTGLI	TACSERVO
RICSUR	CERPPAIIIONTT
COALTMULUSU	ZIRDELZ
SUTTRSA	GOF

Poor Will shall pay five dollars to The 3rd, 7th, 24th, and 40th correct answers will win five dollars for their authors. 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
SEPTEMBER/OCTOBER SCKRAMBLER

Poor Will promised five dollars to 2nd, 8th, 23rd, and 54th persons to mail their correct answers to Poor Will, before the answers appeared in *Countryside*. The second correct answer came from Alpha Annette Payne of Marmaduke, AR. The eighth was from Nancy Fields of Marion, WI, and the 23rd came from Susan Avery of Superior, MT. Only 35 correct responses were received.

OURDSG/GOURDS	EEEHSC/CHEESE
NEYHO/HONEY	BERHS/HERBS
WERSFLO/FLOWERS	SRRBEEI/BERRIES
INSPUMPK/PUMPKINS	PALPSE/APPLES
EEULTTC/LETTUCE	RIDCE/CIDER
STORRAC/CARROTS	CEAPSEH/PEACHES
SELOMN/MELONS	BACBAEG/CABBAGE
BENAS/BEANS	COLIBROC/BROCCOLI
DREAB/BREAD	OOAETTMS/TOMATOES
IEOOCKS/COOKIES	MULPS/PLUMS

CALENDAR OF FEAST DAYS AND HOLIDAYS FOR FARMERS, GARDENERS AND HOMESTEADERS

January 6, 2022: Epiphany (Three-Kings Day): Many Christians celebrate this feast with a fine meal and religious services. Milk-fed lambs are often in demand for this market. Epiphany Sunday is January 2 this year; some areas may celebrate the feast on the traditional date, January 6.

February 1 – 3, 2022: Tet (Vietnamese New Year and Chinese New Year – the Year of the Tiger): The Chinese market is often strong throughout the winter, favoring lambs and kids in the 60 to 80-pound live-weight range.

February 27, 2022: Dominican Republic Independence Day: Areas that have a sizeable population of residents from the Dominican Republic may show an increase in sales of lambs and kids that weigh between 20 to 35 pounds.

February 27, 2022: Meatfare Sunday for Orthodox Christians. Explore this neglected market for the sale of lambs and kids.

Copyright 2022 – W. L. Felker

CAPTURE YOUR COUNTRYSIDE AND SHARE IT WITH US!

We love getting a glimpse into your everyday homesteading moments.





Capture YOUR COUNTRYSIDE





1 Franklin and Rupert are melting our hearts with this cute nose boop. **Dan and Emily LeMieux @goldenbee_farm**

2 Beautiful rime ice. **Michelle Marine @simplifylivelove**

3 Marla Mae is staying warm and dry with one of her boar piglets. **Jessica Kirksey, Texas. @littledsfarm**

4 Luca loves the snow just as much as we do. He would play in it all day long. **Sil Underwood @woodnwingsfarm**

WAYS TO SHARE

EMAIL PHOTOS in JPG format to editor@countrysidemag.com with "Capture Your Countryside" in the subject line.

MESSAGE US ON FACEBOOK facebook.com/iamcountryside

TAG US ON INSTAGRAM or use #iamcountryside: instagram.com/iamcountryside

Countryside & Small Stock Journal retains the right to publish and/or reproduce any and all photos submitted.



IF YOU'RE READING THIS, SO ARE YOUR CUSTOMERS.

ADVERTISE WITH US!

To advertise in marketplace, email ADVERTISING@COUNTRYSIDEMAG.COM

The Secret Life of Bees



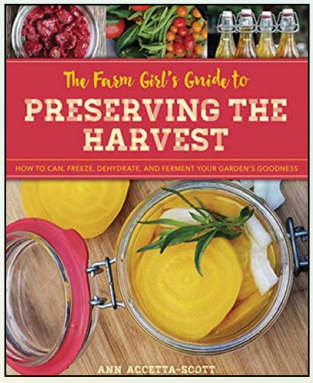
Did you know that bees love to dance? Or that they have an amazing sense of smell to help them find the best flowers? *In The Secret Life of Bees*, Buzzwing shares with you all the details of her life as a bee, in and out of the hive, starting with the day she was born.

