The magazine of modern homesteading

COUNTRYSIDE

& Small Stock Journal

Volume 99 • Number 6
NOVEMBER/DECEMBER 2015

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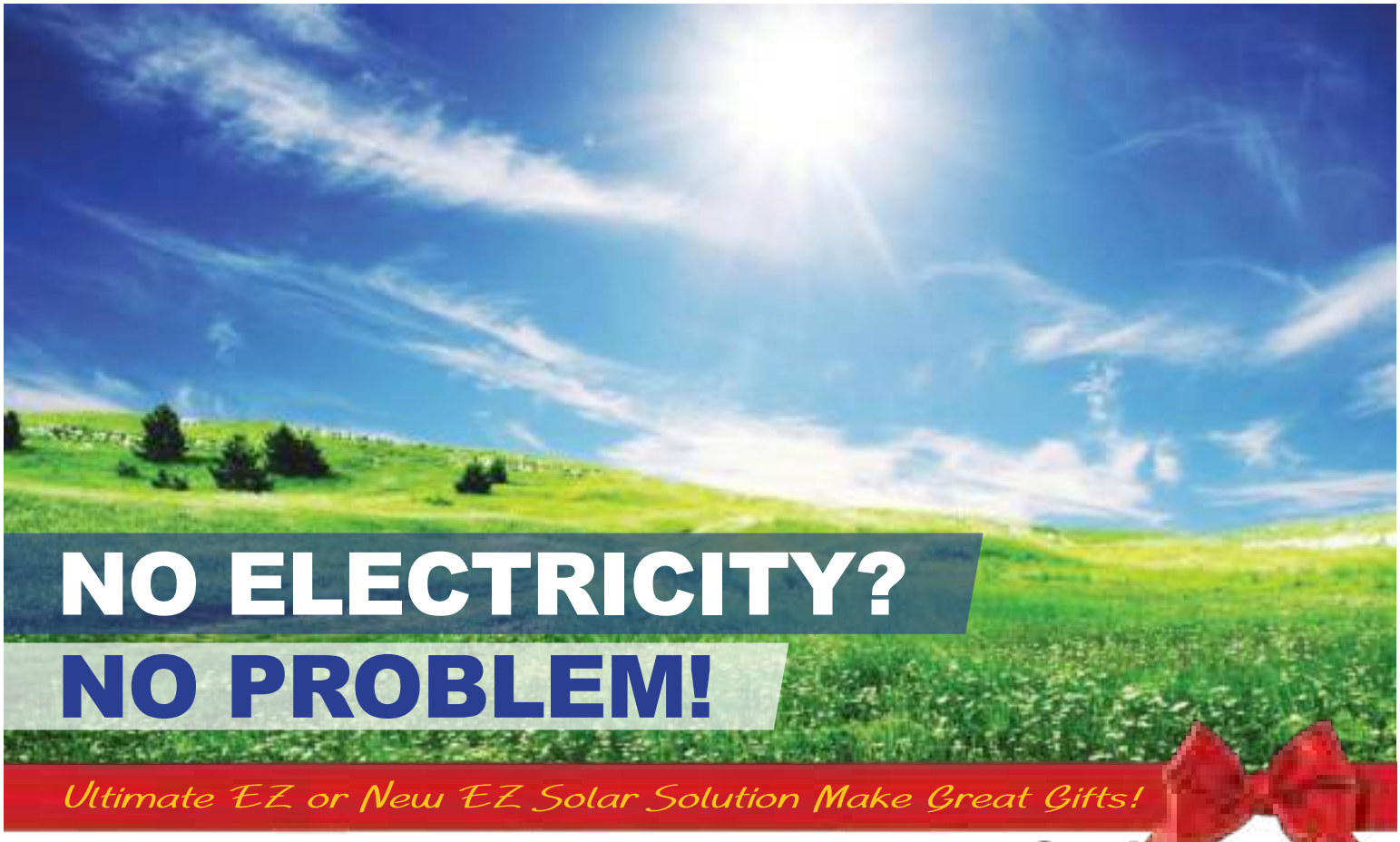

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FEATURED PHOTO

Some of the bounty of summer here at Longsummer Farm in south central Texas.—Mary Gaulke, Texas

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E-mail your photo(s) as a jpeg attachment(s) to friend@countrysidemag.com with "Capture Your Countryside" in the subject line, be sure to include your name, mailing address, phone number and a brief description. Or mail photo(s), including your name, mailing address, phone number and a brief description, to "Capture Your Countryside," 145 Industrial Drive, Medford, WI 54451.

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Found this little guy in our bird bath one day. I have no idea how he got in there.—Joshua Cangialosi, Virginia

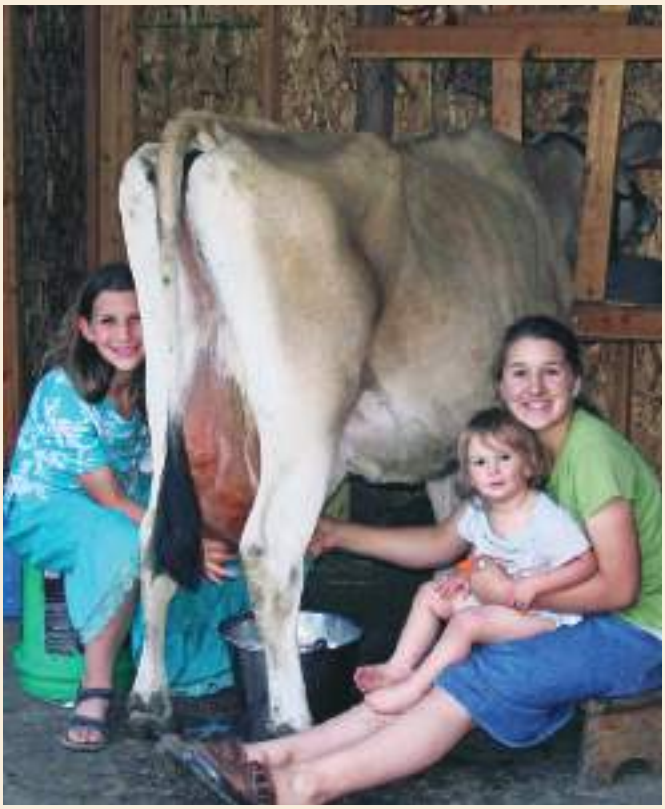
My girls, Bella and Shayla, walking around looking at all the different colors and sizes of leaves!—Brandy Edwards, Alabama

Tomatoes before and after.
— D. T. Duncan, California

In the early morning Gabrielle enjoys the sunlight streaming in the east-facing windows. —Ken Newman, Pennsylvania

This is our Olde English “Babydoll” Southdown miniature sheep, named Tuesday, the day after she was born. She joined her mother and father on our little backyard urban farm in Fairbanks, Alaska. —Ted Sponsel, Alaska

A photo of my dad’s cabbages. He is known for growing delicious cabbages up to nine pounds on average. My parents have a farm in Clay City, Kentucky. It's a beautiful little piece of heaven! —Lisa Pickett, Kentucky



My milkmaids, Mary, Faustina and Adelaide, with our Jersey named Daisy.—Kathleen, Bowen, Idaho

My husband found the runt kicked out of the pig pen by her litter mates. He brought her up to the house where she's made a friend with our puppy. The pig, named Hope, and the puppy, named Molly, love to dig and root together.
— Dee Dee Wingfield, Virginia

This is my beautiful granddaughter, Jessica, giving her favorite Palomino, Cracker, a big hug!—Kim Tittle, Oregon

November/December 2015

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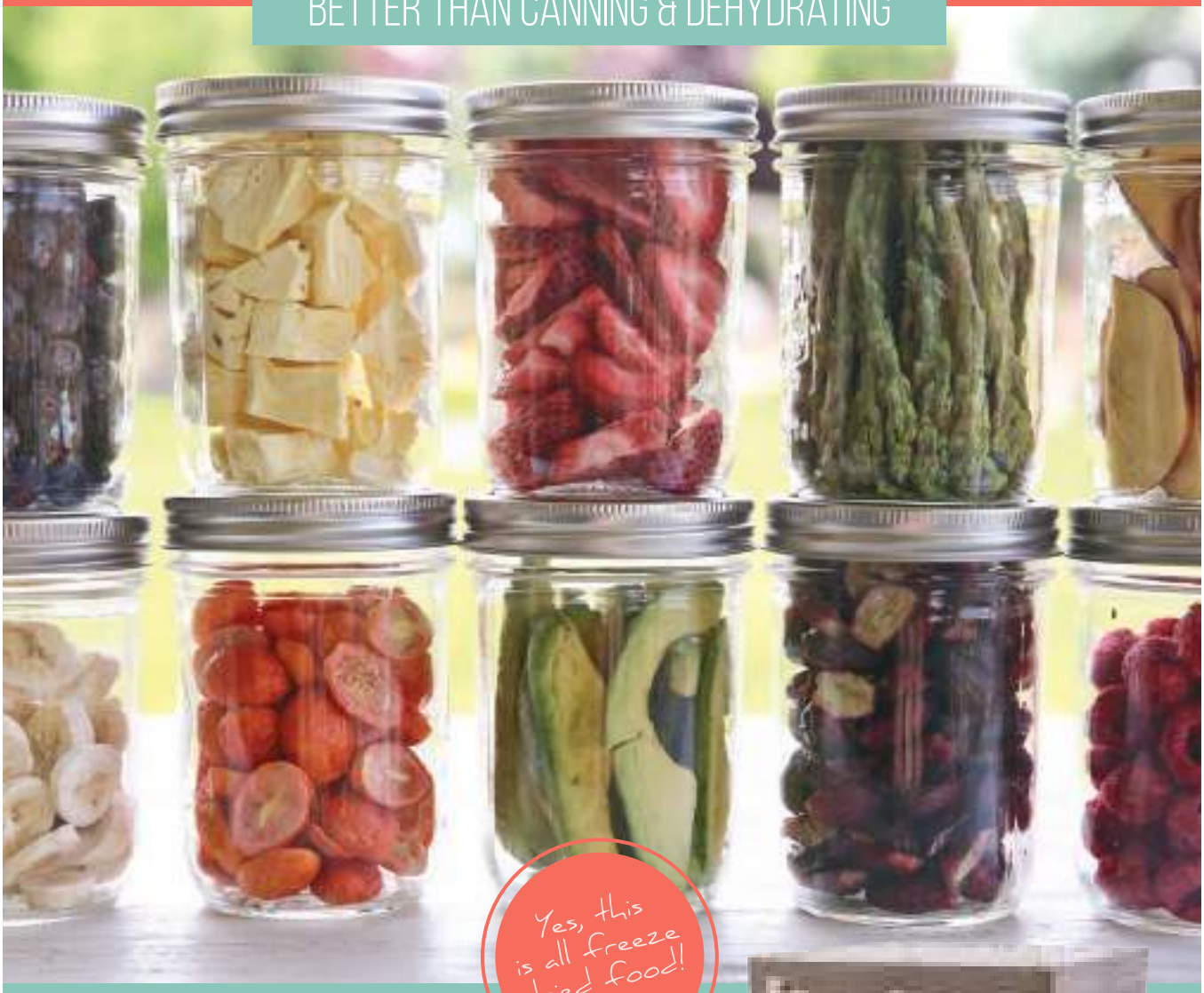
On the cover

Dogs can be valuable on the homestead. Learn more about it in our cover story on page 56.

FREEZE DRY ANY FOOD AT HOME

BETTER THAN CANNING & DEHYDRATING



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Closing a Generation Gap

In this issue of Countryside, we celebrate the end of our 99th year as a publishing company, and 43rd as the magazine that you read today. We want to thank you, our loyal readers, in as many ways as we can, and since we're always looking for a reason to throw a party, the 100th anniversary seems too obvious and too big of an event to pass up. That's a few generations of readers who have read our magazines, and written for them, a few generations of tips, trades and techniques that will be passed along for another 100 years.

In late summer, a reader called me to tell me about her grandson and his cattle farm in Oklahoma. She said she's just proud that he's continuing a tradition her grandfather had started, and while she's been retired and living in the city for a few years, she just wanted to tell me that it's possible to raise cattle and thrive and get your boot ankles bricked in mud, even with an iPhone charging in the console. It's possible to still live, as she put it, "with a harmony with the land."

I still like that sentiment. We have previous generations who showed us the roadmap of how to live self-reliantly, and she called to tell me not all was lost. A generation of millennials is coming of age and is very much against mass-produced and GMO-laden food, and is very much for self-reliance and responsible living. They recycle, drive cars that run on French fry grease and generally think differently about the world—in terms of saving it, not using it. Go to any farmers market in the United States and tell me what you see, and I bet it's young people—both in front of and behind the booths.

As we end 2015, I think confidently about this next generation and ones beyond it. Progress, as we have learned, almost always involves starting with what has worked in the past. And today's growing self-reliance movement and growing consciousness about our environment and our food supply are two examples that maybe, just maybe, the world's getting back to being a better place.

From everyone who has ever worked for Countryside Publications, I'm honored and privileged to thank you for the 99 years. Happy holidays, and you are all invited to join us for our 100th and beyond.

One correction from last issue: The rabbit photos in Elizabeth Hebdon's piece were by Elizabeth Pellette. We regret the error.

Our Philosophy

It's not a single idea, but many ideas and attitudes, including a reverence for nature and a preference for country life; a desire for maximum personal self-reliance and creative leisure; a concern for family nurture and community cohesion; a belief that the primary reward of work should be well-being rather than money; a certain nostalgia for the supposed simplicities of the past and an anxiety about the technological and bureaucratic complexities of the present and the future; and a taste for the plain and functional.

Countryside reflects and supports the simple life, and calls its practitioners homesteaders.

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Find Out How…

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To prove that you can eat great and feel great while losing ugly, unhealthy pounds the natural Vinegar way, you're invited to try the program for up to 3 months on a *"You Must Be Satisfied Trial."*

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What's the secret? Modern research combined with nature's golden elixir.

Since ancient times apple cider vinegar has been used in folk remedies to help control weight and speed-up the metabolism to burn fat. And to also aid overall good health.

Now-- for the first time -- Emily has combined the latest scientific findings and all the weight loss benefits of vinegar into a program with lifetime benefits-- to melt away pounds for health and beauty.

If you like food and hate dieting, you'll love losing pounds and inches the Vinegar way.

Suddenly your body will be energized with new vigor and zest as you combine nature's most powerful, nutritional foods with vinegar to trim away pounds while helping the body to heal itself.

You'll feel and look years younger shedding unhealthy pounds that make one look older than their age.

According to her findings, staying trim and fit the Vinegar way also provides preventive health care against the curses of mankind-- cancer, heart disease, diabetes, high cholesterol and blood pressure and other maladies.

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- Learn secrets of ageless beauty and glowing skin
- Help build the immune system, to fight arthritis and disease
- Speed the metabolism to use natural thermogenesis to burn fat

PLUS so much more that you simply must use the book's easy Vinegar way to lose all the weight you want to lose--and enjoy all its other benefits-- before deciding if you want to keep it.

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LETTERS

Dentist Recommends Vinegar

I have some useful advice that others may be interested in. When I got my Dentures several years ago, the Dentist told me use vinegar to get the plaque off them. So - about once a week I soak them in the wonder liquid and Presto - they sparkle.

I have since gotten implants - Since I am not fond of the hygienist scraping the posts for cleaning - I clean them with Vinegar before going for my check-up. On my last visit to her, she couldn't believe how clean they were and praised me for it!

I then asked the Dentist that put the implants in if the vinegar would harm the metal posts and he informed me it is OK to use it.

- D. L., *New Braunfels, Tx.*

Vinegar Heals Ear Ache in 2 days.

I have been plagued with an itchy ear for several months. It then developed into an earache. I was able to cure both the itch and earache in two days.

- J. D., *Jacksonville, Fl.*

NEWS & RESEARCH

Simple Vinegar used to reduce cervical cancer deaths by 31%

The latest study about vinegar, shows it will prevent an estimated 72,600 deaths from cervical cancer each year.

This according to a study released at the American Society of Clinical Oncology annual meeting in Chicago, IL.

The results were based over a 12 year period tracking 150,000 women in Mumbai, India, between the ages of 35-64 years.

The conclusion, a simple vinegar test significantly reduces cervical cancer deaths. Immediate plans are to implement this simple and successful screening test in developing countries.

The study had been planned for 16 years, but after the results were analyzed and found to be conclusive it was stopped at 12 years.

Vinegar has always been used for its versatility in home remedies, cooking and cleaning. And now scientific and medical findings are showing its a simple, low cost, non-invasive and safe for the patient.

Scarlett Johansson confesses her apple cider vinegar beauty secret

When celebrity beauty Scarlett Johansson needs to keep her skin looking beautiful and glowing one would think she would turn to high priced beauty creams.

Not so, according to an article in the February 2013 issue of Elle UK. She uses simple apple cider vinegar and its natural pH balancing properties to keep her skin looking amazing.

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*Testimonials are atypical, your weight loss may be more or less.

Country Conversation & Feedback

Contact us at: 145 Industrial Dr., Medford, WI 54451; csyeditorial@tds.net

More Drought Preparedness Please

Countryside: We just wanted to let how much we enjoy Countryside, the article on DIY Rainwater Harvesting was excellent. It was extremely informative regarding is actually happening in California. We are not online and information is limited here. Countryside is our connection along with NPR and PBS. A monthly article on the drought would be great!

We've been to Wisconsin the last two years on vacation, touring agricultural areas and plan to make it to Door Co. this year. Who knows, we may find Medford and Countryside.

We also enjoyed knowing about James Woolsey and EMP Charlie Rose frequently asks his guests what keeps them up at night—this is right up there!

My husband thinks I should tell you that we use 99 percent of a deer carcass and 100 percent of fish by canning and freezing for dogs, cats and chickens. Scraps cut off deer bones are canned especially for cats, but dogs and chickens love it too.

In 2014, when because of health problems we couldn't bury fish in the garden, I decided to can it. Everything we didn't use went into a canning jar—our dogs went crazy for it. It does smell terrible, so I do it on a day when doors and windows can be opened. It all helps with the food bill. The fish bones are just mush after canning.

Thanks for all you do.

Janis
Missouri

Rainwater Should Be Filtered

Countryside: I'm writing with regard to the articles in the March-April 2015 issue concerning the use of rainwater from rooftops.

I served in the U.S. Navy from 1956-59. During most of those years I was stationed at the Naval base on the island of Bermuda. My wife and I lived off base in a rented cottage. There was a cistern under the house, which was filled from the rainwater that ran off the roof. To the best of my knowledge, all homes built on the island have cisterns under them. Wells that are drilled produce brackish, undrinkable water. I thing some of the hotels use this water for flushing toilets. The water from our cistern was not filtered or purified. Neither of us was ever sick from drinking this water.

I am not recommending that readers use the water from their rain filled cistern without filtering and purification, but on the other hand I think we sometimes worry unnecessarily about bacteria.

I can think of one reason why the rainwater in Bermuda might be cleaner than in the U.S.—there is no industry to speak of, thus less chance of air pollution.

Another angle: Growing up as a youngster we lived on a property that had a hand dug well. I'm pretty sure it must have had bacteria in it since it wasn't very well covered. It is possible that I built up an immunity by being exposed to this water over a number of years. That's speculation on my part and may not be correct.

Thanks for publishing an informative magazine.

Charles R. Bobb
Pennsylvania

Love from Floyds Knobs

Countryside: We live on a small farm in southern Indiana in a little town called Floyds Knobs. I have always loved to bake and cook and have been selling to friends and family for more than 30 years.

I was in between jobs and at 60 not too many companies are hiring, so I started baking and going to festivals and farmers markets. Then I was just staying home and taking orders for my baked goods; a lot of people nowadays choose food to send to the funeral home instead of flowers. So I

I've known what it is to be hungry, but I always went right to a restaurant. — Ring Lardner (1885-1933)

PHOTOS BY DOT BATLINER.

was doing a lot of pies, cakes, cookies and yes, chicken and homemade dumplings.

One day while baking bread for sandwiches for a friend, whose daddy had just passed away, a car pulls into my gravel road; it was Julia with the health department. I knew her from applying for permits. Anyway I welcome her in, apron on, bandana wrapped around my hair, listening to Allen Jackson. She told me she received a complaint about me allowing people to come to my home to pick up their orders and that I was delivering to them also. That is a no-no! I can set it on my porch, out in the yard or meet on the corner, but not inside my home. I told her I understand and was told to cease immediately.

Now this is where this story gets good. We live on a farm that has been in my husband's family since 1854. We used to have dairy cows and behind our home is a 100 years plus old cinder block building that is 10.5 feet by 14.5 feet. It was used as the milk house; we stored our milk and cream there to be picked up by the dairy company. We got rid of the milk cows 40 years ago and now raise Charolais beef cattle.

So now the milk house has been converted to an outside storage building. So my husband and I decided to fix up the milk house because we have barn cats, raccoons, skunks, possums and other critters. It wouldn't be safe to keep food out in the open and unattended. So it started with just a little paint, cleaning and then turn into a beautiful vintage kitchen from the 50s and 60s era. It's complete with metal cabinets that actually belong to the Seelbachs from Louisville, Kentucky, owners of the Seelbach Hilton.

I shopped the Goodwill stores, our barns, grandma's house, Salvation Army and any other thrift stores.

I found an old yellow chrome and Formica table with four studded chairs. A Frigidaire Imperial Flair Stove, which was the kind First Lady Jacqueline Kennedy used. It works like a brand new one. I love it. I also think any company that started making these again would be the most popular stove around. Double ovens, lots of bottom storage and burners fold away inside the stove—awesome.

My husband's grandfather worked for American Standard years ago, and we have a cast iron sink that proudly says on the bottom, "Made in the United States of America, Louisville, Kentucky, October 3, 1953." Grandma has an International Harvester refrigerator that works great but needs a new rubber gasket installed, which we are working on. A lot of people never knew IH made appliances, as this was introduced in 1947 and only sold for a few years until Whirlpool bought them out.

Grandpa was the president years ago for the Berry Association here in Floyds Knobs, I still have and use several of his wooden berry baskets. Sound is provided from a 1961 General Electric console stereo that plays an old 45 record like no other, great sound and the nice wooden

frame was made by The William Tell company out of Corydon, Indiana, which used to be Indiana's capital. Grandpa made a wooden stand in 1935 that sat on the sidewall where he could stack six large milk cans to be picked up. They had extra electrical work done for the outside. They added a 220 electrical plug so when the trucks came they would plug in and pump milk out of the cooler.

The window in this place is so nice—they are on hinges, they rise up and hook to the rafters by an eyehook. Everyone comments on them. So from the appliances, the décor, dishes and pans everything is on the average of at least 60 years old or older, including me. People come in to look for fresh homemade breads, pies, cookies, fudge, cinnamon rolls, sticky buns, jams, herbs and a few homemade crafts. Also we have dried noodles, dumplings and meals in a jar. We offer complementary fresh sweet tea or lemonade in little glass milk bottles. Probably the best sellers are our Bourbon Walnut Fudge, made with Kentucky's finest Woodford Reserve Distillery, which is the oldest and smallest in Kentucky. Our cinnamon rolls are pretty popular too! We sell approximately 500 a week. Made fresh that day, most of the time they are still warn, using fresh farm eggs, real butter, cream no preservatives or artificial flavorings, only extra added ingredient is love, because I love to bake!

We have an old five-gallon glass pickle jar filled with water with a shot glass in it—drop a quarter in it and if it goes in the shot glass you win a free loaf of bread. And all the proceeds go to our local Floyd County Animal Shelter.

For the convenience of a roadside stand for people who are in a hurry, I take my old Radio Flyer wagon with Grandma's Hoosier cabinet attached and put it at the end of our driveway with an honest jar, but also it says my motto: "If in need, take it free." Last winter when we had a lot of snow and people couldn't get to town. I baked bread and offered it to them. Some couldn't make it, so a friend who has a big truck and loves to play made some deliveries for me.

I have people that heard about this from a friend, Facebook or they had my baked goods from someone. When they walk in I hear so many say it is like "walking back in time," or "Oh, this reminds me of Grandma's," "This is so calming," or my favorite, "I want to move in here." So if you're ever in Floyds Knobs, Indiana, stop in for some sweet tea and maybe a slice of Hummingbird Cake.

So who ever reported me to the health department, thank you for giving me such a blessing, to reuse the milk house, repurposed vintage items and finding a relaxing place for me and others to enjoy.

Dot Batliner
Indiana

Remain Cautious About Glysophate

Countryside: The article on glysophate in the July/August issue on page 13 isn't entirely accurate. I have been actively farming for the last 60 years. I have used glysophate, but I believe it is used to the extreme in too many cases.

It is true that glysophate isn't used for a dry down on wheat. However, it is used on wheat or other similar crops to kill and dry down invasive plants that would otherwise contaminate the wheat seed. Also it helps in the threshing and the separation of the foreign matter.

The Countryside reader is wise to be cautious in the use of straw from an unknown source.

Bob Greenwood
Carlton, Kansas

Grounding Tales

Countryside: I just received my July/August issue. First things first. Countryside is the only country magazine I read.

On page 108 was the article, "Grassroots: Grounding."

I was born in 1952 on a farm in Ohio. My grandparents owned the farm and my father worked the farm. I can say I was grounded all my life. Growing up I had three pairs of shoes and my good-old rubber barn boots. One pair of shoes I had for church, the second pair for the next school year, and the third pair were last year's school shoes. These I would wear only when I had to. The rest of the time I was barefoot!

Back then I enjoyed following my dad when he was plowing with the team. Barefoot in the fresh, cool, plowed ground looking for night crawlers. My brother and I helped out with chores, gardening and yard work, always with naked feet, even when we would help clean the barn. We were always told, "That's what soap is for."

Going through junior high and high school, teachers were always telling me to put my shoes on. Finally they gave up.

Still to this day I only wear shoes when I really have to. In each of my vehicles I have a pair of flip-flops, because we take off to go shopping or whatever and I forget to put on shoes.

Here in Ohio I found a group that is called Barefoot Hikers of Central Ohio (BFHCO). They meet at different parks and trails and hike barefoot. They also have a list from members of barefoot-friendly stores.

If a person searches the internet they can find what is called "Barefoots" foot wear. They are a flip flop with special glue on them. There are no straps to hold them on, just the glue. I wear these more than shoes.

So to stay healthy and feel Mother Earth at her best, go barefoot! (It has been shown that the bottoms of your feet are cleaner after walking than shoes!)

Herbert Twiggs
Ohio

Lessons Learned

Countryside: It was in the middle 1940s. Our farm joined an old farmer whose boys had all left home except one my age.

We went over almost every evening and helped them milk 16 cows, and for 25 cents we got half a gallon of

milk for our baby sister.

One day when Dad was busy in the field and Mom was out picking blackberries, my younger brother decided to crank up the old Plymouth and go for a ride. He got all the younger kids in the car and they excitedly took off down the road.

He got as far as the hill in front of the neighbor's house and over corrected on a slight curve and went smack dab through the neighbor's fence.

Scared to death, my brother came walking home—with all the siblings following—to get Dad.

Dad went down to offer payment for the damage. The neighbor refused. "Don't want your money, Bob!"

That really scared my brother.

As Dad started to walk away, he called back. "I'll help you put the fence back up."

"Better still," the neighbor replied, "Send your son down here every evening for two weeks and we'll call it even."

So for two weeks my brother got off the school bus at the neighbor's and they rebuilt the fence, cut grass, fed chickens, hayed the cows—general farm chores.

My brother learned a lesson. "There are consequences in wrongs."

Catherine B. Smith
Indiana

Nothing to Waste

Countryside: I hate to see anything go to waste. I began a quest to make juices for breakfast from fruits that are often wasted.

This all started years ago with rhubarb juice. I use:

- 5 pounds of rhubarb;
- 1 gallon of water. Cook until soft and then strain;
- Add sugar to taste, using as little as possible;
- 48 oz. prepared frozen grape juice;
- 1 cup lemon juice; and
- Heat and can.

I have friends who have a crabapple tree that produces crabapples about the size of a shooter marble or maybe a little larger. We can use only so much crabapple jelly, so one year I cooked them well, strained them, and made a crabapple concentrate. It makes the most beautiful pinkish-red juice, and is by far better than frozen apple juice. I don't even add sugar.

Another friend gave me apricots during a really dry year, and the apricots were tiny. I quickly found out it would take a lot of apricot halves to fill a jar with fruit. So once again, I cooked them well, strained them, and made a concentrate. This is good diluted with water, but even better with 100 percent pineapple, pear or peach juice from canned fruit.

I have canned juice from extremely small cherries that are too hard to pit for fruit. Experts are now listing all the health benefits of tart cherry juice.

Last year I was given my first chokecherries. I decided to use the cooked and strained chokecherries. I decided to use the cooked and strained chokecherries for juice, similar to the elderberry juice I paid a small fortune for in a health food store.

Maybe these ideas for juice will get the wheels turning and you, too, will can some delicious juice from fruit that may go to waste.

M. Friesen
Kansas

Livestock Benefits

Countryside: I would like to respond to Eric Witter on his "Vegetarians are More Efficient than Meat Eaters" (July-August 2015). I am not opposed to vegetarians. In fact, we don't eat meat for every meal, or even every day. I love vegetables and we have lots of vegetarian meals. But raising livestock is actually very efficient.

Consider the pig. He is a wonderful plow. In the fall, before we went to raised beds, we would put the pig in and he would root all about turning up the soil and eating the dead and dying plants (except the night shade varieties we would pull out first). He would have our garden turned up and cleaned out so we could put it to bed with manure and compost and mulch to season over

the winter. They are also wonderful for scraps. I know a lot of the carrot tops, old vegetables, rotted fruit and other food waste that could go into the composter, but a pig is wonderful for that. It makes up most of his diet and then comes back to us in meat and fat to make lard. And as for pig manure, when it is well seasoned it is a wonderful fertilizer for the garden. We have two pens we rotate out of so that we can make use of the manure that has been weathering for a year.

Goats not only give milk to drink and make cheese, but they are fantastic at cleaning brush, weeds, and nasty things like poison ivy. They also provide comic relief. We actually don't eat the goats. But we sell to people who do. Money in the pocket is efficient in my books.

The sheep are the lawn mowers. We raised beef cattle when I was a child. Now my husband and I have sheep and the pastures are better than they ever have been. They keep the grass cropped down evenly and it thickens. And they fertilize as they go.

Chicken not only give us eggs and good meals, but they help with the garden by eating bugs, and ticks (I live in the South) and if you scatter some corn along the edge of your sidewalk they will scratch out all the grass along the sides and in the seams.

Having a farm brings balance. Everything contributes, and benefits from each other. By all means, raise more vegetables (we are!) but having animals is also just as efficient.

As an aside, I would like to say I do not like your new format. Now with the glossy pages and regimented design it doesn't look any different than any other magazine—from *Good Housekeeping* to *Readers Digest*. You have changed the whole feel of your magazine and I believe it has lost character.

I suppose I will just have to get used to it, like all other unnecessary changes in life. Where I work the motto is "If it's not broke then let's fix it!" I feel like that has happened here. But I will remain a loyal reader as the content has not changed.

By the way, will we still be hearing from Jerri Cook?

Leah McAllister
Arkansas

Editor: *Yes, Jerri Cook will be published as frequently as she can write for us.*

Return to the Old?

Countryside: I just received the latest issue of Countryside (May/June 2015). I have asked two other subscribers for their opinion regarding the new layout, and all three of us do not like the new direction the magazine is heading. We all enjoyed the older format, black and white newspaper-like pages with less advertising. That format gave us a feeling of comfort and community in the magazine.

The new format is too much like *Grit* and *Mother Earth News*. Those are both fine publications, but they are not what I wanted, which is why I originally subscribed to Countryside.

Please consider returning to the tried and true. After-all, Countryside's own stated philosophy on page 10 of the current issue states, "...a certain nostalgia for the supposed simplicities of the past and an anxiety about the technological and bureaucratic complexities of the present and the future; and a taste for the plain and functional."

Ryan Moore

Love the Magazine

Countryside: I'd like to comment on the layout of Countryside. I like the feel of the new paper and colorful ads and pictures. I greatly enjoy the down-to-earth articles written by real back-to-nature-type folks. Please keep up the great work—I love your magazine.

Dean Lawther
Florida

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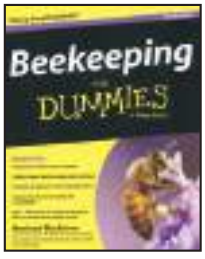

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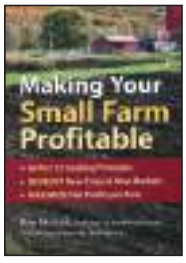

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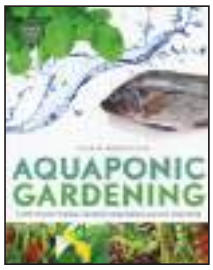

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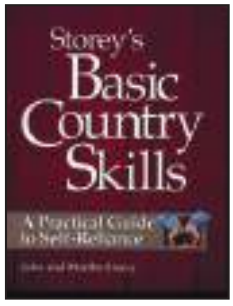

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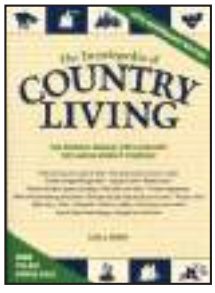

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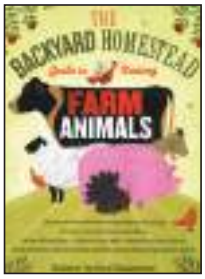

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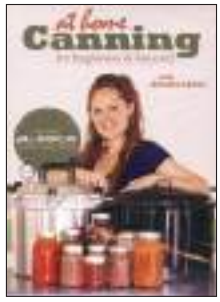

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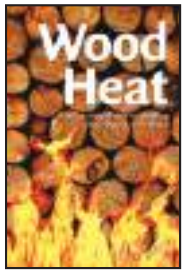

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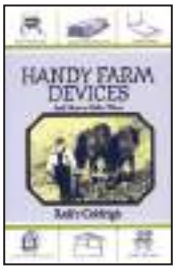

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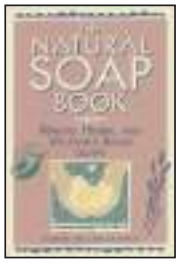

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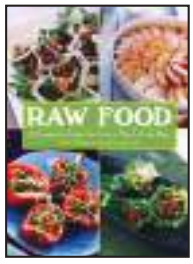

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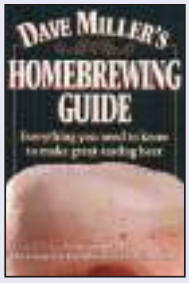

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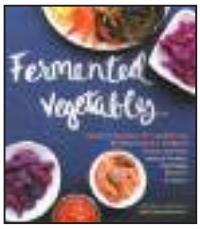

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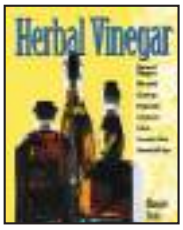

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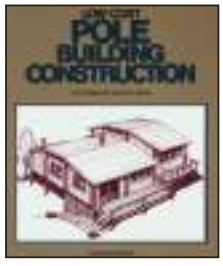

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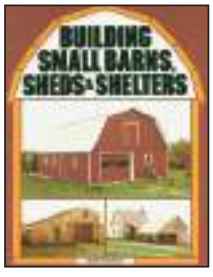

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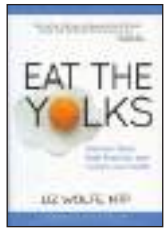

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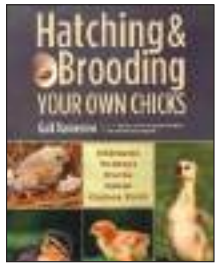

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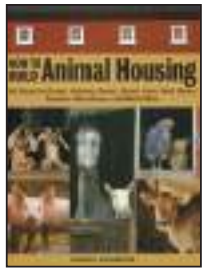

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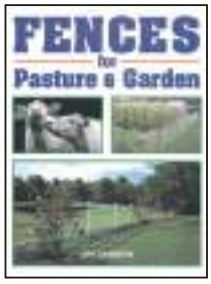

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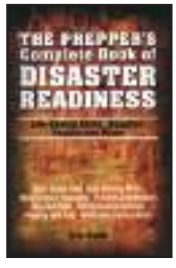

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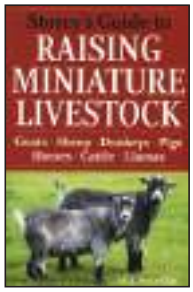

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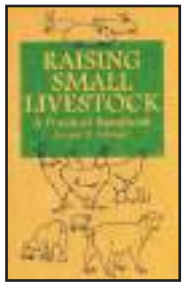

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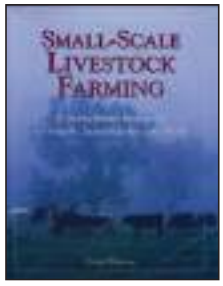

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Nature's Pesticides

A visit to an organic farm in Norfolk, England

BY
PETER
MELCHETT
ENGLAND

FIELDS IN JUNE SUNSHINE: wandering through green lanes and along wild flower verges, stitchwort glows white alongside red campion, viper's bugloss splashes the paths with blue, butter-yellow birds-foot trefoil peeps through long grasses. The landscape is no film set, no figment of my imagination. I am on a working organic farm, Peter Melchett's land at Ringstead in north Norfolk, England.

Here, wheat, barley, clover, vetch and peas are grown in a six-year rotation without chemical sprays, bordered by miles of wide strips where wild flowers flourish. Hedgerows have been left for the past 50 years around the fields, and Melchett has planted stands of native trees, and created more than a hundred acres of wildflower chalk grassland. The farm includes a piece of unploughed commonland, which in springtime is a mass of butter-yellow, thick with cowslips. And in summer, white ox-eye daisies smother the sward like snow—all this a haven for small mammals and birds, invertebrates and insects.

A farmer works the fields near West Norfolk, England.

But aren't rodents, bugs and grubs pests? Isn't that the point of pesticides? Aren't birds pests too, plundering seed grain and fruit? In actual fact, most of our British birds do more good than harm: true, no farmer wants a starling roost on his land, and admittedly Wood Pigeons and sparrows are grain-thieves—but they are all scared of scarecrows! On the positive side, pigeons also eat pernicious seeds such as charlock, goosegrass, chickweed and dock seeds, and sparrows a multitude of insects. On balance, birds are beneficial. Corvids demolish wire-worms in grain crops, and in root and tuber crops are happy to dine on snails and grubs, caterpillars and insects. Crows, ravens and buzzards will take young rabbits, rats and voles. Jackdaws and magpies target larvae, worms, slugs and mice. Buzzards demolish cockchafers and earwigs, as well as any carrion lying around. Robins, wrens and goldfinches are general insectivores, as are tits and wagtails, and the kestrel is among the most beneficial of pest-controllers, targeting with its razor vision rodents and voles, beetles and other insects. The cuckoo will feast on insects and larvae, especially the damaging

A Red Robin, a natural insectivore, eats an insect.

buff tip and tiger moth larvae. Thrushes—both Mistle and Song—have a healthy appetite for snails, grubs and other pests. Golden Plover go for insects and their larvae, and small crustaceans. The nightjar feasts on cockchafers, one of the worst pests to attack crops. The flycatchers will catch insects, moths, sawflies, beetles and aphids.

"The importance of the Lapwing to agriculture can hardly be overestimated," states a Ministry of Agriculture and Fisheries Bulletin of 1955. This beautiful bird, designated "the farmer's friend," was specifically protected by the Protection of Lapwings Act of 1928. Lapwings clear the land of water snails (host to an embryonic form of liver fluke in sheep), and they eat insects, snails and slugs, wireworms and beetles. Larvae of the crane-fly, of turnip and cabbage moths, and of the yellow underwing, which among them feed on grass, turnips, cabbage, potatoes and beet, are all predated by lapwings. Skylarks, Blackheaded Gulls, woodpeckers, swallows and swifts are valuable

But aren't rodents, bugs and grubs pests? Isn't that the point of pesticides? Aren't birds pests too, plundering seed grain and fruit?

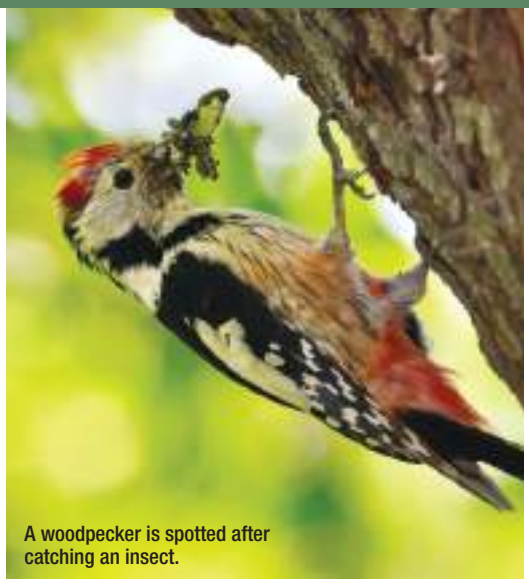
friends of the agriculturalist too, as between them they destroy as many craneflies, blowflies, weevils, grubs, beetles and aphids as they can find.

A CHAIN REACTION

Since Melchett's Courtyard Farm became fully organic 15 years ago, breeding bird statistics have increased astronomically, and there have been rapid spikes in the number and variety of native insects, birds and mammals on the land. According to the *Journal of Applied Ecology*, organic farming methods result in an average increase in biodiversity of 34 percent, and significantly higher species-richness than non-organic. Plant species increased by 70 percent, pollinators are helped, while birds, arthropods and microbes flourished. Clearly it was working here: where wild plants flourished, birds, bees and all kinds of insects abounded. I passed a field of peas in flower, bright magenta and mauve mingled with splashes of scarlet poppies where swallows swooped, butterflies were plentiful, and everywhere there were dragonflies and darters and hoverflies. The birdsong was outrageous.

Walking down one of the tracks under the heavy scent of elderflowers, a leafy lane leads into dense woodland full of songbirds and woodpeckers (the wood, planted 300 years ago has 17 resident species). Glades have been cleared to let light in, to encourage woodland flora and enable replanting of native trees. Mature ivy clambers thickly and freely (tree ivy, contrary to popular suspicion, does not kill healthy trees), its autumn flowers providing late nectar for butterflies and pollen for wild bumble and honeybees. Ivy makes a winter roost for birds, with berries for blackbirds and thrushes, and nesting sites for wrens in springtime. In the undergrowth beneath oak, beech, ash, hazel and sycamore, fallen dead and dying wood has been left to support insect and invertebrate life—a natural larder for the birds.

The result of using natural instead of chemical warfare against pests is that the soil is clean, the water course unpolluted, and the resulting food not merely free of toxic trace elements but full of flavor. Poppies and lucerne, dazzling in full flower at midsummer, contribute to the health of the soil—of which the presence of moles, top predator of the underground world, is an indicator. This new life in the topsoil benefits invertebrates and insects—including that natural pest-killer the ladybird. Cattle



A woodpecker is spotted after catching an insect.

manure adds fertility in the form of phosphorus and potassium, vital elements for plant growth: a two-year cycle of clover, planted to fix nitrogen in the soil, is grazed by young cattle in summer, and cut for winter silage.

Making use of nature's version of pest-control instead of depending on agrochemicals, and using his expertise in plant chemistry and soil composition, Melchett's farming is the method of a farmer who cares as much about his returns as the land itself, its soil, its wildlife and plants and natural beauty. Supported financially through the publicly-funded Higher Level Stewardship Scheme with Natural England, his fully organic working farm is an object-lesson in the science of land management which also acknowledges the wisdom of nature and the beauty of the countryside. No arable killing fields here, that all-too-common sight of scoured soil doused in chemicals with struggling trees and a dearth of wild flowers, creating a habitat in which 43 percent of our farmland birds have disappeared since 1970.

This 750 acres is a reminder of a lost landscape, of what England's countryside looked and felt like before the age of agrochemicals. This is not to be merely nostalgic about a damaged heritage. Its beauty evokes a response which brings home forcefully the realisation of what we are doing to the land, and the consequences of (over) feeding a nation on raw materials polluted with chemical applications based originally on based on poison gases used in World War II, without regard to long-term side-effects on birds and small mammals—let alone us. What are we are doing to the environment, from the soil to our bird life, with this widespread brutal and unsustainable treatment of the natural world? Let alone to ourselves: as Henry Williamson wrote, "A nation that neglects its soil neglects its soul."

Peter Melchett is a policy director of the Soil Association. Learn more at www.soilassociation.org.

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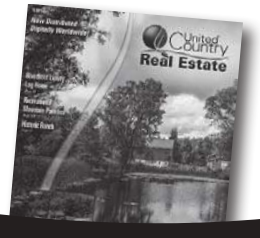

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A Tale of Two Soil Cities

Use of cover crops increases diversity in pore sizes, organic matter

Soil scientist Sasha Kravchenko says bacteria is important in the soil, but is found like communities seen from a plane. Large communities are rare, and most often, it is without bacteria.

BY SUSAN FISK

AS WE WALK ALONG a forest path, the soil beneath our feet seems like a uniform substance. However, it is an intricate network of soil particles, pores, minerals, soil microbes, and more. It is awash in variety.

Soil is a living, dynamic substance, and the microbial life within it is crucial to providing plant life with the food they need to grow. The microbes can be bacteria or fungi, but both need space—the pores—for a good living environment.

Soil particles that clump together are aggregates. These are the architectural building blocks of soil. Their presence has a major effect on the behavior of the soil as a community. Multiple processes form the aggregates: cycles of wetting-drying, thawing-freezing, earthworm activity, actions by fungi, and interaction with plant roots.

No matter what formed the aggregates, the pores are affected. So are the microbes living in them.

Sasha Kravchenko, a soil scientist and professor at Michigan State University, studies soils and their pores in different agricultural systems. Her recent work showed that long-term differences in soil use and management influence not only the sizes and numbers of soil aggregates, but also what the pores inside them will look like.

"Pores influence the ability of bacteria to travel and access soil resources," Kravchenko says. In return for this good home, the

microbes help plants access essential nutrients.

"The numbers of bacteria that live in the soil are enormous," says Kravchenko. "However, if we think about the actual sizes of the individual bacteria and the distances in a gram of soil—that soil is actually very scarcely populated."

To give an idea of what bacterial communities might look like, Kravchenko gives this image: Imagine looking out an airplane window at night over the Midwest. "It's mostly darkness with occasional bright specks of lone farms—those represent individual bacteria. Occasionally, you'll see bright spots of small towns—those would be bacterial colonies. Rarely, you'll see a larger town or city."

Kravchenko's work compared two contrasting agricultural systems. The soil in one system, referred to as conventional in the study, grew crops such as corn in summers. Then the soil was barren from the time of main crop harvest through planting the following spring. The soil in the other system, the cover crop system, had live vegetation year-round.

"These systems have been in place since 1989, so there was plenty of time for the differences between the two systems…to develop," Kravchenko says. "Most of the changes in soil characteristics do not happen overnight. They need time to develop to such an extent that will be sufficient for researchers to detect those changes using currently available measurement tools."

Several surprising observations sprang from the study. First, the aggregates of the two agricultural systems developed different pore characteristics. The aggregates from soil in the cover crop system were more complex and varied in their interior pore structures with more large and medium-sized pores. The conventional system had more small pores spread more evenly through the entire aggregate.

Moreover, microbial communities living in individual aggregates from the same system did not look very much alike. This indicates that an individual aggregate may be a unique system of its own with its own physical build and structure. Much like neighboring cities, an aggregate's community of inhabitants might be quite different from the community next to it.

> "The numbers of bacteria that live in the soil are enormous. However, if we think about the actual sizes of the individual bacteria and the distances in a gram of soil—that soil is actually very scarcely populated.
>
> — Sasha Kravchenko, soil scientist

Within individual aggregates, different bacteria appeared to prefer different conditions. Many of them liked the areas that had a lot of pores with smaller (30-90 micron) diameter, while others preferred being around large (more than 150 micron) pores. "We don't know for sure why that was so, but it is likely that pores of this size provided optimal settings in terms of transport of nutrients, fluxes of air and water, and ability of bacteria to reach and decompose plant residues," Kravchenko says.

These findings highlight the complex interaction of soil particles, pores, microbes, and the plants that grow in them.

Kravchenko and her team used X-ray computed tomography (similar to a medical CT scan). Keeping the aggregates intact gave them an opportunity to view how the soil particles, pores, and particulate organic matter interact in their natural state. "There is only so much we can learn about how soil functions if we work with disturbed soil samples. To get a complete picture we need to look at soil in its intact form."

Author's note: The research was published in the Soil Science Society of America Journal.

Choosing Plants for Winter Aquaponics

Over the past eight months we've been learning how to do aquaponics in greenhouses in cold climates. For the last installment in this series, we look at plants and fish that thrive in the cold, and how to raise them.

BY JEREMIAH ROBINSON
MADISON, WISCONSIN

I GROW IN A COLD HOUSE.

In greenhouse language, this means I allow my temperatures to drop below 10˚F—cold enough to kill most plants. Others grow in warm (>32˚F) or hot (>50˚F) houses, which are nice and plush but in my climate require you to sell your soul to the electrical utility or burn up your woodlot.

I grow in a cold house conditions because I want my aquaponics to produce more (in vegetables and fish) than I put into it (in energy). My super well-insulated aquaponics system does just that.

As you can tell, I'm proud of my energy efficient frozen tundra system.

While my cold house puts limits on my choices for plants, the ones I like the best are the ones that love the cold.