With things to search for and find throughout, tips for making your own environment welcoming to bees, and even a poetry-writing exercise, *The Secret Life of Bees* is brimming with reasons to admire and respect the hardworking honeybee.

Sumptuous and detailed illustrations have pride of place in this magical guide to bees that mixes natural history with a splash of fantasy — a book to be pored over time and again.

shop.iamcountryside.com/collections/beekeeping-books

How to Can, Freeze, Dehydrate, & Ferment Your Garden's Goodness



shop.iamcountryside.com



ALL AMERICAN®
PRESSURE COOKERS/CANNERS

SELF PRESERVATION
FOR YOUR GENERATION AND THE NEXT

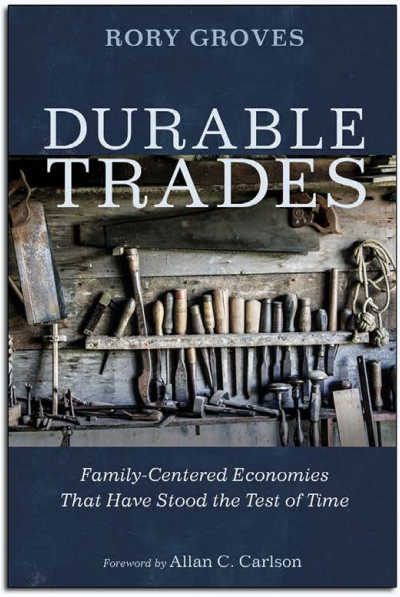
DOES NOT USE GASKETS

Designed & Manufactured
IN THE U.S.A. SINCE 1930

Visit
www.allamerican1930.com
to find an online retailer
or call us direct at 920-682-8627

CONNECT ONLINE WITH COUNTRYSIDE:
iamcountryside.com

Family-Centered Economies
That Have Stood the Test of Time



DURABLE TRADES

Rory Groves uncovers family-centered professions that have endured the worst upheavals in history and continue to thrive today. Through careful research and thoughtful commentary, Groves offers another way forward to those looking for a more durable future.

ORDER YOUR COPY AT
SHOP.IAMCOUNTRYSIDE.COM

REACH OVER 100,000 PEOPLE FOR JUST $60/YEAR!

MARCH/APRIL 2022 DEADLINE: JANUARY 10, 2022

BULLFROGS

Idaho

RANA RANCH BULLFROG FARM, PO Box 1043, Twin Falls, ID 83303-1043. 208-734-0899. <phrogpharmer@aol.com> American Bullfrogs, Purpose-bred, Farm-raised, Fast Growing, Hardy, Prolific, & Loud. Free Info Sheet.

CATTLE

Arkansas

GRAMYBEAR FARM, Clair Gorton, 1068 Sycamore Lane, Leslie, AR 72645. 870-447-2869. <gramybear@gmx.com> Mini Jerserys. Fonnie Thoman Line.

Ohio

Dexter Cattle For Sale. The Dexter Marketplace — Where Buyers and Breeders Connect. www.DexterMarketplace.com

MINIATURE LIVESTOCK

Alabama

LNL MINIFARM, Levon & Lynn Sargent, 663 Hulsey Rd., Henagar, AL 35978. 256-657-6545. <www.lnlminifarm.com> <lnlsargent@farmerstel.com> AMJA % Miniature Jersey & Lowline crossbred mini beef cattle.

OBERHASLI

Maryland

DINGLEBERRY FARM, Janet and Steve Davis, drjanetdvm@verizon.net, 5309 Wye Creek Drive, Frederick, Maryland. 301-473-5260. Registered Oberhaslis for milk and companionship!

PYGMY GOATS

California

Amber Waves Pygmy Goats — Phone/Text 951-736-1076 debbie@amberwaves.info https://amberwavespygmygoats.com Registered African Pygmy Goats — Hand Raised Bottle Babies and Breeding stock. — Est. 1982 Ship Worldwide Lifetime Support, 5-Star Rated Breeder, Better Business Bureau Verified A+ WhatsApp (951)440-3605 Text Only.

POULTRY

California

Silkie Chickens. Amber Waves Bearded Bantam Silkies – SPECIALIZING in DNA sexed female silkies. Shipping ok Continental US and weather permitting. Sales Page https://buysilkiechicks.com Web site https://showsilkies.com Lifetime Support 5-Star Rated Breeder, Better Business Bureau Verified A+.

METZER FARMS, 26000C Old Stage Rd., Gonzales, CA 93926. Year-round hatching. Nationwide shipping. Free catalog now, 800-424-7755. <www.metzerfarms.com> Ducklings: Pekin, Rouen, Khaki Campbell, Golden 300 Egg Layer, White Layer, Blue Swedish, Buff, Cayuga, Mallard, Welsh Harlequin, White Crested & Runners(Black, Chocolate, Blue, Fawn & White) Saxony Silver Appleyard, Goslings: Embden, White Chinese, Brown Chinese, Toulouse, Dewlap Toulouse, African, Buff, Tufted Buff, Sebastopol, Pilgrim, Classic Roman, French Toulouse, Chicks: Cornish Cross, Keets: French Pearl Guineas.

Iowa

COUNTY LINE HATCHERY, 2977 Linn Buchanan Rd., Coggon, IA 52218. 319-350-9130. <www.countylinehatchery.com> Find us on Facebook:County Line Hatchery. Rare and fancy peafowl, guineas, chickens, ducks, turkeys, geese, bantams and more. Featuring Showgirls & Silkies. Most economical and diverse poultry assortment available.

Illinois

CHICKEN SCRATCH POULTRY, Larry & Angela McEwen, 14025 Cty Rd 975 E, McLeansboro, IL 62859. 618-643-5602. <larry_angie@chickenscratchpoultry.com> <www.chickenscratchpoultry.com> Coronation Sussex, Light Sussex, Lavender Orpington, Chocolate Orpington, Jubilee Orpington, Black Orpington, Black Copper Marans, Blue Copper Marans, Blue Laced Red Wyandotte, Crested Cream Legbar, Welsummers, Blue Ameraucana, Black Ameraucana, Rumpless Araucana, Olive Egger, Ayam Cemani, Maline, Silkies.

Maryland

DEER RUN FARM, Allison Rostad, 15131 Sixes Rd., Emmitsburg, MD 21727. 717-357-4521. <www.DeerRunFarmMD.com> <info@DeerRunFarmMD.com> Day Old Heritage Chicks: Ameraucana, Delaware, Marans, and Welsummer. Show quality genetics breed to the SOP. Cleanest hatchery in the U.S. testing for MG, MS, AI, and PT.

Missouri

CACKLE HATCHERY®, PO Box 529, Lebanon, MO 65536. 417-532-4581. <cacklehatchery@cacklehatchery.com> <www.cacklehatchery.com> Fancy chicks, ducks, geese, turkeys, bantams, guineas, pheasants, quail, chukar. Over 200 varieties!

GAME BIRDS

Minnesota

OAKWOOD GAME FARM, INC., PO Box 274, Princeton, MN 55371. 800-328-6647. <www.oakwoodgamefarm.com> Ringneck Pheasant eggs or one day old chicks. Available April thru July. Call or write for price list.

SHEEP

DORSET

North Carolina

CANE CREEK VALLEY FARM, Margaret Burns, 301 Cane Creek Rd, Rutherfordton, NC 28139. 828-286-0159. <dorsetsrus@yahoo.com> Purebred Dorsets since 1974.

TEXEL

TEXEL
Rams and registered breeding stock
STONEROCK TEXELS
8955 Black Run Road, Nashport, OH
43830. 740-624-5850
strikehold504inf@msn.com
STONEROCK TEXELS

SHROPSHIRE

Pennsylvania

LANE'S END FARM, Jan Motter, 12211 W. Rt. 973, Jersey Shore, PA 17740. 570-398-2078. <mottersheep1@verizon.net> Our Shropshires are "Meat-wagons!"

ADVERTISE TODAY!