PLANTS

I've had success with the following list of plants in cold temperatures:

- Spinach (Giant Winter, Tyee);
- Swiss Chard;
- Kale;
- Sage;
- Arugula (Sylvetta);
- Lettuce (Winter varieties survive down to 20˚F); and
- Corn Salad, a.k.a. Mache and Lamb's Lettuce.

STARTING SPINACH

Perhaps the Popeye watching as a kid did it to me, but I love spinach more than any other food on Earth. This is lucky because of all the plants I mentioned spinach grows the best in the cold. With its strong susceptibility to Pythium, it's a challenging crop to grow. However, I've fought this battle and come out victorious. The following instructions work for spinach, and will suit the other (easier) plants just fine.

In growing spinach, you must know your enemy.

Coming in many varieties, the Pythium fungus will kill every single one of your winter spinach plants before you can finish your sauna and ice dip.

With Pythium, prevention is the only solution. Where tomatoes and lettuce will tolerate less-than-ideal seed-starting conditions, for spinach you must follow these recommendations (or their equivalent) exactly:

1. Use either brand new sterile media, or sterilize it yourself by boiling 30 minutes or pressure-cooking to 15 pounds.
2. Soak your trays and cells in

five percent bleach solution for 20 minutes minimum, then rinse three times.

3. Dip your seeds in the bleach solution, then rinse.
4. Start your seeds in the seed tray with humidity dome—maintained between 50-70˚F—by planting them at ¼-inch depth. (Alternately, you can start your seeds in paper towel with water/peroxide mix, and transplant sprouted seeds.)
5. Each time you water, mix 10 parts water with one part hydrogen peroxide solution

   Provide no more than 13 hours of light. Providing only eight hours will make your plants bolt-resistant once they've grown to full size, though they start slower this way.
6. Once they're 4-inches tall, harden off your plants for several days, at times when greenhouse temperatures will not drop below 32˚F.
7. Transfer plants to the aquaponics.
8. Once planted, the intense biological community in aquaponics (especially with water temperatures at or below 50˚F) helps protect you from pythium.

GROWING

With the hard work done, all we do now is maintain proper humidity and light. Plants need to transpire to grow, and most do so most effectively between 50 and 70 percent Relative Humidity (%RH). Under high humidity conditions (common in winter greenhouses), water can also condense and drip on your plants encouraging disease.

During the day, I manage humidity in the low tunnels over my grow beds by bringing in cold, dry air from the outside and pre-heating it using a low-wattage hair dryer, controlled by a 120-volt dehumidistat. A heat recovery ventilator (HRV) would do better, but they're expensive.

At night we get a free pass from humidity. In fact, the more the better!

As temperatures fall below 40˚F at night (i.e. in low light conditions) humidity becomes a resource rather than a problem. Because the plants stop transpiring at these temperatures, growth is not a factor and diseases are rare and largely dormant. Water condensing on plant roots and greenhouse (or low tunnel) walls releases heat that keeps your plants warmer than the air.

With regard to light, the choice is up to you.

My latitude doesn't provide enough light for significant plant growth. Because of this, I supplement in small amounts using fluorescent lights attached to the undersides of my low tunnels. With lettuce, you can leave the lights on all night long if you want, which allows for fewer lights. For spinach, however, 13 hours is the maximum to prevent bolting.

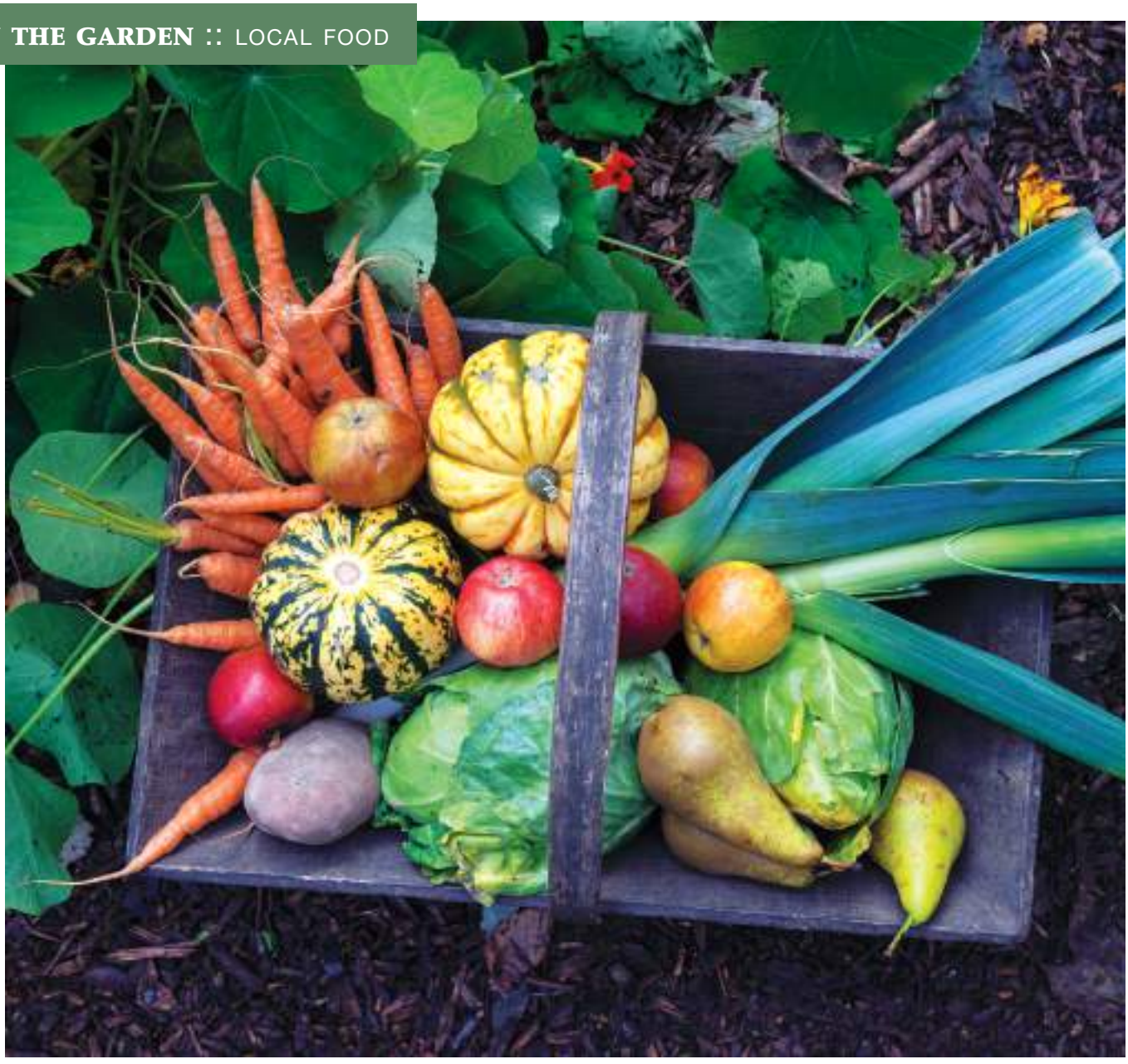
Depending on the temperatures you maintain based on your climate, and the amount of light you supplement, you get anywhere from 0 to 100 percent growth rates. If you choose not to supplement light, you should grow your plants to full size prior to November 1. While they won't grow much over winter, you can still harvest all winter. Carbon dioxide (CO_2) helps with growth at low light conditions, and the CO_2 released from fish waste decomposition helps with this.

HARVESTING

Harvesting greens that have frozen and thawed improves the taste! However, it's a bad idea to harvest while your plants are still frozen .

It's also a bad idea to let your lettuce freeze too hard (below 25˚F) or too often, or they'll die.

Avoid harvesting more than 30 percent of any plant that you want to keep growing. This is an important practice, because in late winter as temperatures warm, your plants (which spent the winter building an impressive root structure) will take off like rockets!



Foods You Should (and Can) Produce Yourself and Why

BY GAIL DAMEROW

NEW OUTBREAKS OF ILLNESSES and even deaths (an estimated 9,000 annually) due to food poisoning are constantly reported in the news. Most of these outbreaks can be traced to problems in large-scale industrial food production, and a majority are caused by bacterial contamination.

Some bacterial contamination is introduced by infected food producing animals, especially chickens, cows and pigs. But most bacterial contamination is introduced through unsanitary methods in growing, harvesting, packing, and transporting foods that allow these products to come into contact with raw manure.

Bacteria isn't the only source of illness. Industrial contaminants, such as mercury and PCBs in fish, are another major issue. And so is the genetic engineering (GE) of plants and animals used in food production, which may not result in readily recognizable outbreaks of acute illness, but possibly an accumulative long-term effect on human health.

By understanding where contaminants come from in industrially-produced foods, those of us who prefer to grow our own can easily avoid the same pitfalls.

VEGETABLES AND FRUITS

Foodborne illnesses associated with vegetables and fruits are increasing, thanks to centralized large-scale food production, an increase in imported produce, and the perceived convenience of prepackaged ready-to-eat raw produce.

Industrial scale production provides ample opportunities for contamination. While crops are growing in the field, bacteria and other pathogens may be introduced from manure- or sludge-based fertilizers or from irrigation water contaminated with manure or sludge. Microbes may not only accumulate on the surface of produce, but can be absorbed through the roots and into the edible tissues. Likewise chemical contaminants—pesticides, herbicides and chemical fertilizers—may accumulate on the surface or be absorbed within vegetables and fruits.

Genetically engineered crops are particularly likely to contain pesticides, as they are modified to either produce or tolerate pesticides and herbicides and are therefore subject to more chemicals than conventionally grown crops. Further, no studies have proven that GE foods are safe for human consumption, and some such creations have been shown to be toxic or otherwise harmful.

Harvesting practices can make things worse by mingling together contaminated and uncontaminated produce, or by using un-

Growing your own food isn't hard. It's just a matter of deciding where your priorities are and then rolling up your sleeves and literally digging in.

clean harvesting equipment. New contaminants may be introduced through unsanitary practices by farm workers or packers, particularly where bathroom facilities are primitive and hand-washing opportunities are unavailable. Other sources for contamination include farm animals and wild animals (especially birds and rodents) having access to harvesting areas.

During processing, unclean containers and vehicles used to transport produce may spread contamination, as may also contaminated water used to rinse produce, or ice used for rapid chilling. The long-distance shipping of produce, especially under variable temperatures, offers pathogens ample opportunity to multiply.

Produce brought in from other countries—to meet consumer demand for out-of-season or exotic vegetables and fruit—is especially suspect where standards of hygiene are less stringent than ours, where crops are routinely irrigated with sewage or fertilized with raw humanure, or where harvested produce is washed with contaminated water. According to a senior epidemiologist at the CDC, some 32 percent of the fruits and nuts consumed in the United States are imported. Thanks to NAFTA, the continuing increase in imported foods has been accompanied by a rise in reported foodborne illnesses.

Precut salad greens, crudités and shredded vegetables, and prepared fruits are among the worse offenders. Many vegetables and fruits have protective surfaces that become damaged by peeling and cutting, and the cut surfaces increase the area on which pathogens can grow and spread. Further, the machines used in preparing these products typically have difficult-to-clean parts, which can easily accumulate and spread bacteria.

Nearly every one of us has, at one time or another, experienced the uncomfortable gastrointestinal symptoms of food poisoning. Regulators charged with ensuring the safety of our food supply, instead of putting all their effort into resolving unsatisfactory industrial practices, put much of the burden on us consumers—expecting us to cook foods we prefer to eat raw, and hoping we'll see recall notices about returning or throwing out tainted foods we mustn't eat at all.

Fresh vegetables that have been involved in consumer illnesses include celery, cucumbers, a variety of herbs, leafy greens (such as lettuce and spinach), root crops (beets, carrots, potatoes), tomatoes, and zucchini and other vining squash. When you look at the list, nearly any commercially grown vegetable is a potential source of illness. Among fruits, melons, raspberries, strawberries and unpasteurized apple juice and cider

have caused illnesses or deaths.

Fresh vegetables that may be genetically engineered include summer squash (yellow squash and zucchini) and sweet corn. The main genetically modified fruit is the papaya, although our government has recently approved the marketing of genetically engineered apples. Since labeling is not required, you have no way of knowing which of these fruits or vegetables has been engineered unless it is identified as being "non-GMO" or "organic." However, few fresh fruits and vegetable currently on the market have been engineered. Most GE produce appears in processed foods, including just about anything containing soybeans or their byproducts (soy lecithin, soy oil, soy or vegetable protein, soy isolates) or corn or its byproducts (corn flour, corn meal, corn oil, corn starch, corn syrup).

In light of these disturbing facts, growing as much of your own produce as possible, enjoying fresh vegetables and fruits in season, and canning or freezing your surplus for future consumption seems like a no-brainer. Luckily vegetables (along with some fruits) are easy to grow yourself, and knowing that you and your family and friends are going to eat them, you are bound to be more careful about safely growing, harvesting, processing, and storing them. And in particular, most family gardens are only steps away from the kitchen—no long, hot haul across the country or halfway around the world. Not only is produce safer when picked and eaten ripe, it also tastes better.

In selecting seeds for your garden, you don't need to worry that you might inadvertently buy genetically engineered seeds. No GE seeds are available for home use. Not only are engineered seeds extremely expensive, but buying them requires signing a contract specifying what you may and may not do with them.

Avoiding other pitfalls of industrial production is equally easy. With a slight alteration in diet you

can learn to enjoy fresh homegrown produce in season, and enjoy the anticipation during the off season. You might even extend the growing season of certain crops through successive planting, by growing varieties with different days-to-harvest times, and by planting some things early or late in the growing year, taking a calculated gamble that spring's last frost will be early and fall's first frost will be late. A cold frame, green house, or floating row covers are other season-extending options.

Water your garden with potable water whenever possible. Rainwater (roof run-off) and graywater (from tub, sink, or laundry but not toilets) can harbor bacteria and other contaminants. If you have to use roof run-off or other recycled water, reserve it for fruit trees and other crops growing above ground—such as tomatoes, peppers, and corn—taking care not to splash any on the plants themselves.

If you fertilize with manure, compost it before applying it to your garden, and position your compost or manure pile where run-off won't drain onto your vegetables. Apply fresh manure only when the garden will be fallow over an extended period of time. Typically, fresh manure is applied only in the fall, giving it time to break down during winter. Never use sewage sludge (also called biosolids), even if it's been composted, as it likely contains heavy metals and other contaminants. Keep chickens, household pets, and other animals out of your garden during the growing season, and especially as harvest time approaches.

FRESH EGGS

Many instances of food poisoning result from eating eggs contaminated with bacteria. The problem is serious enough that the United States Food and Drug Administration considers shell eggs to be a "potentially hazardous food." Accordingly, the USDA mandates that commercially produced eggs must be washed and sanitized, remain under constant refrigeration from farm to consumer, and be cooked thoroughly before being eaten.

Despite all this, eggs contaminated with bacteria continue to cause food poisoning. And it's no wonder, when you consider that thousands of hens are packed into each layer facility, often under filthy conditions that include insects and rodents attracted by dead birds and piles of accumulated poop.

And then consider how old the eggs are by the time the cartons are sold at the supermarket. Eggs bearing the USDA grade shield, for instance, must be processed and packed for market within 21 days of being laid, and the cartons must bear the pack date (the day the eggs were washed, graded, and placed in the carton). A sell-by date is not federally required, although some state laws require it, while others don't allow it.

When a sell-by date appears on a carton bearing the USDA grade shield, it cannot be more than 45 days from the pack date. Consider, then, that by the time the sell-by date rolls around, the eggs may be as much as 66 days old. And that's assuming the dates haven't been "adjusted" to make the eggs look less old than they really are (it happens!)

The USDA recommends that you purchase eggs before the sell-by date and use them within three to five weeks of the date of purchase. Which means those eggs could be nearly 100 days, or more than three months, old.

Can you do better? You bet you can! Keep a few chickens in your backyard and you will have the freshest possible eggs for your table. Take care to keep nests clean, and to collect eggs often (especially in hot or freezing weather), and you won't find better tasting or safer eggs. As a matter of fact, when you collect eggs with clean shells that needn't be washed, you don't even have to refrigerate them — assuming you're going to use them within a few days.

Besides getting tasty, safe-to-eat eggs, another great advantage to keeping chickens is that they go hand-in-hand with producing your own vegetables. You can feed your flock surplus produce from your garden and compost their manure to fertilize next year's harvest.

SAFE MILK

Just as egg washing is designed to remove pathogens from the shells of unsanitary eggs, milk

pasteurization is designed to kill pathogens in milk that has become contaminated either while dairy animals are being milked or during processing or storage of the resulting milk. Bacteria may come from diseased animals or from manure, for example if the teat cup on a milking machine drops off an animal's udder onto the dirty floor.

Milk contamination became a bigger issue with the development of rBGH (recombinant Bovine Growth Hormone, also known as recombinant Bovine somatotropin or rBST), a genetically engineered artificial hormone that makes dairy cows produce more milk. A study at the University of Vermont, and supported by Health Canada, found that cows injected with rBGH suffer an increase in painful udder infections, which result in pus and blood (not to mention antibiotic residues) in their milk. A number of human health concerns—including breast, colon, and prostate cancer—are associated with the consumption of milk from treated cows.

Because of these and other issues, the use of rBGH is prohibited in the European Union, as well as in Canada, Israel, Japan, Australia, and New Zealand, but not in the United States. Yet not all commercial dairies in the United States inject their cows with rBGH, and some of those that don't may label their milk as coming "from cows not treated with rBST" or some similar statement. On the other hand, milk that does come from treated cows may be mingled at the processor level with non-rBGH milk. Unless milk is labeled as being rBGH-free, you can reasonably assume it is not.

Pasteurization destroys bacteria and most other pathogens in milk, but does not destroy the increased level of a potential cancer-causing insulin-like growth factor (IGF-1) that results from the use of artificial hormones. Pasteurization was originally instituted after milk production moved from the family cow to crowded and often unsanitary commercial operations. Still, foodborne illnesses resulting from the consumption of pasteurized milk and dairy products continue to occur.

Producing your own milk is an option a lot of homesteaders are choosing these days. You may not have space for a cow, but a couple of dairy goats will produce enough milk for most families. Either way,

you don't need a milking machine like those used to milk multiple animals in commercial dairies. The advantage of not using a machine is that your hands and milk pail are much easy to sanitize than a machine with lots of little parts that must be taken apart and cleaned after every use. Besides, hearing the split-splat of milk landing in your pail is much more peaceful than listening to a noisy milk pump.

You don't need a pasteurizer, either. By producing clean milk, and refrigerating it promptly, you get a much better and safer product than is available at the supermarket. Enjoy drinking it fresh, or use it to make your own cultured yogurt and kefir, ice cream, and many kinds of cheeses.

MEAT AND FISH

Recalls of contaminated chicken, hamburger, pork, or fish are all too frequent. Bacteria contamination occurs because of unsavory and unsanitary growing methods and slaughtering practices. The use of antibiotics to keep industrially produced animals healthy has contributed to the development of super strains of antibiotic-resistant pathogens. Beef that is contaminated with microbes, when ground up and mixed with beef from other sources, contaminates the entire lot.

Farmed fish and shrimp, especially those produced in Southeast Asian countries, may be fed raw manure from chickens and pigs. Almost all naturally harvested seafood contains some amount of toxic mercury. Even fish caught locally may contain toxic polychlorinated biphenyl compounds (PCBs) or other chemical contaminants.

Producing your own homegrown poultry, meat, and fish requires a bit more knowledge and dedication than growing fruits and vegetables. Further, producing homestead meat has become a controversial issue. For some people it's a matter of not being able to bear the thought of killing animals. Ironically, many people who regularly eat meat don't have a problem, as long as someone else does the killing.

Another controversy relates to rations available for feeding livestock, most of which contain genetically engineered corn or soy, or both. Non-GMO and organic feeds are not widely available and are too expensive for many subsistence homesteaders. But you can somewhat mitigate the GE issue by pasturing livestock and feeding surplus garden produce to reduce the use of either GE rations or expensive non-GMO feeds.

Growing your own fish or shrimp, of course, requires water. The pond or pool needn't be huge, but may require heat and/or aeration. The climate where you live, as well as the size and depth of your water source, will determine what species you can most easily grow. The Internet and the Cooperative Extension are two sources for finding information on growing your own fish.

Online Food Safety Resources

Food Safety News (FoodSafetyNews.com) reports on the latest foodborne illnesses, food and pet food recalls, and other food safety issues

Bad Bug Book — Handbook of Foodborne Pathogenic Microorganisms and Natural Toxins (free PDF), Center for Food Safety and Applied Nutrition, United States Food and Drug Administration

Fish Consumption Advisories (interactive website tracking contaminant levels in regional fish species and water bodies), United States Environmental Protection Agency

Should I Eat the Fish I Catch? A Guide to Healthy Eating of the Fish You Catch (free PDF), United States Environmental Protection Agency

TAKING ACTION

With each new outbreak of foodborne illness, the government institutes yet more food safety policies. The best food safety policy you can institute is to grow, harvest, and process your own.

One group of naysayers will argue that homegrown foods can harbor bacteria and other contaminants, just like their industrial counterparts. That's true, but since you undoubtedly will take greater care in producing your own food supply, the chance is pretty slim that your homegrown food will make you sick.

Foodborne illness occurs as a chain of events. First there must be a source of contamination. Next, the contaminant must come into contact with food. Third, the food item must be handled in a way that retains the contaminant or, in the case of a pathogen, allows it to grow. And finally, a sufficient amount of the contaminant must be consumed to cause illness. Break the chain of events and you have healthful, safe food.

Another group of naysayers will argue that producing your own food takes too much time, especially if you work outside the home. So let me tell you a little story:

When my husband and I were both working full time, we lived in a small apartment in town and bought a place in the country, a 45-minute drive away, that had good garden soil, an old apple and plum orchard, and a small cottage. We spent weekends working in our garden and harvesting produce, which we brought back to town and canned during evenings after work. We accumulated an impressive cache of home canned vegetables and fruits, jams, and apple cider. We weren't in a position to tend chickens or livestock, but we did obtain healthful meat by occasionally harvesting venison and wild pigs on our country place, and we once traded an unused desk for a side of 4-H lamb, cut and wrapped.

When we moved full-time to the country, we added a flock of chickens for fresh eggs and clean meat. After my husband spent a brief stint as a USDA milk inspector, and learned first-hand what goes on behind the scenes, we got dairy goats to enjoy the benefits of grass-fed milk and raw-milk yogurt. We've also grown beef, pork, and fish. And we regularly harvest wild turkeys and deer that abound in our woodlot.

Growing your own food isn't hard. It's just a matter of deciding where your priorities are and then rolling up your sleeves and literally digging in.

Gail Damerow is the author of Backyard Homestead Guide to Raising Farm Animals, Fences for Pasture and Garden, The Chicken Health Handbook, Storey's Guide to Raising Chickens, *and several other books available from our bookstore on page 18.*

Strip or No-Till?

Researchers find improved soil properties with strip tilling compared to the no-till method

BY JERRI COOK

HOW DOES STYLE OF TILLING make a difference in crop success? The blades on a till don't simply chop up soil and move it around. They blend dead plant material left from harvest into the soil. They also expose wetter soil to the air and loosen it.

For some soils this may be useful, but for others not so much. Not tilling can help prevent soil erosion and keep in moisture, while tilling the soil can cause erosion and moisture loss. If a soil tends to be too cool and wet, tilling may be a good option. The opposite may be true for a soil that is warmer and drier.

In response, farmers employ different tillage practices. In conventional tilling the entire surface of a field is disturbed. However, in a no-till field the soil is minimally disturbed just to plant new seeds. Strip-till came about in the last 25 years as a hybrid of the two methods. In this technique only the crop rows where seeds will be planted are tilled.

"Strip-till is in between the two systems where you combine the benefits of each," said Fabián Fernández of the University of Minnesota. "You have some of the soil conservation benefits derived from left over plant tissue on the soil surface and undisturbed soil structure in the in-between row positions where you don't till. And then you have the benefits of a better seedbed from tilling the crop rows where you're going to plant."

He added that for typical Midwest springs, tilled crop rows would be warmer and a bit dryer earlier so farmers can get in and plant. The farmers also won't need special equipment to deal with the leftover plant matter, called residue, in the crops rows like they do when they plant in no-till.

The long-term effects of these different methods can have impacts on soil properties, nutrient and water uptake, yield, and ultimately farmers' profit—but research on them is lacking.

Fernández, who is from the Department of Soil, Water, and Climate in Minnesota, along with other researchers, compared soil properties after five years of no-till and strip-till to try to fill these research gaps. Their findings were recently published in *Agronomy Journal*.

"We saw a consistent benefit of strip-till over no-till for these soils we were working with," he said. "In a previous study we measured a lot of crop parameters that indicated that strip-till allowed the plant to be more efficient in taking up nutrients and water and increasing yield. So then we decided to look at the soil physical properties that may be changing in response to these tillage methods to see if we can explain why we're seeing these benefits in the crops."