E-mail:
asoper@
countrysidemag.com

Or Call:
715-829-7330

SCOTTISH BLACKFACE BREEDERS UNION
Looking after the interests of the breed and Breeders.
Contact Graham Philipson
Littledalefarm@countryspeed.com
(608) 647-7118 • www.SBBU.org

AMERICAN ROMNEY BREEDERS ASSOCIATION, JoAnn Mast, 58221 Lee Valley Rd., Coquille, OR 97423. 541-572-3094. <secretary@americanromney.org> <www.americanromney.org>

BARBADOS BLACKBELLY SHEEP ASSOCIATION INTERNATIONAL, registry for American Blackbelly & Barbados Blackbelly hair sheep. Gorgeous, exotic-looking sheep. No shearing, very hardy, worm-tolerent, regularly twin unassisted. Bred for superior meat quality! Directory of breeders at <www.blackbellysheep.org>

KATAHDIN HAIR SHEEP INTERNATIONAL, KHSI Operations, PO Box 739, Fowlerville, MI 48836, 717-335-8280. <info@katahdins.org> <www.katahdins.com>

KATAHDIN HAIR SHEEP INTERNATIONAL, KHSI Operations, PO Box 739, Fowlerville, MI 48836, 717-335-8280. <info@katahdins.org> <www. katahdins.com>

NAVAJO-CHURRO SHEEP ASSOCIATION, PO Box 19840, Boise, ID 83719. 208-562-1961. <spindanceacres@gmail.com> <www.navajo-churrosheep.com>

NORTH AMERICAN ROMANOV SHEEP ASSOCIATION, Don Kirts, Secretary, PO Box 1126, Pataskala, OH 43062-1126. 740-927-3098. <admin@narsa-us.com> <www.narsa-us.com>

Purebred Dexter Cattle Association of North America (844) 732-2669 <www.DEXTERSTODAY.com> <pdcanow@gmail.com>

TEXEL SHEEP BREEDERS SOCIETY, Niki Fisher Secretary. 2720 NE 25th Ave, Payette, ID 83661. Phone Inquiries: Walt Threlfall 740-881-4417. <usatexels@gmail.com>www.usatexels.org

Countryside Advertising Information — March/April 2022 Deadline: January 10, 2022

Display Breeders/Classified
(1" & 2" sizes)

1x - 2x = $110 per inch, per issue
3x - 5x = $105 per inch, per issue
6x = $100 per inch, per issue

Use pictures, logo and color! FREE Ad Design!

We can help set up your ad, quote an ad you already have running or answer any other questions. E-mail us at:

asoper@countrysidemag.com *or call* **1-715-829-7330**

• Please type or print legibly and indicate the words you would like in bold or capital letters.

• Don't forget to count your name, address, phone number, and e-mail if it is part of your ad.

E-mail addresses & websites are two words.

• 20 word minimum. Ads under 20 words will be charged $63.

MAIL TO:
Countryside Breeders/Classifieds, P.O. Box 1690 Greeley, CO 80632
E-mail: asoper@countrysidemag.com
Phone: 1-715-829-7330
www.iamcountryside.com

BUY, SELL, TRADE • EQUIP YOUR HOMESTEAD • PROMOTE YOUR BUSINESS

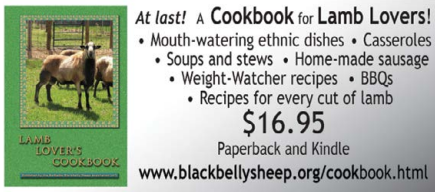
JUST $3.15/WORD: 20 WORD MINIMUM • MARCH/APRIL 2022 DEADLINE: JANUARY 10, 2022

(Approval of an ad does not constitute an endorsement)

BEEKEEPING

MILLER BEE SUPPLY YOUR BEEKEEPING EXPERTS SINCE 1976! Check us out for all your beekeeping needs. Whether you are just starting out or already have bees we are here to assist your needs. Call us Toll Free: 1-888-848-5184. 496 Yellow Banks Road, North Wilkesboro, NC 28659. Email:info@Millerbeesupply.com Website: www.millerbeesupply.com.

COOKBOOK



EGG CARTONS

THE EGG CARTON STORE. Modern service and speed, old world quality and value. Over 40 years of egg packaging and marketing expertise! Egg Cartons | Filler Flats | Beautiful Colored Cartons | Poultry Supplies. Call for GREAT wholesale / pallet quantity pricing! 866-333-1132. FREE SHIPPING on all cartons and filler flats. WWW.EGGCARTONSTORE.COM.