The researchers looked at five specific soil properties: soil organic matter, penetration resistance, bulk density, water aggregate stability, and infiltration rate. The goal was to find out why strip-till was better at

creating a beneficial environment for that crop to grow, Fernández said.

A major result was that after just five years, soil organic matter content was 8.6 percent greater in the strip-till plots when compared to the no-till plots. Furthermore, bulk density was reduced by four percent and penetration resistance, the force a root must exert to move in the soil, decreased by 18 percent.

"We know that soil organic matter is extremely important for a lot of properties in the soil, and we saw one of those benefits in terms of reduction in the bulk density of the soil," he explained. "The soils were less dense and because of the reduction in density, we also observed less penetration resistance."

However, there was no significant change in the water aggregate stability. This tests how stable the soil is against water erosion. The infiltration rate, which is how fast the water moves through the soil, was also unchanged. Fernández thinks these properties may form over time.

According to Fernández, the best place for strip-till is in fields with a lot of crop residue and conditions that tend to be cool and wet in the spring and where farmers prefer not to do conventional tillage. However, researchers don't necessarily know how every field will respond because there are a lot of tradeoffs. For example, Fernández doesn't suggest that farmers use this method on sloping fields because the tilled crop rows can actually encourage erosion.

For those soils where strip-till would be appropriate, it can be a powerful method that benefits the soil by both working to help conserve soil and improving soil physical properties.

"These soil properties impact a plant's ability to maximize its resources," he explained. "If you can get these soil properties to an optimal level they can allow the plant to grow with more ease, allowing it to focus its energy on yield."

Jerri Cook writes regularly for Countryside.

The Countryside Cookbook

We have been publishing recipes that readers have sent us for decades, and most of those recipes will never go out of style. So we are restarting the Countryside Cookbook with three from our archives that we treasure. Like the others, they are all without being pre-packaged and none contain processed food ingredients. If you would like to submit your recipes to the Countryside Cookbook, send them to countryside@swiftcom.com, and if you can, please include pictures of your beautiful work.

Recipes

Cranberry Muffins

- 2 cups of flour
- 2 tablespoons brown sugar
- 2 ½ teaspoon baking powder
- ½ teaspoon salt
- 1 egg well beaten
- 1 cup milk
- ¼ cup melted butter (cooled)
- 1 can cranberries*
- 1 cup sugar

Cook cranberries and 1 cup of sugar until soft, set aside and cool.
Preheat oven to 400 degrees.
Add flour, sugar, baking powder and salt.
Mix the egg, milk and butter. Add the liquid mixture to the dry ingredients. Stir mixture, add 2 cups of cranberries, and mix well.
Spoon into well-greased muffin tins, filling the cups about two-thirds full.
Bake for about 25 minutes or until golden brown.

— Recipes by Shirley Kelly
**To make these dishes even more nutritious, use 2 cups fresh (or frozen) cranberries and pineapple.*

Baked Ham

- 1 ham
- 1 can pineapple slices*
- 12 cloves
- 2 tablespoons prepared mustard
- 1 can 7-Up or beer

Preheat oven to 350 degrees.
Score the ham in diamonds and stud with cloves.
Cover with pineapple slices. Mix 2 tablespoons of prepared mustard with one can of 7-Up or beer. Baste well.
Cook for 20-25 minutes per pound, basting frequently. For the last 10 minutes, turn oven up to 400 degrees.

Honey Baked Apples

- 6 apples (cored)
- 1 can cranberries*
- 2 tablespoons melted butter
- 1 cup honey
- ¼ cup water

Mix cranberries with honey. Stuff the apples with cranberry mixture.
Brush top of apples with melted butter. Pour water in baking dish add apples standing up. Bake at 350 degrees until apples are tender, about 40 minutes. Serve with honey sauce.

Honey Sauce

- ¼ cup of honey
- 1 stick butter
- 2 cups water
- 2 tablespoons cornstarch
- ½ cup raisins

Put honey, butter, and water in saucepan. Blend in the cornstarch, and cook over medium heat until the sauce thickens. Add the raisins when cool and pour over apples.

A Guide to Preserving Tomatoes

BY KAY WOLFE

TOMATOES ARE ONE OF THE EASIEST and most common plants grown in backyard gardens. Everyone loves fresh tomatoes picked from their own vine but if you planted more than one plant, chances are you are drowning in them by now. The taste of homegrown vine ripened tomatoes is incomparable so don't waste them. Preserve them!

I grew up watching my mom can tomatoes so canning comes naturally to me. If you didn't grow up in a household that preserved their own food, you may assume it is much harder than it really is. If you can raise it, you are no doubt capable of preserving it. All you need to gain a rewarding skill and hobby is a little equipment and instruction.

WHY BOTHER?

Many people will tell you they do it to save money and I'm sure they do but that's not why I do it. I do it because I enjoy it and because I want to provide the very best for my family. In just a few hours, I can stock my pantry with beautiful, healthy, organic tomatoes and tomato products to enjoy year round. Once you try it, you'll be hooked too! Home canned tomatoes have the advantage of being stored in glass as opposed to grocery store tomatoes in plastic lined metal cans. Plus, I know my tomatoes have not been exposed to pesticides or herbicides.

BOILING-WATER CANNING

The most common method of canning tomatoes and probably the best way to learn is the hot water bath method. Basically, you place peeled tomatoes in a jar and then boil them under water until they are sterilized. Not everything can be preserved in this method since some bacteria require a higher temperature to kill. But, tomatoes are acidic and most bacteria can't survive in an acidic environment. That's why some recipes call for added lemon juice to raise the acidity so just to be sure, add two tablespoons of lemon juice per quart jar. I don't, but then I raise acidic tomatoes.

For this method, you'll need a few things. Of course you'll need jars but make sure they are Ball or Mason jars and not reused disposable jars like old pickle or mayonnaise jars. Many people look for jars at yard sales or thrift stores. As long as they are not cracked or chipped, go ahead and save some money. You can find everything you need in the canning section of the hardware store or a well-stocked grocery store. The canner is simply a big metal pot with a wire rack in the bottom and a lid. Most hold seven-quart jars and even more pint jars. It may also come with a device used to lift the hot jars out of the water. You'll also need lids made to seal (these are not reusable but are sold separately) and reusable rings to screw down on the lids. A canning funnel comes in handy too. It is made to fit the mouth of the jar so you don't drip tomato juice all over them as you fill the jars.

Here's a fun and tasty recipe to get you started. I use nine 8-ounce jars for this. I like to get the pretty cut-glass jars and decorate the lids before giving as gifts. Once they are completely cool, simply remove the rings and place lovely squares of festive fabric over the lid and replace the ring to dress it up. If you are really crafty, you can cross stitch cute designs for each lid or add a tiny ribbon and they will never eat them because they are just too decorative.

Creole Sauce

From Ball Complete Book of Home Preserving

11 cups coarsely chopped cored peeled tomatoes (8 cups if strained)
1 green bell pepper, seeded and chopped
1 cup chopped green onions
4 tablespoons red wine vinegar
3 cloves garlic finely chopped
2 tablespoons worcestershire sauce
1 tablespoon dried oregano
2 teaspoons hot pepper sauce
1 teaspoon freshly ground black pepper
½ teaspoon salt
½ teaspoon cayenne pepper

Combine the ingredients in a large saucepan and bring to a boil over high heat stirring frequently. Reduce the heat and boil gently uncovered until thickened, about 40 minutes. In the meantime, get your jars and canning equipment ready.

Since the sauce will be hot, go ahead and heat your canning water so the jars will not break when you place them in (just under boiling). Ladle the still hot sauce in the jars leaving one inch head space. Wipe the tops, add the lids and firmly screw on the rings and place them in the warm canner. Put the lid on the canner and bring to a rapid boil. Process them for 20 minutes and then remove and cool.

SELECT AND PREPARE THE TOMATOES

Any tomato can be canned but some have more flesh than others. Tomatoes are mostly water so the Roma paste tomatoes tend to be prettier and thicker once processed. If all you have are the big beef-steak varieties, go for it. They will still turn out better than anything you can buy. What is more important than the variety though is the individual fruits you use. The final product is only as good as what goes in so I like to pick them the day of canning and I only select the fruits in their prime. I don't use green ones or overripe soft ones.

Before you begin, get your equipment ready. Make sure your jars are clean (I run mine through the dishwasher to sterilize) and you have new lids and clean rings. To peel the tomatoes, drop the washed tomato in boiling water for a few seconds until you see the skin start to curl. Then remove it and drop it in ice water. It should be easy at this point to just peel it off with your fingers. Cut away the stem and any blemish but never use a rotten tomato.

Now they are ready for the jar. You can drop them in whole or you can cut them into pieces, it's up to you. If they are big I will at least cut them in half. As you fill the jar, press down on them with your fingers so the juice replaces the air pockets between tomatoes. Add the lemon juice if you prefer. Use a knife to help remove air bubbles because the only place you want air is in the top one inch of the jar. This is called "head space" and it allows the tomatoes to expand during heating. Without it, the tomatoes will boil over in the jar and ruin your seal. Once the jar is filled within one inch of the top and all air bubbles have been removed, wipe the top of the jar good with a paper towel and place a clean new lid followed by a

ring. Twist it down firmly but not tight since the air needs to escape during processing. Continue until you are out of tomatoes or you have enough jars to fill the canner.

Place the jars in the canner and fill with water until the jars are at least one inch below the surface (make it two to be safe). Turn the heat to high and put on the lid. It may take a while to reach boiling so now would be a good time to start another project in the kitchen as long as you can check it every 5 to 10 minutes. Once it reaches a rapid boil, set a timer for 40 minutes for quart jars and keep it boiling hard. When the time is up, turn off the heat and give it a few minutes before removing the jars with the utensil made for removing hot jars. I like to set mine on a dry towel on the counter and then don't touch them until they are completely cool. As they begin to cool, you will hear a pop. That means the lid just sealed and is your assurance the tomatoes are safe. Always check the seal before storing and again before using. If the seal is not still vacuum packed, don't eat it.

SAUCES

Now that you see how easy it is to can tomatoes, let's move on to the next level: sauces. There are so many salsas and sauces that use tomatoes combined with spices along with onions and peppers. As long as they are acidic, they too can be preserved using the water bath method. Serve them to your guests over cream cheese or with chips. These make great gifts and are so pretty to display in your kitchen. Once you start playing around with recipes you can make your own to suit your family's taste. Some like it hot so go crazy with the type of peppers you use but I personally like to "sissy" them down for those of us who prefer milder sauces.

FOOD STRAINER

Here in South Texas, there are few varieties of tomatoes that can stand the heat and those are small, so peeling by hand is too time consuming. They have a great taste though and do well in canning and cooking, so I bought a strainer to cut my preparation time from hours to minutes. I will never again be without one of these little gadgets. It comes with various size strainers to alter the texture of the tomatoes but it can also be used with apples and many other fruits and vegetables. I prefer to use the "salsa" sized strainer for the majority of my recipes.

> In just a few hours, I can stock my pantry with beautiful, healthy, organic tomatoes and tomato products to enjoy year round.

One thing to keep in mind is once the air hits a tomato, an enzyme begins to cause the water to separate from the pulp so you want to heat the strained tomatoes as soon as possible to deactivate the enzyme. I strain a batch at a time and pour it directly in a large pot and heat it up. All this takes place rather quickly so I've not had a problem with them separating like I would if I peeled each individually.

PRESSURE CANNING

If you have enjoyed canning so far, it is time to kick it up a notch with a pressure cooker. Pressure cookers can safely process all fruits and vegetables along with meats and an endless variety of combined ingredients, limited only by your imagination. You'll want to buy a large one that holds at least seven quart jars. I just bought a new one for $125. If that sounds like a lot, consider it an investment or better yet, put it on your wish list for your family's gift giving.

Many people are intimidated by pressure cookers due to the high heat under pressure, but the modern models are very safe. Unless you are filling it with explosives, you are not going to blow up a pressure cooker! The lid locks in place by design. When you turn the lid to close it, one metal plate slides under another, making it impossible for the lid to blow off. If you were to forget and leave it on the heat, the rubber safety valve would blow out letting the heat and steam escape long before the cooker would explode. The only way to hurt yourself is to get burned by the steam if you open the lid before it cools down, but now that you know, you won't do that.

Okay, now that we're canning with the big girls, on the next page is a great recipe for spaghetti sauce requiring a pressure cooker due to the ingredients. Before you place it in the jars, take a little bite and adjust the spices to your liking, but this is my final recipe based on my preference. I have preserved enough to eat it at least every other week. It's great for when I come in hungry and in a hurry. I simply brown some ground beef, drain, add a jar of sauce and simmer a few minutes. I serve it over pasta or if I have more time I use it to make eggplant parmesan or lasagna. I don't have to worry about what's in it since I not only made it but I grew most of the ingredients. Your kids will love this recipe and you will love that it is safe and healthy.

CONCLUSIONS

Homegrown tomatoes are just too good to only enjoy during the summer. With a little bit of equipment and time, you can preserve them as a variety of wholesome products to be enjoyed year round. Now that you have mastered canning and have the equipment, try your hand at ketchup, barbeque sauce, tomato paste, juice, etc. Heck, don't stop at tomatoes. Go ahead and preserve all the great foods our bountiful homesteads provide. You'll be so glad you did!

Spaghetti Sauce Recipe

Makes 7 quarts

14 pounds of tomatoes run through strainer (weigh them before straining)
1 cup of olive oil
½ garlic bulb chopped very fine
4 onions chopped fine
2 bell peppers chopped fine (remove seeds and membrane from inside)
2 jalapeño peppers chopped fine (remove seeds and membrane from inside)
¼ cup packed brown sugar
¼ cup sea salt
2 tablespoons of raw apple cider vinegar
½ cup of Italian seasoning (marjoram, basil, rosemary, thyme, oregano, savory and sage). Buy mixed spice or grow your own.

You'll need a pot that holds about 2 gallons for this. If you have nothing else, use your pressure canner as the pot and then clean it before you need it as a canner.

Sauté the peppers, onions, and garlic in the oil until tender. Then stir in the tomatoes, vinegar, sugar and salt and bring to a medium boil. Continue to stir occasionally for about an hour holding at a low to medium boil to reduce the liquid. Add your Italian spices the last 15 minutes of cooking. Once it is as thick as you want, it is ready to can.

Have seven clean quart jars ready with rings and new lids. Ladle the sauce in the jars leaving one inch headspace. Wipe the top of the jars clean with a paper towel and top with the lid and ring. Tighten it but don't crank it down.

To get your canner ready, fill the bottom with three quarts of water (check your instructions with your cooker in case it is a different size). Add the round rack that fits inside to hold the jars off the floor of the cooker. Since your sauce is going to be hot, go ahead and heat the water in the cooker to just below boiling. Place the filled closed jars inside, check the seal on the cooker lid (they can stretch out of shape over time) and close it up. Turn the heat on high and watch for the steam to start coming out of the vent pipe. Once it does, time it for 10 minutes (I use the timer on the microwave). This lets the air out which is important.

After the 10 minutes, place the weight/pressure regulator over the vent pipe. Now the pressure will start building and you should be able to hear the jars boiling inside. Watch the dial as the pressure starts to build. You want to let it rise to 11 pounds of pressure and then hold it there for 30 minutes by adjusting the heat. It is alright for it to go over some but don't let it go under. You'll be tempted to go do something else while it is boiling but don't. You need to watch the pressure closely.

Once your 30 minutes are up, turn off the heat and leave the cooker alone until it is completely cool. When it is, open it and remove your canned spaghetti sauce. Write the date and contents on the lid and store in the pantry. You're done!

My Great-Grandmother's Egg Custard Pie

BY RHONDA CRANK

IN MY EXPERIENCE, either you're a custard pie lover or a custard pie hater. My husband and I are custard pie lovers! My great-grandmother, Ma Horton, was known for her pie and cookie making. My grandmother learned from her and I was blessed to learn from my grandmother. This recipe is Ma Horton's Egg Custard Pie.

Begin by preparing your favorite piecrust recipe.

Easy Homemade Pie Crust

Ingredients:

1 1/4 cups unbleached all-purpose flour
1/4 teaspoon real salt (this means kosher or sea salt)
3 tablespoons coconut oil in solid form
2 tablespoons plus 1 teaspoon solid unsalted butter
1 tablespoons raw organic apple cider vinegar
3 tablespoons cold water

Preparing the crust:
In medium bowl, mix flour and salt together.

Using a pastry blender, cut in butter and coconut oil until the flour mixture resembles coarse crumbs. If you use a mixer or food processor, be sure not to over process.

Add the apple cider vinegar and mix in thoroughly. Now carefully add the water one tablespoon at a time until a ball of dough forms—you don't want it to be sticky.

Using a rolling pin, roll out the dough on a generously floured surface until it's a few inches larger than your pie plate: four-to-five inches larger is a good goal. You may have to flip the crust to re-flour your surface and the crust to prevent it sticking to the surface and your rolling pin.

Once you have your pie crust rolled out, lightly flour the top of it and carefully roll it up, loosely, or fold it into quarters. Then gently lift it and unroll it into your pie plate.

Leaving enough dough to flute (fold under itself) the crust, trim it evenly around your pie plate.

Gently flute (fold the excess dough under itself) even with the pan. Now you can crimp the edges with your fingers or use a fork to mark the edge.

Heat the oven to 425˚F degrees. While the oven is heating, prick the bottom and sides of your crust generously with a fork. This will prevent the crust from rising in the middle, causing peaks and valleys in your crust. Bake the pie crust for 10 minutes, until your crust is light, golden brown, or to your desired doneness.

Egg Custard Pie Filling

Prep time: 15 min.
Bake time: 35 to 45 min.
Makes eight servings – or at least it can, depends on the size of your slice. I use a 9" deep dish pie pan.

Ingredients:
6 eggs
1/2 cup of sugar
2 2/3 cups milk
2 teaspoons vanilla
3/4 teaspoon salt
1/2 teaspoon ground nutmeg
1/4 teaspoon cloves
1/8 teaspoon allspice (optional)

Instructions:

1. Move your oven rack to lowest position and preheat your oven to 450°F.
2. Using a wire whisk and a medium bowl, or your electric mixer on medium (I use my Vitamix), mix the eggs until well blended.
3. Next, add the milk and sugar, blend well. Then add the vanilla, salt, and spices and mix well.
4. It's a good idea to place your pastry-lined pie plate on the oven rack and then pour the filling into it. This helps prevent any spilling. I also place a baking sheet under the pie while it cooks, just in case.
5. Bake at 450°F for 20 minutes.
6. Reduce the oven temperature to 350°F and continue baking for 10 to 20 minutes. Check every five minutes until a knife inserted halfway between the center and edge comes out clean.

We like our pie warm and chilled, so once it sits for 15 to 20 minutes, we enjoy a warm slice. Refrigerate the remaining pie and have it chilled. If you prefer a chilled egg custard pie, let the pie sit for 15 minutes then refrigerate for about four hours. An unchilled egg custard pie will be less firm than a chilled one.

If you're interested, I estimate that one serving (if you use an eight serving size slice) contains about 270 calories, but who's counting? It's egg pie, it has to be good for you. Right?

Experimenting with Maple Syrup

Ontario's Lake Country's Golden Treat

BY HABEEB SALLOUM

THE FIRST STOP OF OUR GROUP on the Tap into Maple Route located in Ontario's Lake Country and Springwater, an area within the larger region of Bruce Grey Simcoe, was at Shaw's Maple Syrup and Sugar Bush, a plantation of maple tree wonder and also home of the Shaw Pancake House. In this land of scenic, tamed wilderness for Torontonians and thousands of other tourists, Lake Country is an outdoor paradise that has many enticements, not least of which is the maple syrup season and its peripheral bounty.

We had come in early spring to enjoy this North American natural sweet—the only sweet enjoyed by the Indigenous Peoples in this part of the world before the arrival of Columbus.

The North American cold and harsh winters, followed by warm and sunny spring thaws give parts of Canada and the U.S.A. an advantage when it comes to the production of maple syrup. These ideal weather conditions produce the sweetest and most flavorful maple syrup not only in Canada, but also around the world. This, combined with the thousands of acres of natural maple forests (also called bushes), make Eastern Canada, especially Quebec (producing some 70 percent of the world's production of maple syrup), and the North Eastern U.S.A., the home of almost all the sugar maples in the world.

While enjoying a breakfast that included a large stack of pancakes saturated with homemade maple syrup, Tom Shaw, owner and manager of the Sugar Bush enthusiastically talked about his passion for his family's business. He is the fifth generation of Shaws who have been producing maple syrup on this farm and his son, soon to follow, will be the sixth. Tom's great-grandfather began the business in 1904 by collecting the sap in pails and boiling it in cast-iron pots. This method continued until the 1970s when a system of tubing was installed.

Sated from a very filling meal, led by Tom, we walked to the edging sugar maple bush where we were shown the old method of sap dripping into buckets, a slow and tedious process. Just as Tom explained, we witnessed what must have been a near revolution in production technology when we watched how the tubing system works to collect sap. These tapped trees are connected by a system of plastic tubing that transports the sap from the trees to tanks where it is stored for distilling. The end product remains naturally pure syrup without any chemical agents or preservatives.

Depending on the sugar content, usually running from two to four percent, it takes 30 to 40 liters (roughly eight to 10 gallons) of sap to produce, after boiling, one litre of syrup. The condensed product

contains significant amounts of carbohydrates, potassium and calcium, and small amounts of iron and phosphorus, and a tablespoon contains about 50 calories. From this pure syrup, which is filtered and sterilized before being poured into containers, are made: maple sugar, maple butter, soft maple sugar candy, and maple taffy—all appreciated products that the tourist takes back as a souvenir of Canada.

Even though all over North America and other parts of the world, maple syrup is known as a breakfast delight, the Indigenous Peoples used it to enhance wild game and, later, the European settlers added it to all kinds of dishes. Today, when, in the maple syrup areas, the sap runs, it's maple syrup time! Family and friends gather during the few weeks in spring when the sap flows and the theme is usually maple syrup foods. Besides the traditional Canadian maple syrup dishes such as maple syrup-baked beans, maple omelettes, and maple desserts, and hot maple taffy served on a bed of fresh snow, I often add this luxurious natural sweetener to my favorite Middle Eastern desserts such as Kunafa, stringed phyllo-dough filled with a soft cheese, and Qata'if, a type of stuffed pancake dessert.

As for us that day, at the point where the sap is collected we stopped to listen to Tom relate the story of maple syrup and its attributes. It was apparent that maple syrup and its many drawing cards was an integral part of his life.

Leaving Tom's Bush behind I thought of the boiling sap, called by some of its fans, "liquid gold." As happens to the gold ore in its raw stage, the maple sap was before us being refined into a valuable commodity. The difference is one can eat this variety of liquid gold.

Back home in my kitchen I continued my experimentation with maple syrup as an ingredient in food and came up with a series of dishes. From these the following will give an idea of the culinary delight of this golden eatable.

Maple Flavored Baked Chicken

Serves 8

Cooking meat with a sweet taste is a North African specialty. This dish is a continuation of this tradition.

2 tablespoons ground mustard seed
8 cloves garlic, crushed
5 tablespoons maple syrup
¼ cup lemon juice
1 1/2 teaspoons dried thyme
1 teaspoon black pepper
1 teaspoon cumin
2 teaspoons powdered ginger
1 1/2 teaspoons salt
2 tablespoons olive oil
4 pounds chicken drumsticks*
Flour for dredging
2 eggs whisked with
1 tablespoon water
2 1/2 cups breadcrumbs

Preheat oven to 400˚F.

Place mustard, garlic, maple syrup, lemon juice, thyme, pepper, cumin, ginger, salt and oil, in a large bowl then thoroughly combine. Add chicken and coat evenly. Cover and allow to marinate in the refrigerator for one hour, turning the chicken over every 15 minutes.

Dredge the drumsticks with the flour, then lightly roll in the egg mixture. Coat each drumstick in the breadcrumbs and place in a well-greased casserole, side by side. Cover. Bake until done for about 1 1/2 hours, the final 20 minutes uncovered.

Serve with mashed potatoes.

* If boneless chicken breast is preferred, bake for 45 minutes or until golden.

Maple Carrots

Serves 4

This type of dish is popular in Morocco but made with sugar or honey instead of maple syrup.

1 pound carrots, sliced into ¼ inch thick rounds
4 tablespoons maple syrup mixed with 2 tablespoons orange juice and
¼ teaspoon salt
¼ teaspoon ground ginger
¼ teaspoon cumin

Place carrots in a saucepan, then cover with water and cook over medium heat for 20 minutes or until slices are tender. Drain then stir in maple syrup mixture. Allow to simmer uncovered over low heat for five minutes, stirring a few times, then place on serving dish. Sprinkle with ginger and cumin then serve.

Baked Beans With Maple Syrup

Serves about 6

Beans cooked in this way with vegetables and herbs and spices are perhaps more tasty and healthier than beans cooked with all types of meat.

1 1/2 cups white beans, soaked overnight in water into which has been dissolved 1/2 teaspoon baking soda, then drained
8 cups water
2 large sweet red peppers, seeded and finely chopped
1 large onion, finely chopped
4 cloves garlic crushed
2 cups chopped mushrooms
4 tablespoons tomato paste, dissolved in 1/2 cup water
1/2 cup maple syrup
1 teaspoon salt
1 teaspoon dry mustard
1 teaspoon cumin
1 teaspoon ground coriander seeds
1/2 teaspoon black pepper
1/8 teaspoon cayenne

Place beans and water in a saucepan and bring to boil, then cover and cook over medium-low heat for one hour or until beans are half cooked (still semi-firm). Transfer with their water to a casserole then stir in remaining ingredients. Cover, then bake in a preheated 350°F oven for three to four or until beans are well cooked, checking occasionally and adding more water if necessary.

Sweet Cabbage and Apple Salad

Serves about 6

Different than ordinary salads, this cooked salad dish is both succulent and satisfying.

4 tablespoons olive oil
1 medium onion, thinly sliced
1 large apple, cored and finely chopped
4 cups shredded cabbage
1/3 cup water
4 tablespoons maple syrup
3 tablespoons vinegar
1/2 teaspoon salt
1/2 teaspoon black pepper
1/2 teaspoon powdered ginger

Heat oil in a saucepan, then sauté onion and apple over medium-low heat for 10 minutes. Stir in remaining ingredients then cover and cook over low heat for 10 minutes, stirring a few times. Serve hot or cold as a salad or vegetarian entrée.

Lentils with Maple Syrup

Serves about 8

Simple to prepare this recipe can be served with cooked rice or mashed potatoes.

1 1/2 cups split red lentils
4 cups water
2 medium potatoes, diced into 1/2 inch cubes
2 medium carrots, finely chopped
1 medium onion, finely chopped
4 cloves garlic, crushed
4 tablespoons tomato paste, dissolved in 1/2 cup water
4 tablespoons maple syrup
2 tablespoons soy sauce
2 tablespoons olive oil
1 teaspoon powdered ginger
1 teaspoon cumin
1 teaspoon dried marjoram
1/2 teaspoon salt
1/2 teaspoon black pepper
1/8 teaspoon cayenne

Place all ingredients in a casserole then stir. Cover; bake in a 350°F preheated oven for 1 1/2 hours or until lentils are well cooked, checking a few times and adding more water if necessary. Serve hot.

Sweet Maple Syrup Balls

Makes about 3 dozen balls

This is a type of dessert that is prepared in different ways in many countries, especially in Asia.

2 cups flour
4 tablespoons cornstarch
1/2 teaspoon salt
1 1/4 ounce package dry yeast dissolved in l/4 cup of warm water along with 1 teaspoon of sugar then allowed to stand for 10 minutes
2 cups warm water
1 1/2 cups maple syrup, mixed with 1/2 cup water
Cooking oil for deep-frying

Combine flour, cornstarch and salt in a mixing bowl, then pour in yeast and mix well. Add water then stir until mixture resembles texture of pancake batter, adding more flour or water if necessary. Cover; then set aside for one hour.

In the meantime, heat maple syrup, then set aside, but keep warm.

Place oil in a saucepan and heat over medium, then drop one tablespoon of batter into hot oil. Deep-fry until balls become golden, then remove with a slotted spoon and dip into warm syrup. Remove, drain excess syrup then arrange on a serving platter. Continue until all the batter is used. The balls are at their best if served soon after frying.

Maple and Walnut Tarts

Makes about 16 medium size tarts
Pecan or pine nuts can be used as a substitute for the walnuts.

1/2 pound butter, at room temperature
2 tablespoons water
2 teaspoons vinegar
4 eggs, beaten (1 beaten separately)
1/2 teaspoon salt
2 cups white flour
1 cup brown sugar
4 tablespoons butter, melted
1 1/2 teaspoons vanilla
1/2 cup maple syrup
1 cup walnuts, coarsely chopped

In a mixing bowl, thoroughly combine butter, water, vinegar and the one egg (beaten separately), then set aside.

In another mixing bowl, combine salt and flour, then slowly pour in contents of the other mixing bowl. Knead into dough, adding a little water or flour if necessary. Refrigerate for 30 minutes.

Divide dough into 16 balls, then roll out balls into rounds about l/8 inch thick. Place each round snugly in greased muffin cups, then flute in same fashion as pie and trim excess dough. Pierce tart shells in bottom a few times with a fork, then bake in a 375˚F preheated oven for 10 minutes. Remove and set aside.

In the meantime, combine remaining ingredients to make filling. Fill the tart shells, dividing the filling evenly, then bake in a 350˚F preheated oven for 15 minutes or until crust turns golden brown. Remove from oven and allow to cool; then remove tarts from trays and serve.

Maple Syrup Bread Pudding

Serves about 6
To make these "maple-syrupy" sweeter, maple syrup may be added to the cooked pudding to taste.

2 tablespoons olive oil
2 packed cups of small pieces of bread
1 1/2 cups milk
1 cup maple syrup
2 tablespoons cornstarch, dissolved in 4 tablespoons water
1 teaspoon vanilla
1/2 teaspoon nutmeg
1/4 teaspoon ground cloves
1/2 cup currants or raisins
Whipped cream

Preheat oven to 350°F.

Combine all ingredients, except whipped cream, in a greased casserole dish, then bake uncovered for about 50 minutes or until top lightly browns. If desired, top with a tablespoon of maple syrup and serve with whipped cream.

Tofu Cream Dessert

Serves 4 to 6
A tasty and healthy dessert, this dish is simple to prepare and makes a tasty treat.

1 pound soft tofu, drained
1/2 cup maple syrup
1 tablespoon lemon juice
2 teaspoons vanilla extract
1 teaspoon lemon rind
1/4 teaspoon ground cloves

Place all ingredients in blender and blend until creamy — 5 to 10 minutes. Chill then serve.

Maple Syrup and Date Muffins

Makes about 16 medium size muffins
Dates, an Arab contribution to the world's cuisine, go well as an ingredient in desserts, especially muffins and cakes.

2 cups white flour
2 teaspoons baking powder
1/2 teaspoon baking soda
1 1/2 teaspoons cinnamon
1/2 teaspoon salt
1 cup chopped dates
1/2 cup ground almonds
2 eggs, beaten
3/4 cup maple syrup
1/2 cup butter, melted
3/4 cup water

In a mixing bowl, combine flour, baking powder, baking soda, cinnamon and salt, then stir in dates and almonds and set aside.

In another bowl, combine remaining ingredients, then stir into flour mixture, adding more water if necessary to make a batter. Fill greased muffin cups, about 3/4 full, then bake in a preheated 350˚F oven for 25 minutes or until lightly browned. Cool for a few minutes, then remove from cups.

The trouble with life in

Cogongrass Invades Southwest Alabama

Cogongrass will completely take over an ecosystem if not controlled

BY CAROLYN DRINKARD

JUST LIKE KUDZU AND FIRE ANTS, Cogongrass has become a major problem for southwestern Alabama landowners. Many believe that Cogongrass came into the Port of Mobile in packing materials in the early 1900s. Unknowingly, work crews helped to spread the seeds as they worked to bush hog or grade the roadways. Now the largest invasion can be found south of Highway 80, but it continues to move north.

Cogongrass is sometimes mistaken for native grasses like broomsedge or Johnsongrass; therefore, correctly identifying this nuisance weed is necessary before any management or control program can begin. Cogongrass can grow as high as five to six feet tall, with fluffy silver-white flowers that bloom in late March. The yellow-green leaves seem to rise directly from the ground in an overlapping, rounded appearance. The blades are about an inch wide with a whitish, off-centered midrib. The plants often have thatch surrounding the base and grow in dense, circular patches.

PHOTOS CLOCKWISE: The wheels of this equipment must be washed and cleaned before the equipment is moved elsewhere. This helps to prevent the spread of Cogongrass; Cogongrass threatens healthy pines and other native vegetation; This wheel of a bush hog is covered in Cogangrass. Steve Crowley and George Robertson, who work for Scotch Land Management believe that Cogongrass threatens the ecosystem of Southwest Alabama.

The 29 foresters and technicians of the Scotch Land Management Group in Fulton, Alabama, work tirelessly to identify, manage, and control Cogongrass on the 430,000 acres owned or managed by the company. Scotch has been in the timber-growing business in Southwest Alabama and Southeast Mississippi for over 120 years.

"We are actually hiring people to look for Cogongrass in a program that we call 'Reconning for Cogongrass,'" explained Steve Crowley, president of Scotch Land Management. Workers are sent into areas to specifically look for Cogongrass. When Cogongrass is spotted, the searchers use their electronic data collectors to record GPS coordinates, so that a spraying crew can later find the exact patch.

Scotch began spraying Cogongrass back in the 1990s. Because of the vast amount of acreage, the spraying programs must begin in late spring, using both Scotch and outsourced crews. They spray twice from late May until frost, using a combination of two herbicides, glyphosate and imazapyr. Using two herbicides catches both the top and bottom of the plants. The top of the plant is easier to destroy than the rhizome, which spreads rapidly beneath the ground and forms a thick, dense mat, choking out other vegetation. If not treated, Cogongrass can produce nearly 6,000 pounds of rhizomes per acre.

If the infested area has younger, less established plants, the Scotch crews will till the area from spring until fall. But for older, more established areas, spraying works best. Sometimes, a well-established area will require three years of attention before the established plants are destroyed.

George Robertson, chief forester for Scotch Land Management, said that spraying is a defensive action. "The cheapest thing to do is keep cogongrass from spreading," he explained. "We are fanatical about not spreading this to other areas."

Cogongrass spreads through the air and through rhizomes beneath the surface. The seedpods often have as many as 3,000 seeds per head, which can be blown through the air, transported on the fur of animals, or moved by any dirt-moving pieces of equipment that disturb the soil. The seeds can remain viable for 13 months. Often, after timber is thinned, the dormant seeds get enough sunshine to spring to life in areas that previously showed no signs of Cogangrass.

When Cogongrass is spotted, the searchers use their electronic data collectors to record GPS coordinates, so that a spraying crew can later find the exact patch.

Scotch crews use many preventative measures to keep the invasive plants from spreading. They require equipment owners to wash and clean all equipment before bringing it onto any Scotch property. Scotch foresters mark all Cogongrass areas with bright yellow flags. They prohibit anyone from disturbing these areas. They also ask the public to report patches to the Forestry Department or to their office, with GPS coordinates, if available. Then Scotch will go out to mark and verify the patch.

Scotch Land Management also oversees and leases vast areas for hunting. They make sure that those who lease this land are aware of the dangers of spreading Cogongrass. Whenever a hunter secures a Scotch lease, he is given information about Cogongrass. The foresters explain proper bush hogging and plowing techniques to prevent spreading. Those who do not follow these regulations can lose the right to hunt this property.

"Anyone interested in wildlife habitat or economic return from their land has to engage in prevention and treatment of Cogongrass," added Crowley. Left unchecked, Cogongrass will choke out native grasses and rob timber of necessary nutrients. It will also kill younger pine seedlings. Cogongrass is very flammable, and it burns hotter than native vegetation.

Crowley explained that eradication is very expensive and takes time and effort. "We look for Cogongrass 12 months a year," he stated. "I'm proud of Scotch and the people we work with. They have allocated the money to control it. They have been visionary in seeing that Cogongrass will become an even bigger problem. It's a battle we have to win," explained Crowley, "or it will take over our ecosystem."

Robertson compared Cogangrass to cancer. "It may not be deadly today," he explained, "but it will be on down the line."

This article originally appeared in the Alabama Cooperative News. *Carolyn Drinkard is a freelance writer from Thomasville, Alabama.*

Preventing Fires on the Homestead

Fire danger increases in winter, which is also a good time to mitigate any fire dangers

BY ERIC WITTER

RESPONSIBILITY

Starting a fire is a huge responsibility. You could burn friends or family members. Your property or your neighbor's property could be damaged or destroyed. In addition, violating local burning regulations can be very costly. A close friend of mine almost got a $10,000 fine when a fire got out of control.

I have burned of many piles of brush up to about 30 feet across and have learned the following techniques and concepts that I have found helpful. All of the burning that I have done has been in the southeastern part of the United States.

PREPARATION FOR THE BURN

I always secure a burn permit if required. I like to burn when the wind is not blowing strongly. I also give consideration to the relative moisture of the area surrounding the site of the fire. Waiting about seven to 10 days after a rain works well. Beyond two weeks of continuous dry weather can create very dry and dangerous conditions. When it is that dry just a tiny spark can ignite dry leaves. If the site of the fire is surrounded with dry leaves such as in a forest, rake the leaves back so that the ground is bare around the site, thus creating a firebreak. A firebreak two to three feet wide usually works well. If the site of the fire is in a field of dry grass, I would mow around the site and rake it if necessary to create the firebreak. Before starting a fire is when I like to gather the needed fire suppression equipment: rake, mower if needed, garden hose and nozzle, or garden sprayer. Once the equipment is ready I can then prepare to light the fire.

Creating defensible space around buildings will help prevent a controlled fire spreading to structures.

FIRE SUPPRESSION

A garden hose is one of the most effective measures for keeping control of a burning pile of limbs or debris. With a hose I can just keep watch for any unwanted spreading of the fire and spray it down. Sometime sparks can travel 20 feet and catch fire where they land, so I continuously scan the surrounding area. If a garden hose is not available I use a garden sprayer filled with water. Just a few gallons can do a lot to control a fire that is moving away from the fire site. If I only have a rake, I use it to rake an area two or three feet wide around the escaping fire to create

a firebreak that will contain the fire, but I do the raking far enough away from the fire so that I do not suffer from the heat or smoke. In an area of dry grass I would mow a swath around the escaping fire, again keeping back from the heat and smoke. If the grass was very tall I may need to rake it after the mowing. Note that these fire-suppression techniques enable me to keep back from the intense heat and smoke. Fighting the flames directly is best reserved for putting out small spots of fire, like a few square inches.

HOMESTEAD PREPARATION

Several things can be done to reduce the risk of fire on the homestead. Various fire-proof building techniques can be implemented. Metal roofs are great for anyone with a wood stove or fireplace. They are also great if a forest fire could sweep through your area. Metal siding is also inhibitive. Block and brick buildings can be utilized. Keep a grassy lawn around buildings. Maintain firebreaks across your property as needed. Have a water system that is robust enough for fire emergencies. Keep plenty of garden hose around. Just 300 feet of garden hose around would have saved a dear friend from a disaster! It is a cheap and efficient measure of protection. For instance I can reach any part of my three acres with 600 feet of garden hose. That would be about $250 of hose. It really is not that big a price compared to the infrastructure that could be saved from a fire.

Long live your homestead!

Some breeds like Australian Cattle dogs have instincts for monitoring and protecting certain types of animals.

WORKING *like a* DOG

Selecting the right dog for your needs means understanding breeds and behavior

BY KENNY COOGAN

FOR HUNDREDS OF YEARS, DOGS HAVE worked with humans in mutually beneficial relationships. Historically and presently, dogs help us hunt, protect our homes, kill vermin and help us care for farm animals. Some breeds help us by moving and controlling the animals we keep as stock and other dog breed types protect them.

"Up until the last 150 years or so, and with the exception of a few rather wealthy people, most of us could not afford to keep dogs purely as entertainment," Ken McCort, owner and operator of Four Paws, a canine training center in Doylestown, Ohio, says. "These specialized jobs that dogs did for us were not necessarily based on our training of them, but rather followed specific behaviors or sequence of behaviors scientists call 'motor patterns.'"

Through artificial breeding, we have selected many characteristics that are favorable to a homesteader. Certified behavior consultant and dog trainer Miranda K. Workman says that initially dogs were bred based on function. "You will have some breeds that have a predisposition or tendency to be better or more readily adapted for specific behaviors," Workman says. That is why we have herding breeds, guarding breeds, terrier breeds—they were bred based on the function they performed. Workman, whose master's degree is in anthrozoology, says that breeding for conformation (form) is a more recent development.

Herding breeds for example seem to enjoy to chase and bark at our livestock, while another group, heelers, will take the behavior a little further and actually nip at or bite the feet of the animals. "These motor patterns can be controlled and refined through training, but the sequences needed to be there genetically to start with as training alone would not create such a useful and reliable helper dog," McCort adds.

While any dog can be trained to do a variety of things, the breed does play a part in the dog's natural abilities. For example, a Border Collie will instinctively herd, while a Cavalier King Charles Spaniel will not. However, Workman says, "there is some behavioral plasticity within dogs that allows, for example, for 'non-herding breed' dogs to learn to herd." She concludes that there needs to be more studies on how genetics and environment affect behavior.

According to the American Kennel Club's Canine Good Citizen Director and Certified Applied Animal Behaviorist Mary Burch, Ph.D., homesteaders value a lifestyle of self-sufficiency and many raise a variety of animals or heritage livestock. There can be training challenges with dogs and livestock, but systematic training will result in a peaceful coexistence for everyone, including the dog.

THE GENERALIST DOGS

Dr. Burch says that two critical skills for dogs living with livestock include: 1) the reliable recall and 2) "leave it." The recall behavior is another term for "coming when called" and this is a critical skill for dogs that live on the same property as livestock. If your dog runs free on your property, begin with the dog on a leash to teach the recall. Walk along with the dog on your left side. When the dog is not quite expecting it, quickly begin backing up, saying "Buddy, come!" When the dog comes to you, praise him and give him a treat.

Public Relations Manager of the American Kennel Club Jessica Rice D'Amato says for a well-socialized dog that has spent a lot of time with you, this training will proceed quickly. "Gradually lengthen the distance between you and the dog, and then start practicing by having the dog sit and calling him from progressively increased distances off-leash," Dr. Burch explains.

The second behavior Dr. Burch believes is crucial for your dog to learn is the "leave it" cue. If your dog begins to worry or approach livestock when you don't want them to, you may need to use this cue. With herding dogs, you would teach the dog to lay down or come to you when sheep or other animals the dog herds are involved. When the dog is approaching chickens or other animals that should be ignored, the "leave it" command is helpful.

Dr. Burch recommends first pairing the words "leave it" with looking at you. Take the dog for a walk and carry a treat. As you walk along, calmly say, "leave it," and when the dog looks at you, give them a treat. Repeat this until the dog looks at you when you say "leave it."

The next step will be when you are walking at a distance by some livestock. Cue the dog to "leave it," rewarding them as they ignore the animals. Practice this by gradually getting closer to the livestock. If your dog lunges or there is any chance that it may hurt an animal, do all of your training until the dog is reliable on a leash or long line.

THE HERDING DOGS

McCort says that successful herding dogs will need to know at least four behaviors. The first is an outrun. "That means the dog will run wide paths around the stock and take up a position behind them. The shape of an outrun is often genetic," he says.

Pets are not reliable livestock protectors, as good guard dogs should be around the livestock 24/7. See more on guard dogs on page 62.

Despite its natural instincts, there are specific tasks a herding dog will need to be trained to do.

A second behavior the dog will need to know is how to "walk up," which means to move toward the animals they are herding. "When the dog is close enough to get the stock's attention, it is often cued to lay down—a behavior that stops them from charging in," McCort adds.

The dog also needs to know how to move to the left (counter clockwise) and to the right (clockwise). These movements are often called "away to me" and "come by." If the dog can do other behaviors at a distance, they can be more valuable as a working herding dog.

There are many ways to train behaviors for herding dogs, and McCort prefers and recommends methods that do not involve force or intimidation. "These behaviors are often cued by whistles rather than words and need to be reliable from quite a distance. If the genetic foundations are not there, then there is little chance the dog can be trained to reliably work stock," he advises.

THE GUARD DOGS

"Protecting stock is a completely different use of dogs and required them to be socialized to the animals they are to guard," McCort has observed. Often these dogs are raised with the stock in the barn. Many true livestock guarding dogs are not household pets and do not live in the home with the people who own the ranch. "Several reliable experts I know that are involved in livestock guarding dogs have told me that keeping these working dogs as 'pets' can and often does eliminate them from being truly reliable flock guardians," McCort cautions.

If the guard dogs are to protect stock from predators and thieves, they will need to be with the livestock 24/7. To be truly effective, they would need to allow the rancher/farmer to approach, but often no one else is permitted. "Because they will aggressively go after any intruder, these dogs often are only used with stock animals that are on hundreds of acres and/or that are completely surrounded by a secure fence," McCort says. Reaching into the fenced area will often get intruders bitten.

Although there are many breeds that have natural guardian tendencies and make wonderful family pets, caregivers should decide which trait to nurture.

"They either are a Livestock Guardian Dog or they are a pet," McCort says. "True working LGDs are extremely valuable to the owner but are not considered a family pet."

He says that most farmers and ranchers with limited acreage can't safely keep LGDs. On the contrary he adds, "there are several people I know that keep sheep that use herding dogs to move them."

Kenny Coogan, CPBT-KA, is a pet and garden columnist and has authored an ecological themed children's book titled "A Tenrec Named Trey (And other odd lettered animals that like to play)." He is an animal training and behavior consultant and earned a B.S. in animal behavior. Please search "Critter Companions by Kenny Coogan" on Facebook to learn more.

Recommended Reading

- Working Like a Dog: The Story of Working Dogs through History ***by Gena K. Gorrell***
- Carting with Your Dog – Positive Draft Training for Fun and Competition ***by Laura Waldbaum***
- Sheepdog Training and Trials: A Complete Guide for Border Collie Handlers and Enthusiasts ***by Nij Vyas***

Protect Your Poultry With Livestock Guardian Dogs

BY BRENDA M. NEGRI
CINCO DESEOS RANCH LGDS

Free-ranging poultry is all the rage these days as cage-free eggs from "happier, healthier hens" bring premium market value and health benefits for the consumer. With this freedom, however, comes risk: free-ranging fowl is a predator magnet, often drawing in foxes, raccoons, feral dog packs, coyotes, birds of prey, and in some areas even mountain lions, bear and wolves. So what is the homesteader to do when predators are attracted to your flock for their next meal?

Enter the Livestock Guardian Dog, or as they are commonly referred to as, LGDs. These breeds from the Old Country are highly coveted for their instinct to guard livestock from depredation. Breeds such as the Great Pyrenees, Maremma, Pyrenean Mastiff, Anatolian, Spanish Mastiff and others, have for centuries protected sheep, cattle, horses, swine and goats in their native countries of Spain, Italy, France and Turkey. Now a regular sight on many family farms, with proper selection, care and training, LGDs can also keep prized hens, guineas, turkeys and other fowl safe from predators.

Washington State hobby farmer and heritage Buckeye chicken breeder, Barbara Judd was a first time LGD prospective buyer and owner when she contacted me querying about the availability of pups. My Pyrenean Mastiff female Atena had just produced a whopping 16-puppy litter out of my Great Pyrenees male, Peso. There were two small females I affectionately dubbed "the Pockets" whom Barbara immediately fell in love with and named Lucy and Patty.

When she explained to me what her goal was—rearing these pups to protect chickens—I cautioned her, as fowl are typically the most difficult to train LGDs on. Clucking and flapping and fussing hens present a temptation few pups can resist chasing! But luckily for Barbara, I'd started introducing this litter to my flock of 40 layers, so the prospect of her plan, although a challenge, was one I was up to and excited to see how the pups would fare.

Once Barbara took home her pups at about 10 weeks of age, she continued Patty and Lucy's training. She was a first time LGD owner with zero exposure to LGDs—breeds who are entirely different than pet breeds in their make up, instincts and behaviors. She became a beacon of hope and a shining example of what a person can accomplish if they follow some basic guidelines.

Here are some key points and solid tips for bringing up LGDs to guard fowl.

TIP 1: Buy healthy, vaccinated and de-wormed LGD pups from proven, working parents. Make sure parents are both recognized LGD breeds; crosses with non-LGD breeds are high risk and unpredictable.

Dogs that are descendents of other guard dogs make more consistent protectors.

Clucking and flapping and fussing hens present a temptation few pups can resist chasing!

TIP 2: Breeder track record and credibility are important for future support and advice. You want pups with early exposure to fowl before you take them home at 10 weeks or older.

TIP 3: Plan on daily "Chicken 101" training for your pups. Make it a "reward" time with positive reinforcement—Judd typically gave her pups a treat before every "class," and soon, they were reminding her it was time for school.

TIP 4: Get the pups tired out with activity such as a perimeter walk of your barnyard or active play before you engage them in training.

TIP 5: Use older, less flighty hens for training. Stay in the immediate area with the pups, but allow both chickens and pups to have freedom of movement.

TIP 6: Facilitate, but never force interaction or proximity. Begin training with harness and leash to assist keeping pups in line, and for correction. Graduate from tighter control, to dragging a leash, and eventually to no harness or leash as they mature.

TIP 7: Aim for the pups to ignore the chickens. If you catch them staring at chickens, turn their heads or put your hand briefly over their eyes to divert their attention.