FREE

SOON Church/Government Uniting,Supressing"Religious Liberty," Enforcing "National Sunday Law." Be Informed! Need mailing address only. TBSM, Box 374, Ellijay, GA 30540. thebiblesaystruth@yahoo.com, 1-888-211-1715.

GARDENING



LETSGROWFRUIT.COM – Top quality fruiting trees, shrubs, plants. Custom grafted apple trees! Handmade raised beds, planters, rain barrel stands. Small family-run New England farmstead.

HEALTH

Stop Nighttime Leg Cramps in one minute. Old Amish formula. See it at: <www.StopsLegCramps.com>

HEAT FOR ANIMALS



MILKING EQUIPMENT

Visit www.PartsDeptOnline.com for great deals on new milking equipment for cows and goats. We supply to all size dairies. Call for a free 180pg catalog. 1-800-245-8222.

OF INTEREST TO ALL

QUESTIONS? Personalized card readings. Tarot, etc., $30, 918-274-9251, leave message.

OFF GRID

NEED OFF GRID SOLUTIONS? Wood and coal stoves, chimneys and stovepipe, wood fired canners, propane ranges and camp stoves, many more items. Gingerich Stoves and Plumbing LLC, 19091 180th St., Bloomfied, 82537. 641-722-3540

POULTRY

Colored & White Meat Broilers, layer chicks, turkeys, lots more. Free catalog. Myers Poultry Farm, 966 Ragers Hill Rd., South Fork, PA 15956. 814-539-7026. <www.myerspoultry.com>

POULTRY FEED



POULTRY SUPPLIES



PRESERVING

All American Pressure Canner, the only pressure canner that forms a metal to metal seal eliminating the need for lid gasket replacement. Offers large capacity canning to make pressure canning your meats, vegetables, and fruits easy. Easy Cleanup. 800-251-8824. www.allamerican1930.com.

SHEDS

Classic Sheds, LLC. Eli Huston, ph 715-316-3607. Wisconsin Amish Quality stock or custom sheds built to your needs, delivered and set up. Give us a call today to get discuss what you need! Serving Wisconsin Area.

TOOLS

CROSSCUT SAWS: SAW TOOLS, knives, firewood cutting, people-powered tools. Catalog, $1 U.S., $3 Foreign. Crosscut Saw Company, PO Box 7878, Seneca Falls, NY 13148. 315-568-5755. <www.crosscutsaw.com>

TRACTORS

TRACTOR PARTS and more for older and antique farm tractors. Free access to thousands of articles, photos, technical info, and our popular discussion forums. <www.YesterdaysTractors.com>

ADVERTISE TODAY!

E-mail:
asoper@countrysidemag.com

Or Call: 715-829-7330

YOU'RE INVITED!

JOIN AMERICA'S FAVORITE POULTRY COMMUNITY

HOME TO BACKYARD POULTRY MAGAZINE

MEMBERSHIP INCLUDES:

- *BACKYARD POULTRY* MAGAZINE
- LIVE CHAT WITH EXPERTS
- DIGITAL LIBRARY SINCE 2006
- POULTRY CHEAT SHEETS
- EXCLUSIVE PARTNER DEALS
- IN-DEPTH POULTRY GUIDES
- FREE SHIPPING AND MORE!



BACKYARDPOULTRY.IAMCOUNTRYSIDE.COM/ALL-MEMBERSHIP

EST. 1917
MURRAY McMURRAY
HATCHERY
™

2022 Chick Pre-Orders Start Nov. 1

FREE Catalog

Defining Quality for Generations

For over a century, Murray McMurray Hatchery has remained a trusted, family-owned business, working tirelessly to ensure our poultry meets the highest standards. Whether you are an experienced enthusiast, or just embarking on the journey, look to McMurray Hatchery for guaranteed quality rare and Heritage breeds, low minimums, and all the supplies you need to raise your flock.

MCMURRAYHATCHERY.COM | 800.456.3280

CHICKENS • DUCKS • GEESE • TURKEYS • QUAIL • GUINEAS • PEAFOWL • PHEASANTS • PARTRIDGE