TIP 8: Discipline any inappropriate behavior from the start with a consistent noise you make to show dissatisfaction. Don't tie a dead chicken around a pup's neck as punishment: this is confusing to the pup and does not discourage or accomplish anything.

TIP 9: Make the chicken area a calm, quiet area. This means no yapping pet dogs, no screaming toddlers during training time. Keep distractions to a minimum.

TIP 10: Positively reinforce their good behavior by giving them big soup bones to chew on while they lay quietly in the coop vicinity. This can be done while chickens are penned up and safe, and the pups outside the chicken run.

TIP 11: Do not force the class for a given period of time. Expect these to be somewhat intense but short training sessions where you are right there, not yards away. This is you participating, hands on. Observe, correct, praise, discipline. Start with 0-15 minute classes.

TIP 12: End class on a positive note. If the pups appear to be getting tired, irritated or annoyed, end the session before anything "awful" happens.

TIP 13: Don't let misbehavior discourage you. Mistakes are part of the process.

TIP 14: As the pups progress, you will be able to extend the distance you can be from them, and the amount of time they are with the chickens. Progress slowly and mindfully.

TIP 15: If you have pet dogs regularly harassing your fowl, don't let them mingle with your LGD pups as they'll impart bad habits. Keep them away from the fowl at all times.

TIP 16: Protect the chickens by keeping them in a secure enclosure. Once the LGDs are trained, you can go back to longer free-range time, but until sufficiently trained and while there is predator danger, the chickens will need to be protected.

SUMMARY: With consistency and patience, Barbara Judd has helped Patty and Lucy reach an impressive level of success as solid chicken guardians. Barbara was willing to do what was necessary to support her pups' natural guarding ability, and has been rewarded a thousand fold. They are an integral part of their farm and family. An LGD, or even better, a pair of LGDs can become partners on your farm as well, as long as you are willing to put in the time.

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It is recommended to start with swarms that are organized and proven survivors.

Catching Swarms Means Free Bees

BY ED DANE

DO YOU GET STICKER shock every time you see the price of bees? How would you like some free bees? Have you ever thought about trapping a swarm?

Swarms have been harder to find the last couple of years because of the loss of so many bees due to mites, disease, pesticides, CCD and harsh winter weather. Therefore, there has been stiff competition for the ones that exist. This is where setting traps can give you an edge.

I personally value swarms second only to purchasing a nuc or an existing hive and far superior to a package, for two reasons. One is because they are free and the other is because a swarm is a survivor. If you think about it, these bees have had to survive the last winter and be strong enough in the spring to build to the point of swarming. That makes them much more appealing to me. Now if they happen to come from a feral hive, that makes them even more valuable because they have done all that on their own without any help from a beekeeper. This is the hive I want to make splits and raise my own queens from. I have trapped many swarms over the years and I'd like to share with you how to do it.

I have used two types of equipment to trap bees. Both work but one is far superior to the other. You may have seen one of the cone-style traps advertised in the bee supply catalogs. This is a container that is a little larger than a five-gallon bucket and is shaped like a large flower pot. It is brown and made from shredded wood pulp. It has a cover on the large end and an entrance hole in the smaller end. It attaches to a tree and looks like a part of a limb with a hole in it for the bees to enter.

Before attaching it to the tree it is recommended that you add some bee lure. This can be purchased from the same catalog and consists of either some artificial pheromone or some essential oils that attract the bees and help them locate the trap.

I have used this type of trap only once and I would not recommend it because of one basic flaw that I learned about the hard way. Swarms are very good at drawing wax. In fact, I have had them draw a whole super of foundation in three or four days. This is because they have gorged themselves on honey before leaving the original hive. This is a good thing if you are a beginner and don't have access to drawn comb, but in one of these traps, it can be a disaster. If you don't check the trap every day, or better yet at least twice a day, the bees can fill that trap full

don't have to remember anything. — Mark Twain

of wax and you can't get them out without a real mess on your hands. So I don't recommend you use this type of trap.

This is how I do it. I take two 2-by-4 studs and cut one into a rectangle-shaped frame. To one of the narrow ends, I attach the other 2-by-4 stud. This stud works as a leg and the rectangle-shaped frame is attached to the tree by a couple of screws. Then I put a complete single-story hive with a bottom board, an inner cover and telescoping cover on the frame and attach it with a stretch cord. Inside I add 10 frames (six foundation and four drawn comb). I put the drawn comb in the middle. This has two purposes. One is to give the queen someplace to start laying right away and the other is to add to the attraction of the hive because drawn comb has some scent to it, especially if it has had brood raised in it. If you don't have any drawn comb, it will be fine with just the bee lure but if you have it, I think it helps.

The lures can be purchased from the bee-supply catalogs and work well, but I make my own by using a method that my mentor showed me 51 years ago when I first started keeping bees. I carry a small bottle with some rubbing alcohol in it, and when I find a hive that is always cross when I try to work them, I replace the queen. The old queen goes into the bottle. I keep this bottle and collect any dispatched queens all summer long. Then next spring when I am setting my swarm traps I take a Q-tip, break it in half, dip it in the bottle and toss it in the trap. The alcohol evaporates and the pheromone is left to attract the bees. I like this arrangement because I have a trap that is easily removed from the tree stand, so I don't have to transfer the bees to another hive. It also gets the trap in the air, so it appears more like a hollow tree to the bees. They like this because it is more natural. I have had many swarms move into a dead-out hive that I had setting in one of my bee yards, but I think they prefer one in a tree. This method keeps the trap high enough to be attractive to the bees and low enough so I can use a stepladder for easy removal. Actually, I'm tall enough that I can stand on the tailgate of my truck and remove the hive without a ladder.

One word of caution: don't forget to staple the hive parts together so the hive won't come apart when you remove it. I would also recommend that you move the hive after dark so you get all the bees and don't leave any field bees that may be out gathering nectar.

You will also want to move the hive at least two miles away. The rule is, if you move a hive, you should move it less than two feet or more than two miles. This is because the bees use the angle of the sun and visual signs to help them locate their hive. If you don't move them at least two miles away, the field bees may go back to the original location by mistake.

I hope this will help you catch some free bees and give you a little DIY project to work on during the long winter months while you are dreaming of getting back to working your bees. Good luck and happy beekeeping.

Tying Heifers, and Other Bonds

BY JOHN COLE
MINNESOTA

MY GRANDFATHER AND HIS family moved onto the farm where I lived in the 1930s as a result of The Great Depression. My dad lived his entire life on the same farm. After Dad's retirement, I took over the family farm and continue to carry on many old-school practices, either because they served our needs or after so many years it is simple custom to do so. One such practice is tying up the replacement heifers to tame them before they are turned out to pasture.

Tying up heifers before they are released into the field is an old-school way to tame them.

After making the decisions about which heifers to keep, we tie them in stalls for three to six weeks, carrying the water and feed to them. We pitch by hand the manure from under them and bed them down. Key to the process of taming them is showing a kind of love or gentleness by being calm and never raising one's voice no matter how hard they kick or how heavy their foot seems. There is also the reality that, by having chosen them as replacements, there is the obligation to care and provide for them for many years to come.

Beyond the how-to of physically caring for cattle, there are many other lessons that have been passed through my family by tying up the heifers. Lessons are literal as well as metaphoric. When choosing replacements, much discussion centers on conformation and disposition. Metaphorically, it represents the opportunity for a father to talk to his son about choosing friends and perhaps even a spouse. I am not implying we necessarily pick those around us by conformation and disposition — that seems offensive. Rather, the moment should be seized to visit with the next generation about those we choose to surround ourselves with. Obviously, we can't sell individuals that don't, for whatever reasons, measure up, fit our standards or treat us poorly, but rather the emphasis can be on the choice of friends.

Once chosen, all responsibility for caring for the heifers lies with us. In addition, she must be treated gently and with a calm voice. The way she is treated doesn't necessarily depend on her behavior but rather is offered unconditionally. This should bring out the best in the heifer. Multiple times throughout the process of taming heifers are available to discuss the responsibility physically as well as socially we have to our family and friends. But beyond that, doesn't the circumstance beg for discussion of not to controlling others by punishments and threats, but rather getting the best from them through love and respect and unselfishly offering part of one's self?

After all of this, the heifer is turned out to become a cow. Responsibility to her never ends. Hopefully, if it is her nature, she will be gentle and well mannered for many years to come. Eventually she will be sold. Again, the situation is available for discussion of lifelong lessons of what it means to be and remain friends, and how our friends may change throughout our lives but their memories remain.

The lessons I learn from tying heifers are multiple but in retrospect most lessons center around the Golden Rule and realizing like my father and grandfather, to have the wherewithal to take advantage of teachable moments. When Jack and I finished tying up the heifer this year, I asked my son, "Did you notice I didn't raise my voice?" My dad asked me the same thing once.

Emus: Alternative Agriculture

BY KENNY COOGAN

A FEW WEEKS INTO MY five-and-a-half month study abroad experience near Brisbane, Australia, I visited an emu farm. Sprinkled through the precipitous landscape, these large flightless birds epitomized their reptilian ancestors. At the farm, nearly 10 years ago, I applied emu oil to the back of my hands, sampled different baked goods made from their eggs and examined hollowed eggs that were larger than my hands. These native Australian bird farms, like the one I experienced, continue to be popular in the land down under.

Today in the U.S., emus are a popular choice for alternative agriculture due to their minimal husbandry needs, small acreage capability, appealing characteristics and potential for becoming profitable. Tony Citrhyn, Board President of the American Emu Association (AEA), says that the future for emu farming looks very bright because "Emu oil is becoming recognized as soothing, efficacious and beautifying." Citrhyn, who lives in Chehalis, Washington, has been keeping emus for six years and currently has 68 birds. "Emu meat, hides, and feathers are experiencing high demand, as well as emu oil."

Citrhyn became involved with the nonprofit organization due to their extremely helpful nature. The organization publishes a bi-monthly newsletter and several

industry brochures, which help the membership with trademark rights, rearing information and business direction.

Before purchasing emus, prospective producers should first contact their state Department of Agriculture, as some states classify them as livestock rather than exotic animals, so no permits or licenses may be required.

Although purchasing younger stock is cheaper (fertile eggs for around $25 and day-old chicks for around $100), emus do not reach sexual maturity until they are two years old.

Regardless if you obtain an adult or juvenile flock you will need to contain them using chain link, hog wire, 2-by-4 non-climbing wire or cattle fencing with wire on the outside. The height should be between five and six feet.

Even though emus are tall, many resources say that emus do not require a lot of leg space, despite the more the merrier attitude of the emu. Some say 2,500 square feet for a pair during the breeding season is adequate, while others claim that 20 to 50 emus can live on one acre as they grow out. Vegetation that provides shade is appreciated and slopping terrain is not a problem for these birds. If you have unusable land for crops, emus might be the solution.

In addition to emu chick starter, maintenance and breeder commercial feeds, emus will graze on chicory, clover, rape, timothy, alfalfa, rye and other grasses, greens and fruits. They will also eat large insects, lizards, snakes and rodents and the occasional large pebble to grind up the food.

Chicks 8 weeks old and up to 2 years old will eat on average up to two pounds of feed a day, while adults will eat closer to a pound or a pound and a half. If emus are left to graze and given no supplemental feed, it is estimated that they will require 15 to 20 pounds of forage per day.

After Joylene Reavis and her husband spent a year researching the emu industry by visiting farms and attending conferences, they decided to start the Sugar Maple Emu Farm in Brodhead, Wisconsin, on their 10-acre farm. Now 21 years later, Reavis says that several of those years they raised more than 150 chicks.

"I shipped 70 emus from my farm last fall for processing but, at present, I only have my six breeder pairs now for a total of 12 emus," she says. "I have contracted all of my chicks to be raised by another emu grower. We are splitting the costs of feed and other expenses and will split whatever we get for them after processing."

All meat that is processed for human consumption must meet the requirement set by the Poultry Products Inspection Act. If your state has a USDA-recognized state poultry inspection program, it may be sufficient for marketing meat products.

"Many people raise the emus and home process them to fill their freezer with nutritious red meat. They then sell the fat, which is quite valuable," Reavis says. "This helps to pay for the costs to raise the birds." The American Emu Association has a CD that covers home butchering.

While you would need to raise a lot of emus to make a living, emus are a nice addition to any farm, Reavis believes. "Both emu oil product companies and emu oil refineries are always looking

Emu Resources

American Emu Association – aea-emu.org

The Emu Farmer's Handbook I & II by Phillip Minnaar & Maria Minnaar

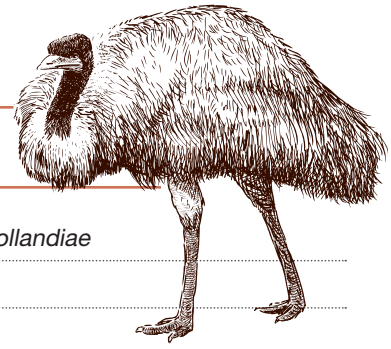
Emu egg art by Tampa artist Josh Caraballo.

PHOTOS BY KENNY COOGAN.

for good quality emu fat," she adds. Arrangement should be made at least one year in advance to ensure that you know what their requirements are. Hides and feathers are also marketable items when the birds are processed.

Emus have adapted well to varied climates and chicks that are raised with humans can be quite social. Males have been noted to be friendlier and less shy, while females can be productive for 20 years.

Kenny Coogan, CPBT-KA, is a regular pet and garden columnist and has authored an ecological themed children's book titled "A Tenrec Named Trey (And other odd lettered animals that like to play)." He has a B.S. in animal behavior and is a certified bird trainer through the International Avian Trainers Certification Board. Please search "Critter Companions by Kenny Coogan" on Facebook to learn more.



ALL ABOUT EMUS

SCIENTIFIC NAME	*Dromaius novaehollandiae*
ADULT SIZE	4.9 to 6.2 feet
AGE OF MATURATION	2 to 3 years
EGG WEIGHT	1 to 1.5 pounds
INCUBATION PERIOD	8 weeks, incubated by the male
LIFE SPAN	10 to 20 years in wild, up to 30 in human care
NATIVE RANGE	Australia, New Guinea, Indonesia
NUMBER OF EGGS LAID	5-15 eggs per clutch, up to three clutches per season
RUNNING SPEED	30 mph
SIZE AT HATCH	Almost 10 inches tall
SIZE OF EGGS	5 x 3.5 inches
WEIGHT	65 to 120 pounds

I have a rock garden. Last week three of them died. — Richard Diran

Lesson # 2: A Solution for Mosquitos

BY LIL ROBERTS
MANTECA, CALIF.

DO MOSQUITOS BOTHER YOU? They bite the dickens out of me. But get some of the tan-colored mouthwash from Dollar Tree, or using Listerine, will keep them away and it will even kill them. Pour it in a spray bottle and keep it handy for when you go out in the evenings or at night. I spay it on my head, arms, legs and clothes. Also spray the chairs, under the table and around the area where you will be sitting. Also spray around your screen doors in the evenings to keep them away, as they seem to hover around openings and get inside when they can. I even spray areas inside the house if I see a few got inside. It works.

Lil and her husband, Rex, are retired. They have lived in the country all their lives, and now live out in the country surrounded by almond orchards. They have several animals, including dairy goats, chickens, geese, quail, dogs and barn cats, and raise their own beef for butchering.

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Arnica can be used for colds, especially ones that trigger aches and pains.

Homeopathy for Flus and Colds

Homeopathy for the Homestead, Part 2

BY
BECKY RUPERT

IF YOU GOT YOUR FEET WET with some homeopathic remedies based on the first part of the series, good for you! Homeopathy has a long track record for healing colds and flu. If you look into the history of homeopathy, during the swine flu epidemics, cholera epidemics and similar problems, homeopaths lost significantly fewer numbers than their allopathic counterparts. There are some very good homeopaths working with doctors on the AIDS epidemic in Africa, and Homeopaths Without Borders help in many countries where malaria, dysentery, and other local diseases thrive.

We hope that we don't have to deal with catastrophe, and who knows what the future holds, but with some good homeopathic remedies on hand, you can treat your family at home. It's a good insurance policy if the worst happens, and if not, you have good inexpensive care if you need it. I get folks calling me in a panic about bird flu or the local disease du jour, and I have to say, "Okay, let's be prepared, but no need to stress about it." We know that the past homeopaths when faced with epidemics handled the situation, and so can we, if necessary.

Of course, we hope it never comes to that, but if you are looking into disaster preparedness, then homeopathy is one of the things that is good to know, and have some remedies on hand if local docs aren't available or we are in a crisis situation. Even if the worst doesn't happen, you can save money on your health care with some basic knowledge of alternative medicine, and still know when to call in help.

Anyone can learn basic homeopathic care for their family and use it effectively. It requires a bit of a shift in your thinking, because we are raised to take an

aspirin for a headache and Tums for heartburn, and take it every four to eight hours. This is not how holistic medicine works. Allopathic ("against the body") and homeopathic ("with the body") are opposite, as you can see.

This is not to say that allopathic medicine isn't helpful! It is greatly helpful in situations where life-saving measures are warranted: broken bones, stroke, heart attack, car accidents, etc. (although homeopathic remedies can be helpful in these situations when used properly en-route to emergency care). If you have a blood pressure of 200/100 then you may need to take something to get that down before looking into alternative measures. If you have a necrotizing gall bladder, you need to get it out of there! Get the idea? Conventional medicine has its place, can be very necessary and also extremely helpful, when practiced properly. Homeopathy and homeopathic remedies support the body in its effort to heal itself. If we haven't abused it severely, the body has a wonderful capacity to heal itself. Homeopathy can be the proper catalyst to help start that reaction.

Okay, now that you have that information, here are some basic tenets of homeopathy to get you started:

- Homeopathic remedies are taken as needed to maintain improvement, when you are better, you don't repeat until you need to take it, it is not taken on a schedule.
- Every person is an individual, and needs individual remedies based on the symptoms (each person with a virus, bacteria, headache, cold, flu, etc., will probably need a different remedy).
- It is not a placebo, so if you get the wrong remedy, it probably won't work and you may need to choose another.
- There are no side effects to remedies, but you may experience a slight worsening of your symptoms initially (called an "aggravation"). This is usually a good sign the remedy is correct, wait for improvement and then you will notice eventually you will worsen again and need to repeat the remedy.
- Homeopathic remedies are commonly used over-the-counter (OTC) in 30C or 12C potency; either will work fine if it's the correct remedy. If that's not available, then a 6C or "X" potency will work, but you'll probably need to take it more frequently, as it is not as strong.
- When in doubt, wait. Don't take more than one remedy at a time, or you won't know what's working. Don't use combination remedies if you can avoid it. An exception will be one of the homeopathic cough syrups, that can be good to have on hand if you can't figure out which remedy to use. Sometimes when symptoms first start it's difficult to tell what modifies them.
- Homeopathic remedies are easiest to find when you are a good observer—watch what makes the symptom better or worse (the fatigue of influenza, the cough, or the chief complaint in that person). If you find a remedy that causes a great deal of fatigue, and that's what is bothering you the most, then you are on the right track. Similarly, if your child has a barking cough, then it would be best to find a remedy producing that kind of cough.

Conventional medicine has its place, can be very necessary and also extremely helpful, when practiced properly. Homeopathy and homeopathic remedies support the body in its effort to heal itself.

HOMEOPATHIC REMEDIES FOR COLDS AND FLU

Keep in mind there are thousands of remedies available for colds and flu, we're going to touch on only some of the details of a few remedies that are commonly used. If your cold or flu goes on for a few days, you have intense fever, are dehydrated, listless, with coughs that are deep in the chest or that won't resolve, you need to seek the help of your health care provider. You may wish to let them know you wish to use antibiotics only if necessary, and only for bacterial infections. Keep in mind that flu is a virus, and antibiotics might not be the best choice as they are ineffective, unless you are worried about secondary infections.

COLDS

Ferr-p — this is a great remedy when you just have a feeling you are coming down with something, but there are no strong symptoms yet. One or two doses of ferr-p 30 should knock out the rest of the symptoms, if not, you'll need to wait a day or so until symptoms develop. Try some herbal measures—elderberry is great for viruses! You can

also take elderberry along with homeopathic remedies if you'd like.

Acon — this is a great remedy for colds that start suddenly, especially if you had a mental or emotional shock involved before falling ill. This type of cold also comes on after exposure to cold wind. There is often high fever, and this remedy can be confused with Bell (belladonna). The mental state of the person can be highly anxious, or fearful and restless.

Arn — those of you who have used arnica may be surprised that it can also be used for colds and flu. The person usually says they are well when they are not, they can have great aching in which the bed feels hard to lie on.

Bell — Belladonna fevers are usually pretty intense, sometimes leading to hallucinations! The person is very hot, and the symptoms usually come on suddenly. Coughs can make the throat raw, which can lead to more coughing. Usually there is also a headache with the other symptoms, which is usually intense, right-sided and throbbing. Many children need this remedy for right-sided ear infections. This remedy can be used for flu or colds (as can all of these remedies), if the picture fits.

Rhus-t — is often used when there is great restlessness. There is also a dry cough that is painful and can start after getting cold and wet. The person often feels worse after bathing or uncovering, and feels the need to get up and move around; they can't sit still.

Rumx — is a common cough remedy, used frequently when the person coughs with talking. Temperature changes bring on coughing spells, even undressing or uncovering can lead to cough. The cough is brought on by intense tickling in the throat, and can be worse at night, in open air, or by breathing deeply.

Spong — is a wonderful remedy for croupy coughs in children. There is a dry barking cough that sounds like a seal's bark, or as if a saw going through wood. They are often better eating or being propped up, and tend to be worse after or around midnight, or in cold air.

Bryonia is a vine-like, climbing plant with spring-shaped tendrils, and is the only British member of the cucumber family. Other names for this wild flower are English mandrake, wild vine, wild hops, wild nep, tamus, ladies' seal and Tetterbury.

INFLUENZA

Here in our office we carry flu kits and a yearly flu remedy we use for flu prevention. Taken once a month or so, most of my clients don't have to worry about the flu. Since we don't use flu vaccines, and most of our clients choose not to, this is a good, safe alternative. Flu preventative remedies are usually taken from October through March.

Ars — homeopathic arsenic won't poison you and it is a great remedy for flu — and food poisoning! It's always a good idea to keep this one in the family emergency kit. This remedy is used for high fevers with thirst for small sips frequently. The person's face is often warm with fever, and the body is chilled, but they desire fresh air. People with flu needing arsenicum album often have vomiting and diarrhea. They have dramatic fever and chills and feel worse with motion or movement. They can be restless, but are generally weak, and they can have great anxiety and desire someone to be with them, and are afraid being alone.

Bry — bryonia is used when there is tremendous thirst for large gulps, and is worse from the slightest motion, they want to be perfectly still. They cannot tolerate jarring at all, and are usually very irritable with a desire to be left alone! The type of flu they usually have is very slow in progressing, unlike the sudden symptoms

when you use Belladonna!

Bell — Belladonna as stated before, is used with rapid onset and high fevers, with striking symptoms such as cold hands and feet, but hot body, flushed face, glassy eyes, and dilated pupils. Symptoms are usually right-sided, throbbing and intense, they can have sore throats, are usually not thirsty (but they may want lemonade).

Gels — If you can remember the three "D's," you can remember this remedy: drowsy, droopy, dull. This remedy is used for great fatigue, with eyes half-closed, and feels achy. Chills can alternate with flushes of heat, with a heavy sensation in all of the extremities.

Nux-v — this is a great remedy for flu if you have intense symptoms with marked sensitivity to any stimulus — light, odors, noise, touch, etc. There is high fever and intense chills, and the person often feels intensely critical, no one can do anything right! Nux-v is used when the person is very cold and can have nausea which is relieved by vomiting. These types can be preoccupied with work. Don't take nux-v if you are taking any other homeopathic remedy, as it will interfere.

HOW TO TAKE REMEDIES ACUTELY

Remedies are not taken on a schedule, they are taken on an as-needed basis. I will give some guidelines to help you in taking the remedies appropriately. Keep in mind that if you think you made a mistake with the remedy and symptoms are aggravated, you can usually just wait it out. An aggravation happens right after the dose of a remedy and is rarely a big deal. If it is intense, *do not* repeat the remedy, you should feel much better within a short time. Very few people are sensitive to homeopathic remedies, and they should be managed by a practitioner who has experience with handling those types of cases.

Remedies are taken as needed, which means you should see improvement within a short period of time (within an hour or two, usually) and then you will relapse, or the symptoms will start to come back. When you relapse is the time to repeat the remedy. After seeing clear improvement, and relapse, repeat the remedy as needed until the symptoms are gone (usually within a day or two).

If you don't see improvement right away, you may need another dose or another remedy, you can try another dose in one day without any trouble unless you are very sensitive. If you see no response after two doses of a remedy in one day, then you probably have the wrong one and need to try again. Sometimes you need more than one dose to see improvement, but usually it is with the first dose. This takes a little practice, but with a few tries, you will be confident in your dosing. If you are not sure, follow the adage: "When in doubt, wait it out."

Hopefully this will get you started in using this safe, effective method of healing. If you don't have these remedies locally and you would like to have some on hand, you are welcome to contact us and we'll ship single remedies or kits right to your door.

We can also refer you to a good practitioner in your area, or if you would like to have one on hand for situations you feel you need help with. We also do long distance work over the phone if necessary. Don't try to tackle the chronic issues on your own such as headaches, fatigue, hormonal issues, anxiety or depression, leave that up to the professionals!

I hope you have found this information helpful to aid in healing yourself and family with this safe holistic method, I wish you the best of luck on your journey to health!

Becky Rupert is a Board Certified Homeopath, and Traditional Naturopath who consults with clients all over the United States. She has been homesteading and helping others to "Heal Yourself, Naturally" for more than 20 years. She can be reached at 419-853-3805 or via email at beckyrupert@frontier.com

Building with Straw Bales and Adobes

Unconventional building methods may pleasantly surprise you

BY KARIN DENEKE

"THIS LOOKS LIKE THE INSIDE OF A BARN," a friend of mine exclaimed when she visited my unfinished straw bale house years ago. And she was correct. All she could see when she stepped inside were straw bales, the timber frame and the roofed trusses overhead. The interior floor space was wide open, void of framing for the individual rooms.

"That is where the adobe walls will come in later," I explained.

An unconventional house requires a much different approach—from planning to finish—than that for stick built or log construction. It just happened that my hybrid house is located in a mountain community where log cabins are extremely popular. It created quite a stir among some of our residents, folks that may have never had a chance to watch the construction of a straw bale/timber frame/adobe hybrid house. And I am sure a few folks were extremely skeptical this would work.

PHOTOS CLOCKWISE: The timber frame with trusses; Wet adobe walls; Bales and windows are in place; Contractor and builder Charles Reel works with a chainsaw.

ALL PHOTOS BY KARIN DENEKE

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Straw bale house.

THE PLAN

Planning for such a home starts with the selection of a suitable lot. This 13,000-acre gated subdivision is heavily timbered. The elevation varies between 8,400 to 10,300 feet. Winters are long, with night-time sub-zero temperatures, and snowfall averages of up to 250 inches per season. Such conditions call for a well insulated home and a home with maximum solar exposure.

Finding a lot with southern orientation for my passive solar house was a prerequisite. Passive solar in a nutshell means taking advantage of the sun. The lot I selected is at an elevation of 9,000 feet. It has underground grid connection—a plus for me because I did not have to invest in a costly solar electric system to provide power for my house.

In a cold, or moderate climate—whether you build a conventional or an unconventional home or live on or off the electric grid—you should always make sure the longest wall of your house is south- facing. By that I mean, the home's south flank should be sited no more than 20 degrees from the true south or the overhangs won't work properly to block the sun's heat energy during the summer months. The sun travels high in the summer sky—thus the overhang shades the south facing windows. During the winter months, the path of the sun is much lower, allowing full sunshine to enter the house.

In this community, having a view of the surrounding mountain peaks ranks high on the priority list. A south-facing lot is secondary. However a million dollar view does not pay the heating bills.

THE FRAME

The support system for my straw bale/ hybrid house is the timber frame, anchored into the concrete slab. As recommended by my contractor Charles Reel, we had poured a Frost Protected Shallow Foundation, a foundation pioneered by Frank Lloyd Wright. It uses insulation vertically, and horizontally around the exterior perimeter, and actually requires less concrete than a traditional slab with its footings and stem walls. We reinforced the foot-print points where the vertical 8-by-8 timbers would be placed—and also reinforced the areas where we would set the adobe walls—with extra concrete.

When it comes to the overall cost for a straw bale house, don't assume it is low. If you want to build it correctly by hiring a professional, someone trained in alternative building methods, it can easily exceed the dollars spent on a stick-built house due to its hand labor.

A timber frame can add quite a bit of expense to your building costs, unless you cut your own lumber and craft your own frame. In my case, the frame was ordered from a timber framer who erected it with the help of my contractor and crew. A crane was needed to lift the heavy timbers.

THE COST

When it comes to the overall cost for a straw bale house, don't assume it is low. If you want to build it correctly by hiring a professional, someone trained in alternative building methods, it can easily exceed the dollars spent on a stick-built house due to its hand labor.

A load-bearing house is a cheaper option. You stack your bale walls to the desired height and add a bond beam around the perimeter to accommodate the roof. You could also consider a shed roof, which is the least expensive option. But first consult your county planning and zoning department to learn if it's building code permits load-bearing construction.

STARTING CONSTRUCTION

Once your plans are approved, don't get into a hurry to have your straw bales and adobe blocks delivered. A common mistake folks make, is storing these materials on their building lot, subject to deterioration by rain and snow. First get your slab under roof, then store your adobes and straw bales underneath.

In the agricultural valley below me, fields of wheat, oats and barley are harvested each season. The straw bales from all three of these small grain varieties can be used for building a straw bale house as long as they are tight, heavy construction type, two or three string bales from the latest harvest. I would not recommend old bales. We were fortunate to have a farmer in the valley who produced just what we needed.

Locating the adobes for our interior walls was not as easy. Some folks in the Southwest still make their own adobe blocks on-site from the clay-containing soil on their land. This was not an option for me. The clay content of my forest soil was minimal. In addition, time constraints would not have allowed the lengthy process.

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Initially my contractor and I were prepared to order adobe blocks from a yard in northern New Mexico, nearly 140 miles away. We learned transportation charges can add up to 50 percent to the cost of these heavy earth blocks. We also required adobe dirt—to make the mortar that glues the blocks together. Fortunately we discovered a small ad in a local advertiser/shopper's guide that helped us tremendously. It read: "Traditional toxic-free clay-mud adobes. Adobe houses are warm in winter and cool in summer. Help save our forests—build with adobes."

It turned out this adobe-making operation was located along the Conejos River here in south central Colorado near a small community by the same name, and 90 miles from my building site. The owner, a man by the name of Demetrio Valdez, made his adobes the old-fashioned way, by sun-drying the mud bricks outdoors in wooden molds.

Unlike Valdez' natural adobes, the yard in New Mexico produced traditional and stabilized blocks. The latter contain an asphalt emulsion additive. We preferred the natural adobes because our intentions were to build a healthy house, using natural materials only, thus avoiding out-gassing of the finished home, so common in conventional construction, a condition that can pollute the interior of a home up to seven years. We stored the adobes under roof, just like we had done with the straw bales earlier. Natural adobes are somewhat fragile and must not be dropped, and should be carefully stored on edge.

INTERIOR WALLS

As soon as my house was enclosed completely, with windows and doors in place, we started laying the interior adobe walls. The adobes were set on a course of half height concrete blocks, mortared to the slab. The blocks matched the width of the adobes and served as a necessary safeguard against accidental spills or flooding. Contact with standing water could damage the adobe walls structurally, thus all the earthen walls rest on these blocks.

A window view.

My exposure to adobe construction prior to building this house was minimal. I knew building with sun-cured earth goes back thousands of years, and is a wide spread practice all over the world. During my visits to the sunny and dry Southwest, I had admired the adobe architecture in the settlements of Taos and Santa Fe. The R-value of my straw bale exterior walls of around R-50, by far exceed that of 4/6 adobe exterior walls of around R-3. Yet, when you couple the insulation value of the exterior straw bale walls with the interior adobe walls' heat-retaining mass, you have a winner. The adobes add thermal mass to a house—storing heat in winter and providing cooling properties in summer. Combine that with blown-in cellulose insulation in the attic and you have a super-energy-efficient house.

We had wrapped the straw bale walls inside and out in plastic netting. Our stucco sub contractor would have preferred expended metal lath. But living inside a metal cage, was not our idea of a healthy house. The stucco coats—the scratch, gray and color coat, contained lime to allow the walls to breeze. Later on we finished the exterior walls with a three-foot high rock layer, applied over the stucco coating. It not only enhances the visual appeal of my home but also protects the lower part of the stucco walls from moisture such as rain and snow.

To achieve a professional finish look for the interior straw bale walls, my contractor first coated them with a clay slip, and then finished with a natural plaster mix to which an earth-tone pigment had been added. Prior to that, he had spent hours shaving off bumpy spots protruding from the bales with an electric chain saw, to assure later on the finished walls had an even appearance.

It took a while for the mortar between the adobe blocks to dry. In the end, I was not happy with the appearance of the adobe walls—they made my rooms look dark. I preferred a lighter more airy look. It took some experimentation to come up with just the right coating mix, to achieve the desired change. A mixture of wheat paste, Kaolin clay, fine, and medium-fine sand, and water, did the trick. Instead of applying it with a trowel, I used a paint brush. The results justified all the work that went into this project, from brushing down the adobe walls to removing loose debris to hauling buckets of the coating mix up and down ladders.

The exterior foot print of my single-story, three-bedroom, 2.5-bath house is a bit over 2,000 square feet. The interior measures 1,630 square feet. The ceilings are nine feet high. It is the most energy efficient home I have ever owned. And that says a lot, considering my sub-alpine location in the Rocky Mountains where snow often is covering the ground from the end of November, through late April or early May.

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Fencing for Creatures Great and Small

"Take us the foxes, the little foxes, that spoil the vines, for our vines have tender grapes." — Song of Solomon 2:15

BY JEFFERY GOSS, JR., C.H.
MISSOURI

HAVING ABUNDANT WILDLIFE on your farm or homestead is generally a good thing, but when a certain species or another is a threat or nuisance, coexisting with that species can become difficult, to say the least.

ABOVE: Backyard sheep fencing in Colonial Williamsburg combine brick and wood; RIGHT: a Virginia fence style displayed at Mt. Vernon.

PHOTOS BY ANNE-MARIE IDA

Foxes can eat eggs and sometimes kill young chicks, ducklings, and goslings. Raccoons can strew garbage everywhere and can also do all the above-stated fox behaviors. Porcupines are usually not a problem, except that in some cases they can inadvertently kill young trees by eating the bark, and they can also injure dogs that try to catch or corner them. Rabbits… well, just let some into your garden and you'll understand opossums are generally no big deal, but if you live in an area where equine encephalitis is going around, a possum relieving itself in your stable can ultimately translate to a dead horse. Dogs from a neighboring farmstead (or worse yet, a stray pack) can be dangerous to you and your own dogs, not to mention that *any* superfluous dog running around you place means more scooping to do, unless you don't mind tracking it into the house. Cats are usually not a problem, but if you have a flock of fowl, a particular cat just might be. Weasels, mink and their relatives are relentless hunters of any small creature (even kittens). Woodchucks are ravenous garden consumers, and like raccoons, they are fond of corn on the cob. Nutria spread disease and chews openings where you don't want them. And when it comes to skunks, you for "stinking" sure don't want to encounter one when you go out at night to dump the compost pail, not to mention the mess they make in the yard digging for grubs.

If the conflict is with only one or a few individual animals, the best or simplest solution is to trap and relocate

This picket-style fence keeps livestock in *and* out.

them. In other cases, the best solution is to create a physical barrier, i.e., some sort of fence or wall. Although most farm/country fences are made with a mind toward keeping larger animals in or out, they are practically laughed at by smaller beasts.

Let us start by considering the simplest kinds of fences. Virginia fences are split logs, stacked one on the other in a zigzag formation: a truly rustic fence. While easy to build, they have basically one practical purpose: to keep cattle out of a crop, such as corn, or out of an orchard. Such fences cannot keep jumping animals (deer) out very well, and small animals can simply walk through them. Another old-fashioned form of fencing, popular is the Ozarks, is a living hedge of bois d'arc (Osage orange). This keeps out most cattle, horses and sheep (or keeps them in a field), but once again it has no real effect upon small mammals.

Then there are stone fences, the Robert Frost kind. These are common in eastern Canada and New England, as well as in the British Isles. Stone fences are one step below stone walls: a stone fence is held up solely or primarily by the rocks' sheer weight, rather than by mortar; consequently they are apt to need rebuilding, as the poem observes. In terms of keeping out small animals though, they can actually do quite well, so long as they stay together. Rabbits might be able to hole up between the stones, but not necessarily make it through.

Post and picket fences are the next level of fence building. While laborious to construct and susceptible to fire, these wooden fences are built tight and therefore, in many cases, more reliable than stone un-mortared fences. With wood, the posts are all bound to one another. There is no need to worry about stones falling apart and making gaps that even two can pass abreast. Some styles of picket fence though, are just a meaningless to small critters as a Virginia fence would be. The Kentucky-style, bright whitewashed idyllic fences that often frame horse pastures are meant only for keeping horses in, and in some instances they are even more motivated by the "snob value" of a picket-fence esthetic, which is needed in order to impress all but the most stolidly professional gamblers.

Stereotypes aside, a picket fence can often be built for containing or excluding small mammals if built right. Although it demands more wood, the fence must be built with close gaps between the planks. And the posts must be significantly closer together, so that there is no stretch of easily undermined open space beneath the fence. However, for covering a large area, wooden fencing is neither economical nor ecological.

Metal is the material of choice for many small-animal exclusion fence setups, as any thorough study thereof will reveal. Such fencing is structurally like baling wire, only larger. Chicken wire will work, as long as the fence is high enough. An extreme example of small-creature-blocking is the system of ultra-high fences used in Australian environmental restorations. John Wamsley, widely known as the environmentalist who hates cats, organized to keep out feral cats and other introduced mammals after eliminating them from the area by trapping. Wamsley's system uses a "lip" on one side of the extra-tall fence in order to prevent jumping. Cats are really good at it, as I am sure you know.

Most metal fences such as chain link and barbed wire are made with spaces way too wide to keep out anything smaller than a dog. On cattle ranches and sheep ranches, this is often all that is needed. But when more intensive control is required, reinforcing the fence with a second, finer-spaced roll on the other side of the posts might be easier and more efficient than tearing out the old fence entirely. Caveat, the double-layer wire fence might not look very pretty, but then neither does a pile of raccoon-strewn trash all over your dooryard and walkway, or a pile of feathers where a bobcat got one of your ducks.

Some who read this may be thinking about electric perimeter fencing. While such contraptions may have their place, there are several things that should be considered before installing one.

1. Electromagnetic fields. There has been little safety testing on electric fences, but the harmful nature of fields from similar devices has long been known (going all the way back to John Ott's studies in the 1960s). Electric fence lines carry a strong field.
2. Ease of compromise. Electric fence lines can easily be put out of service by grounding (even a tree branch falling on the fence and touching the ground). It can also be done by something breaking the line, which is quite common. In such cases the fence may be a source of false security, especially if there is no fence other than those few strands of supposedly electrified wire.
3. Humans can accidentally get a vicious shock, such as by touching a tree that touches the fence or by accidentally touching a connected wire or when tending the fence or livestock.
4. Electrification apparatus are usually expensive and the money could be spent on a lot of other, probably better things.

Jeffery Goss, Jr., C.H., can be reached at P.O. Box 14122, Springfield, MO 65814.

We Came to Our Senses and Now Live Within Our Means

A few of the ways we gave it a more woodsy feel.

PHOTOS COURTESY KIMBERLY HANSEN.

BY KIMBERLY HANSEN
WISCONSIN

YOU DON'T HAVE TO LIVE IN the middle of nowhere in order to live the "backwoods life" that most of us dream about, but few of us attain or sustain. I've been reading magazines on self-reliance for more than 20 years now, and while I have done some of the things written about, including homeschooling my children, I kept getting sucked back into the everyday existence that most of us come to regret. Consumerism has been alive and well in this girl's life and before too long, I found myself trying not to fall off a mountain of debt.

Silly me, I thought going to school would help me to make a better life for my family, but instead, I am now being suffocated by student loans that will follow me to the grave, and as life would have it, I never even got to finish my degree. That's one part they leave out when enticing you to get an education.

And don't get me started on the lure of the new car smell. It's one of my weaknesses. I am embarrassed to say I have been involved with the purchase of four new and three almost new vehicles in the past 13 years. Even after my husband and I both lost our jobs in 2009, when we got back on our feet, one of the first things we did was buy new vehicles. I'd say it was temporary insanity, but it's been going on most of my adult life.

It took me almost having a heart attack and my husband, Bob, getting hurt on the job to finally come to our senses. Our main goal now is to get out of debt, and turn our little 696 square foot townhome that sits on 2/3 acre into the homestead we always dreamed of. Since we have now hit our 50s, we are more reluctant to be out in the middle of nowhere and believe that by planting the right trees and putting up some fences, it will be private enough yet close to what we need.

To start on the road to financial independence, we got rid of one of our vehicles, which not only eliminated a car payment, but left us with only one car to insure, license, repair and gas up. We traded one cell phone company that charged us $140 per month for two phones, to one that charged $65 for two phones with very similar services. Of course, cable and Internet had to go, too. I must say, I don't mind not having to pay for the additional commercials that cable companies subject you to. A 65-mile multi-directional HD antenna gets us close to 60 stations and since I am one to watch PBS mostly, I don't feel like I'm missing a thing and with the new digital signals, the picture is just as good, if not better than cable. Gone are the days of horizontal hold.

Our next goal is to pay off the truck and the other small bills we have, limiting the money needed to survive and freeing up extra money to pay down the mortgage. My ultimate objective is to be able to work from home and be as self-reliant as possible. That will only be possible with hard work and self-discipline. But I believe we are on our way, putting our efforts into

We turned our bathroom into an outhouse.

our homestead instead of things that rob you of your freedom. A Friday night for us is a couple Redbox movies and Bob's awesome homemade pizza from scratch.

Though we love having such a small house, we were limited in storage, so my hubby built a beautiful pine pantry for stocking up on food, and for a lot less than what you would pay for a cheaply made Walmart special. Luckily, that man of mine can do just about anything, so all the wants and needs of our dream cabin have been accomplished on a shoestring. We needed a new kitchen table because the old one was in sorry shape, so he built a nice farmer's table for less than $100. We also needed a door on one of the rooms we have. Where it is situated and the size of the room does not lend itself to a conventional door, so he built a barn door, which is now a focal point of the "great" room for less than $75. To give ourselves the Northwoods feel we love so much, we made our bathroom into an outhouse. We feel like we went up north to the cabin and never left.

Last spring, Bob scrounged some materials and built a nice little greenhouse, to help with the gardening. He has two black barrels to catch water in and two he cut in half to do some container gardening. We experimented with beans, carrots and pumpkins. Next spring, we are going to build a raised bed and also have the containers as well as some berry plants along the fence. We agreed to really put in some effort and either can or freeze what we yield. I'm hoping to start off with some basics like spaghetti sauce, pizza sauce and veggies. Since neither of us have done this before, it will be interesting to see the results.

Right now we are just trying to make it through the Wisconsin winter, while planning what will be in our vegetable garden this coming season, how we will turn our old shed into a chicken coop, and what trees we will plant for privacy. I want a forest but the reality of cost will make us start out with smaller trees. I used to want to move up north and have 40 acres of pines and build a little cabin, but I've been in this town for 20 years, I've raised my kids in this area, and I am near my daughter and new granddaughter, so I have more reasons to stay than to go. We will just have to build our self-reliant, homesteading life right here.

Karen Ash poses in the store with many of their homemade goodies.

A Sweet Success

Karen and Don Ash's passions are in the country and in good ice cream

BY DONNA COLLINGS

LOCATION, LOCATION, location. Anyone will tell you that location is the key success factor in any retail business. With that in mind, why would anyone open a retail food business in a rural community with a shrinking population at the height of a bad economy?

It's the heart that makes those decisions. And for Karen and Don Ash, they knew the moment they stumbled upon the tiny village of Angelica that was the only place for them. Nestled in the foothills of the Allegany Mountains in New York State, the village is far from any city. Time seemed to move at a slower pace here. No hurried drive-thru burger joints, no bustling supermarkets with checkout for seven items or less, no parking meters that ticked off seconds like time bombs, and no nerve-wracking freeways.

In an area known for timber and dairy farms, the charming village was referred to as, "A Town Where History Lives." Quaint antique shops lined Main Street and churches surrounded Circle Park. Friendly folks took the time to wave at neighbors and strangers alike. Karen and Don fell in love with Angelica.

Knowing just where they wanted to be gave Karen and Don their purpose. They purchased a home in Angelica, but remained with their corporate jobs in Rochester, seeking refuge only on the weekends. By chance, a Main Street storefront opened up. They leaped at the opportunity and quickly converted the doll shop into their dream—The Angelica Sweet Shop.

Still commuting, they would rush from the city to the country every Friday. Serving up ice cream, selling old-fashion candy, and baking fresh pastries all weekend, and then they made the hour long trek back to their Monday through Friday grind. Hard work, long hours, and sheer determination paid off. The little shop proved to be a viable and sustainable business. Karen and Don quit their jobs, put their city home up for sale, and settled into country life.

By country life, I mean working seven days a week, baking late into the night, and opening the shop early. If that wasn't enough, they opened a second business. The Black-Eyed Susan Acoustic Café is a full service restaurant featuring live music.

After nearly 10 years living in Angelica, running two successful full-time operations, Karen and Don seemed to have found bliss. It shows on their faces, warm genuine smiles as they greet their guests. Taking time to compare sightings of early spring robins or offer a refill of

coffee, it's just the friendly way they treat everyone. Their great pride in service and quality goods is unmistakable. As a team, Karen and Don have carved out a successful niche in a rural community. Though busier than ever, they have found their lives are simpler and more satisfying.

Secrets to the Success

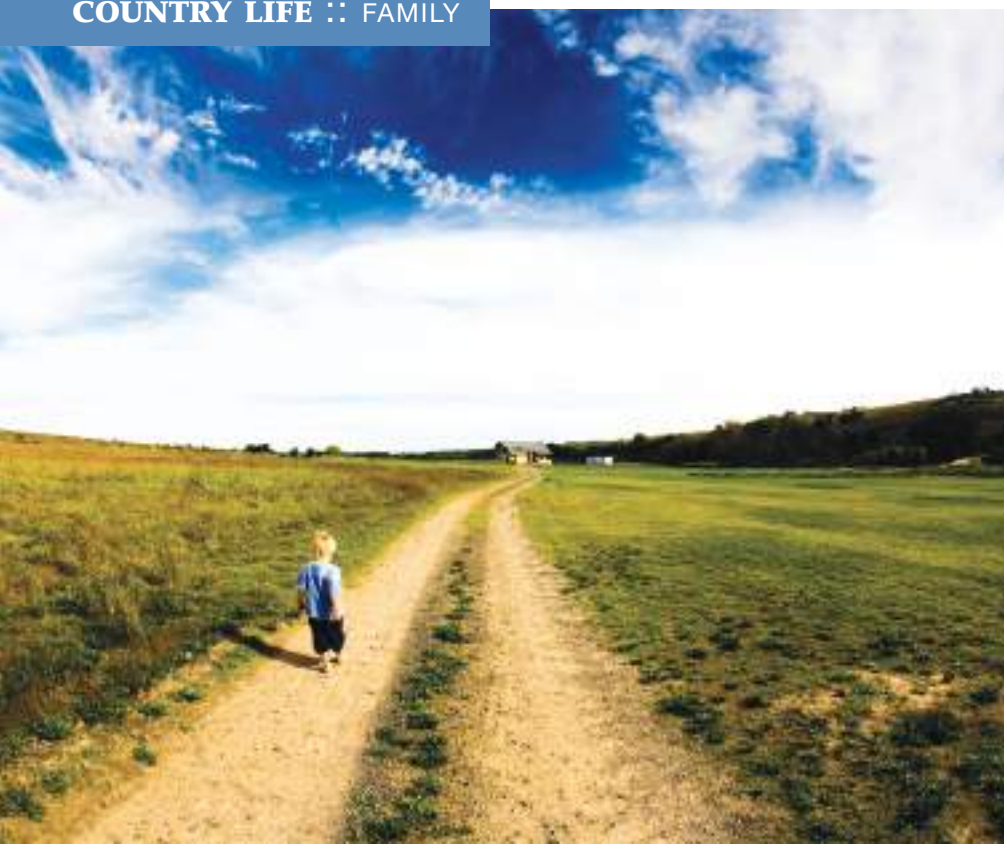
Drastic career change is not for everyone and running your own business can be risky, but following your heart can be very rewarding. Karen and Don shared some key points that lead to their success:

1. Capitalize on opportunities— When approached to bake fruit pies for the Maple Tree Inn, a restaurant that is only open seven weeks of the year during maple syrup season, Karen suggested maple flavored pies. She has developed four new recipes featuring the local flavor that are now best sellers at both the Maple Tree Inn and her shop.

2. Form alliances—The Angelica Sweet Shop sells and promotes many items that are unique to the area such as salt-rising bread from another bakery, flavored vinegar, and even gourmet doggie treats. Local artists display their talent on a special wall in the shop.

3. Adapting new promotions— Menus and products evolve with the seasons and various festivals in the area. For instance, Karen has formulated Lavender Crème Brulee and Lavender Scones in conjunction of the annual Lavender Festival.

4. Staff with the right people— There is never a "help-wanted" sign. New employees are referred or are customers. The only skillset that is required is a friendly attitude and a warm smile. All else can be taught.



Send 'Em to the Farm

BY MARSHALL NYCH

THE PHRASE OF DOMESTICATED animal finality, "Send 'em to the farm!" was perplexing to the mind of a child. Boyhood wonder and a strong sense of adventure trumped concrete understanding of such serious, grim concepts. Such adult excuses for convenient pet closure were thankfully clouded.

The summer I was six, we three Nych brothers went through cats like underwear. An orange specimen (cat, not underwear) named Tiger, my personal favorite, disappeared one night. My Hardy Boyish sleuthing skills were able to uncover a couple of owl feathers glooming over a pile of tangerine fluff. It was then, solemnly standing in the corner of my front yard, I first heard the patent line. The case was closed the moment Mom confessed, "It was time we sent 'em to the farm."

Puzzled as to why we'd give Grandpa and Grandma my friendly feline, I asked, "Why?"

After a brief pause, Mom said, "There are a lot more mice on the farm for Tiger to hunt."

While Tiger sat on the lap of luxury eating canned food, I was unable to argue with maternal logic. I became quite content and accustomed with this business of my parents caring for my pets by "sending 'em to the farm."

Shortly later that summer, two more of our beloved felines came up missing. Naturally, Dad said he had, "Sent 'em to the farm." And our fourth cat, a gray-striped variety named Godzilla, took a certain liking to little brother Ryan. Godzilla was our first indoor cat. Prior to him, I didn't know cats could survive inside. I recall Nathan developing severe allergies seemingly overnight. Doting and nurturing as Mom was, it was only a matter of time before Dad sent Godzilla to the farm, where he could terrorize pests.

This mysterious action was not limited to cats, many a dog had been sent to the farm in my former years. The first canine sent packing was our long-time pet Gretel. This wiener dog had sunk her teeth into cars, Amish buggies, and other roadside attractions. But it was her taste testing my friend Jeff's leg that got her an immediate one-way ticket. The next morning, Mom explained, due to the growing traffic on our road, Gretel had to be sent to the farm. Not only did the farm host fewer vehicles, it had a lot less of my friends' legs. As I chewed Mom's words, I couldn't quite swallow them. The farm to which we were sending her, Grandpa and Grandma Nych's, was just off the porch on the backside of our property, with mirrored traffic patterns. I learned at an early age, kids who are at an early age cannot win an argument against their elders.

The next sendoff was Dad's hunting dog Mandy. Likely because she was stowed away in an outdoor cage, I failed to fall in love with this breed, a Springer Spaniel. Another strike against Mandy was the fact she trampled me every single venture to the side yard. On one unexpectedly pounce-free, painless stroll, I asked, "Dad, where is Mandy?"

Dad got unusually quiet, looked to his feet and said, "Not enough game here…had to send 'er to the farm where there's plenty of birds and rabbits."

Ironically, in all my years, I only recall one animal being sent to our house from the farm. My simple mind simply looked at this as back pay…Grandparents trying to show gratitude for all of the pets I had bestowed upon their property. Their gift came in the form of Spanky, the runt of the most recent lit-

ter of piglets. I could just hear it… Grandpa, upon spotting a hopeless little porker, looked to Grandma and said, "Better send 'em off the farm."

Spanky was sent off the farm to be pampered and spoiled by the Nych brothers. We did a fine job. Spanky drank more milk than an Oreo factory break room.

As Spanky swelled in heft and girth, so too did my pride. Aside from the thousand-plus holes peppering our front yard, Spanky was the perfect side of pork to our family. My pig sidekick, while I was a prisoner at the penitentiary that is elementary school, dedicatedly waited for me by the driveway. He would bide his time digging holes. When I returned from prison on a yellow bus to a front lawn vacant of Spanky, I knew something was amiss.

"Has anyone seen Spanky?" I asked my parents.

"Umm…we…ummm…sent 'em to the farm," Dad and Mom answered in unison.

I couldn't believe it, the only creature ever to be sent off the farm was returned to sender. I would later realize denizens of the farm admired how nicely my dear pig had plumped. Once surprised the runt had even survived, the whole family salivated at Spanky's ability to thrive.

Now having lost four cats, two dogs, and one pig to the farm, I felt it was time to revisit my old friends. Often, the immediate family would go to our grandparent's farmhouse following Sunday service. I fully expected to reconnect with my former felines. After such a considerable chunk of time, I'd assumed the mouse population would be well under control. As I walked into the barn, I eagerly called, "Here Tiger! Hey Godzilla!" Rather than stumbling upon a pride of fat cats resting in the shade of the barn rafters, all I discovered were piles upon piles of mouse droppings. Very disappointing. Very disgusting.

Discouraged but not hopeless, I moved on to my beloved dogs. By now, I had envisioned Gretel and Mandy, along with other dogs relegated to the farm by local parents, had formed a pack. I was confident neither of the Nych dogs had been chosen Alpha Male (Gretel and Mandy were both female.) Still, I wanted to see how they were doing. I doggedly searched for my former canine companions. Try as I might, all I could track down was an old, abandoned dog cage which was a former domicile to Jac, Grandpa's mutt who died of obesity. The only items on Jac's menu were table scraps and a sampler platter of discarded pieces & parts of familiar farm animals.

I admit I wasn't the brightest kid. Honor roll was a concept as distant and foreign as Latin. However, even I began to connect the dots. The picture beginning to emerge was an ugly one. What I lacked in smarts, I made up for in spunk. I ran right to the rustic farmhouse and straight to the source.

Grandma was undoubtedly the most painfully honest, blunt person I knew. She always let you know exactly where you stood, no matter what degree of short you happened to fall.

Haunted by thoughts of Spanky's whereabouts, I gulped, "Grandma, what does 'send em to the farm' really mean?"

Grandma, drying her hands on a worn kitchen rag, was the first to answer with truth. "Marsh, it means your folks served Spanky with your eggs last week."

That day, some innocence of childhood had been lost. It too was intangibly exploring the fictional farm where cats and dogs got along and where pigs were encouraged to go feral.

I begrudgingly trudged back home. My fibbing parents had been planning an anniversary date for quite some time. I caught snippets of their conversations between losing all of my pets. I cannot recall whether it was a dinner, a movie, or miniature golf. However, one thing I'll never forget is what I overheard walking through the sliding glass door into the kitchen.

"What should we do with the boys while we're gone?" Mom whispered to Dad.

Dad, with his usual wild grin, answered, "We gotta' send 'em to the farm."

The Value of Self-Sufficiency

Part 2 of 2: Youth and Homesteading

BY ALEXIS GRIFFEE
WATCHTOWER FARM

WHEN PEOPLE TALK ABOUT being self-sufficient, you usually do not think of teaching these skills to your children.

My son has been involved with 4-H and livestock shows for the past three years. In that time he has expanded from rabbit to poultry to goats. He has slowly worked up the "livestock ladder" and learned many valuable things along the way. The time has come when he has yet again requested to graduate to a larger animal. Initially, we thought that he would simply start a "pig project" and raise a couple of hogs to show. However, shows for hogs are limited in our area and he really enjoys that aspect of his project. As soon as he made that discovery, he instantly went on to the next animal—a cow.

We have a couple of dairy cows on our small farm so we are reasonably experienced in cattle ownership—and also cattle prices. Right now, there is no such thing as a cheap cow. I instantly had the knot in my stomach and the thought of, "Oh boy, how are we going to afford this one for him?"

As a parent, you never want to think that you cannot afford to give your child an experience or opportunity, especially when it is a learning one.

We had to face the facts. As a single income home, a small farm and having multiple small children, we simply could not afford to just whip out the checkbook and plop two months' pay down for a show steer. Do not get me wrong, we are financially stable but large purchases need to be thought out and planned for. In a way, this is a good thing because it prevents impulse buys of large items that we cannot afford or debt accumulation.

After talking things over with my husband we agreed that it was time to be real, and time that we had a talk with our son. Finances are generally not something that we think about sharing with our kids. On one hand, kids can look at a paycheck and think, "Wow, that's a lot of money…we are rich!" without the knowledge and full understanding of all of the expenses that it takes to keep a home, much less a farm, running. On the other hand, you do not want to impart worry into your children by saying that finances are tight. The last thing you want as a parent is for a child's overactive imagination to get the best of them and cause unnecessary worry. We had to meet somewhere in the middle.

We sat down with our son and explained the situation. We showed him bills that must be paid monthly, our own food expenses, as well as what it takes to keep our small farm running. We laid it out in black and white, no drama, no fuss and let him ponder over things. He was able to grasp everything.

After some contemplation, he

said, "Will you help me come up with some things that I can do to raise the money?" Now we are talking! This was exactly what I was hoping for. He was presented with the facts and wanted to come up with his own way of raising the funds. He wanted to be self-sufficient.

After some quality discussion and putting some thought into things we came up with a game plan. Although it would not purchase the whole animal, it would be a start, a down payment, and something he achieved on his own. His plan was to sell the various projects that he had made for 4-H to enter in the fair. Most of these were award winning and included everything from homemade strawberry jam to hand dyed wool roving to a welded horseshoe coat hanger.

With this goal in mind we set off to accomplish our list the next day. He took photographs of the items, he wrote ads for them, and he even told me ideas of places to post them for sale. As a homeschool parent, it is always a success when you can turn one thing into a learning experience that encompasses multiple educational aspects and subjects. It is an even bigger "win" when they are so motivated to complete their tasks that they do not even realize that they are learning! When we were done, he ran up to me and tackled me with a huge hug and a grin that stretched from ear to ear. He simply said, "Thank you, Mom." He was proud of his work, he did not get handed a wad of cash but he was handed the keys to independence.

In a time where crowd-funding sites seem to dominate, people are losing more and more of their own independence. After all, who wouldn't want some stranger to just come along and finance their dream—whether it's a steer or a trip around the world? While it seems great, I have to wonder what the cost of this is. It seems as if everyone has a crowd-funding page for something they "need." Minds and ideals are shifting from "How can I work to make this dream happen" to "Who is going to make this dream happen for me?" I was grateful and humbled as a parent to see him take charge of his own future and desires. Although he has sold several things, I was not sure if he would have enough money for a steer in time. He knew this and he was okay with it and his efforts were never discouraged. He was motivated to keep working toward his goal and he knows that he will be able to do the project next year too, no matter the outcome.

Minds and ideals are shifting from "How can I work to make this dream happen" to "Who is going to make this dream happen for me?" I was grateful and humbled as a parent to see him take charge of his own future and desires.

In the end, he did manage to sell enough to purchase a calf on his own. Although it is not the fanciest and best-bred animal around, it is healthy, nice and most of all, it was bought entirely by him. When we went to get the calf I talked to him and made sure that he knew this calf probably would not beat the high dollar calves in some shows. He admitted that he was aware of that and then shot down my concern. He told me, "I know he isn't the 'best,' but he is what I can afford and he will give me what I need to fund my future projects."

This experience highlights a major reason why we need organizations like 4-H and FFA. Aside from getting our youth back to their roots, they teach them a level of integrity as well as determination that cannot be found in any textbook. The values of lessons like these are exemplified by the 4-H motto, "learn by doing" and sum up what is so often lost in our fast paced and digital age. It is easy to get caught up in the modern race to always have the best, at literally any cost. Sometimes it takes wisdom "from the mouth of babes" to slow us down and reach us.

As parents we are always tempted to do everything for our children. We want their world to be perfect; we want to give them everything they desire. That's love, right? I challenge you to rethink that position. There is an even greater gift that we can give our children, the gift of self-reliance and independence.

Find part one of this series in the September-October issue of Countryside.

The Woodland Homestead

REVIEWED BY GAIL DAMEROW

HOW TO MAXIMIZE THE BENEFITS you derive from your small woodlot is the subject of *The Woodlot Homestead* by Brett McLeod, who looks beyond timber and firewood to cover a multitude of other, often overlooked, benefits including livestock forage, fence posts, and raw materials for crafting. Despite having lived on wooded acreage for more than 30 years, my husband Allan and I gleaned lots of handy tips from this book.

And it's no wonder, given the author's impressive credentials as a woodsman. He is an associate professor of forestry and natural resources at New York's Paul Smith's College, where he coaches the Woodmen's team. He is the founder of the Adirondack Woodsmen's School, the Adirondack Rural Skills and Homesteading Festival, and the Adirondack Center for Working Landscapes. He is a former professional lumberjack and a current lumberjack competitor. Most important, in terms of the practical advice he offers in his book, he homesteads on a 25-acre draft-horse powered mountain woodlot.

"The lessons that come out of this book," he says, "represent not just my own trials and tribulations but also ideas from over a dozen woodland homesteaders who have chosen to live, work, and play in places that most would write off as 'too wild' or 'not farmable'."

Indeed, after Allan and I moved to our neglected hillside woodland, and had spent the first few years laboring over various reclamation projects, a distant neighbor came by, looked around, and exclaimed, "Wow! I didn't think anything would grow up here."

The book's first chapter explains how to inventory your trees, evaluate your options, and develop a woodsman's eye — all things we wish we had known when we first moved here. Instead we hired a forester, who did not consider our goals for sustainability, but instead evaluated our woodlot only in terms of potential timber harvest.

Had this book been available then, we would have had a proper guideline for taking inventory of our forest to determine if our ambitions were in line with the land's potential. The author points out, "A basic woodlot inventory should consider parcel size, topography, site access, species composition, and forest structure." All of which go into making a logical evaluation that considers multiple factors simultaneously.

Chapter two discusses essential tools and techniques for managing a woodlot. One section covers how to find and restore an old axe. Between 1850 and 1950, an estimated 10 million felling axes were produced by 100 different manufacturers, who had ready access to quality steel. Keen competition among the various forges meant the quality of axes they produced remains unprecedented to this day, when relatively few high-quality felling axes are still being made. Accordingly, the author explains how to evaluate a vintage axe, replace the haft, remove rust from the head, and sharpen the edge.

Although the book discusses how to use a peavey (a lumberjack's spiked cant, used for moving logs), but not how to restore one, the section on restoring an axe reminded me of the

old peavey we found in our woodlot. After Allan replaced the badly rotted handle, a neighbor asked to borrow the peavey. Instead of returning our old one, which he claimed he had lost, he brought us a different old peavey with a cracked and splintered handle. Later I asked my husband why he seemed so pleased with the exchange. He said a wooden handle is easy to replace, but the irreplaceable steel hardware of the "new" peavey was far superior to the one we had found. So, as McLeod suggests, keep your eye out for quality vintage axes and other woodland tools begging for a second chance.

Chapter two includes chainsaw use and maintenance, but oddly makes no mention of the fact that ethanol will gum up your saw, requiring expensive downtime at the repair shop. (Ask me how I know this!) And a fuel stabilizer such as Sta-Bil is not the answer. According to our chainsaw repairman, fuel stabilizers are little more than snake oil. Do yourself a favor and use only fresh ethanol-free gas in your chainsaw and other small engines.

Moving on to chapter three, McLeod suggests ways to incorporate cattle and other grazing animals into a woodlot and how to use a "pig-o-tiller" to help with stump removal and turning the soil. This chapter lists nine goat breeds for the woodland homestead, but oddly does not include Nubians. On our place we raise this dual-purpose breed exclusively, and have used them to clear underbrush from the woods along our driveway.

Interestingly, McLeod cautions against letting dairy or dual-purpose goats browse aromatics such as cedar or juniper, which he claims will make the milk unpalatable. We routinely feed our Nubians prunings from the cedar tree growing beside their barn, and we've never noted any difference in taste of their delicious milk.

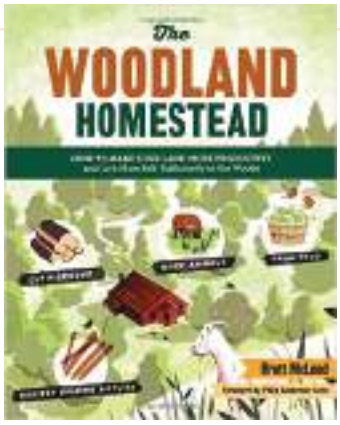
A discussion on felling your forage (allowing livestock to browse from freshly felled trees) gave me a chuckle as I recalled how quickly our Nubians learned to come running when they heard the chainsaw start up. For the goats' protection, as well as our own, we had to remember to close the gate to whatever section of pasture we planned to cut forage in before starting the saw.

Chapter four explains coppice forestry and its benefits for growing the makings of rustic furniture, as well as growing fodder and fuel. Included are step-by-step instructions for making charcoal that is superior to store-bought briquettes compressed from sawdust. Coppicing is a method of periodically cutting back a tree to stimulate growth.

This chapter includes a section on creating wildlife habitat, and here we learned that the birds pecking holes in our otherwise healthy apple trees are not woodpeckers, but their sapsucker cousins. These birds bore straight, parallel rows of holes that allow the tree's sap to flow to the surface, attracting insects. "Sapsuckers commonly establish forest routes where they move from tree to tree, boring small holes, and then return along the same route to pick off insects."

Chapter five describes how to build living fences, stump fences, shelter belts, and living barns. Buried in an odd place — the middle of a section on debunking myths, such as that a growing tree will lift a fence upward, or that galvanized nails and staples will poison a tree—is a caution against attaching fence hardware directly to trees. Metal will eventually become encased within a tree and could damage the blade of a chainsaw, as well as a more expensive blade at the sawmill. Worse, unexpectedly hitting a staple or piece of fence wire with your chainsaw can cause serious damage to yourself. When we moved to our woodlot we spent countless hours removing barbed wire wrapped around or stapled to trees. On many trees the wire went right through the middle—in one side and out the other.

Another caution is avoid the risk of lacerations by not using barbed wire to fence horses, to which I would add dairy goats, as well. A doe's udder



The Woodland Homestead

by Brett McLeod, $19.95
Storey Publishing (2015)
240 pages, 8" x 10" paperback

Homemade pH Test

You can determine whether your soil is alkaline (sweet) or acidic (sour) using a couple of ingredients from your kitchen. Begin by collecting approximately ½ cup of the soil you'd like to test. Be sure to dig down deep enough so you've collected the actual soil and not the surface duff.

With your sample in a glass jar, add ½ cup of vinegar and watch. If the soil begins to bubble, or make a fizzing sound, it's alkaline. If there's no reaction, take a fresh ½ cup of soil in a new container and add ½ cup distilled water followed by ½ cup baking soda. If it bubbles or fizzes, you have highly acidic soil.

Amending soil on a small scale (around a single fruit tree or berry bush, for example) can be done by adding wood ash or lime if it's sour, or pine needles if it's too sweet.

— Brett McLeod in *The Woodland Homestead*

Interestingly, McLeod cautions against letting dairy or dual-purpose goats browse aromatics such as cedar or juniper, which he claims will make the milk unpalatable.

ripped open by barbed wire is not a pretty sight!

On a happier note, this chapter also explains how to propagate an Osage orange fence from seeds — a challenge unless you know the trick for separating the seeds from the fruit, which are called hedge apples. We have a few Osage orange trees on our property and have long wondered how to create more of this rot-resistant wood.

Chapter six discusses edibles that come from trees, including not only fruit, but also honey and syrup (not just from maple sap, but also from birch, walnut, and boxelder sap). The chapter explains how to resurrect apparently defunct fruit trees growing in the understory. Such trees respond to the extreme shade by slowing their growth rate and ceasing fruit production, and they can maintain this conservative existence for decades, waiting for you to appear one day with a saw and pruning shears.

"When new or aspiring homesteaders tell me about their dreams to 'live off the land," says McLeod, "I often tell them that the first thing they should do when they acquire property is to plant fruit trees." Amen to that! Our nearest neighbor made great fun of Allan and me when he saw us laboring to establish our young orchard. He's long gone, but we're still harvesting apples from those trees.

The books' final chapter examines a variety of forest plants you can grow or collect to eat, to use for medicinal purposes, or to use for crafting items such as burl bowls and bark baskets. Many such plants can be managed to encourage them to expand.

In this chapter I learned how to deal with chestnut maggots, those pesky little worms that crawl out of freshly gathered chestnuts left on the kitchen counter. After my first experience with those maggots, I've been hustling our nuts into the freezer immediately after harvest. Instead, McLeod suggests soaking them in 120°F water for 20 minutes before storing them for future use by hanging them in an onion bag. Now I can't wait for this year's chestnut harvest.

A section on mushrooms, rather than trying to explain tricks for identifying safe wild mushrooms, describes how to cultivate three easy-to-grow mushrooms by properly inoculating the right kind of log or stump. The book says you can get spore plugs for dozens of different mushrooms, but doesn't indicate where. However, an Internet keyword search for "mushroom spore plugs" yielded a number of sources, including fungi.com, which offers an email newsletter, an archive of interesting articles, a calendar of classes and workshops, and a catalog of mushroom plugs, products, and books. But I digress.

Although *The Woodland Homestead* focuses primarily on reclaiming a neglected or abandoned small forest, it includes lots of helpful tips for establishing a new woodlot from scratch. Either way, the long-term investment is well worth putting in the necessary time and effort.

Beyond the science of woodlot management is the art of developing what McLeod calls a woodland eye. And that, my friend, is not something you can learn from a book; it comes only with time spent in your own unique woodlot over many years and many seasons. *The Woodland Homestead*, however, offers a great start by showing you how to become more self-sufficient by making your own woodlot more productive.

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Late Autumn and Early Winter

BY W. L. FELKER

THE EPHEMERIS FOR NOVEMBER AND DECEMBER

THE SUN

Daylight Saving Time ends at 2 a.m. on Sunday, November 1. Set clocks back one hour.
Winter solstice occurs at 11:48 p.m. on December 21

THE PHASES OF THE THE DEER MATING MOON AND THE SECOND SPRING MOON

The courtship of deer continues throughout the late autumn, depending on the region. At the same time, milder fall weather often promotes a resurgence of spring growth, a "second spring."

NOVEMBER

3: The Deer Mating Moon enters its final quarter at 7:24 a.m.
7: Lunar Apogee
11: The Second Spring Moon is new at 12:47 p.m.
19: The moon enters its second quarter at 1:27 a.m.
23: Lunar Perigee
25: The moon is full at 5:44 p.m.

DECEMBER

3: The Second Spring Moon enters its final quarter at 2:40 a.m.
5: Lunar Apogee
11: The Sparrow Flocking Moon is new at 5:29 a.m.
18: The moon enters its second quarter at 10:14 a.m.
21: Lunar Perigee
25: The moon is full at 6:11 a.m.

JANUARY

2: The moon enters its last quarter at 12:30 a.m.

THE STARS

Directly above you at 10 p.m., Perseus stands below the North Star. In front of Perseus, to the west, find Andromeda, and then the Great Square. East of Perseus is Capella, the most promenent star of the Milky Way (except for Sirius in the far southeast), by midnight, the Pleiades and Taurus, winter's prophets, will be almost directly overhead, Orion fully visible behind them. Regulus, the brightest star of spring, will be just starting to rise along the eastern tree line.

THE SHOOTING STARS

The Leonids: November 17-18
The Geminids: December 13-14
The Ursids: December 17-25

THE PLANETS

Venus is the morning star throughout November and December, sharing that role with red Mars. Jupiter rises after midnight and is overhead when Venus and Mars appear.

A CALENDAR OF HOLIDAYS AND SPECIAL OCCASIONS FOR FARMERS, RANCHERS AND HOMESTEADERS

November 7: Ecuadorian Independence Day
November 15 – December 13: Al Hijira: Islamic New Year.
November 24: Ashura
November 26: Thanksgiving
December 8 – 16: Hanukkah
December 25: Christmas

METEOROLOGY

Weather history suggests that cold waves usually cross the Mississippi River on or about the following dates: November 2, 6, 11, 16, 20, 24 and 28; December 2, 8, 15, 20, 25 and 29. Snow or rain often occur prior to the passage of each major front. If strong storms occur this month, weather patterns suggest that they will happen during the following periods: November 2–5, 14–16 and November 22–27; December 1–3, 24–26, 31-January 1. It is probable that new moons on November 11 and December 11, as well as full moons on November 25 and December 25 will bring stronger-than-average storms to the United States.

THE ALMANACK DAYBOOK

NOVEMBER

1: Daylight Saving Time ends today at 2:00 a.m. The number of accidents often increases with the sudden change in sunset time.
2: Late fall, the period when almost all the remaining leaves come down and temperatures turn decidedly colder, begins this week.
3: The weak moon is expected to keep the first days of November relatively mild.
4: Bedding plant seeding for 2016 starts at new moon time (November 11); this is the week to prepare seeds and flats for May flowers. Continue seeding at new moon throughout the winter months.
5: Beginning at this time of month, the percentage of daily sunlight drops a little each day.
6: Harvest the last corn and soybeans before late autumn rains begin.
7: Lunar apogee, along with the waning moon, augers well for mild conditions until November 11th front, which typically chills Veterans Day.
8: Today through the 20th is the normal rutting period for whitetail deer in the central part of the country.
9: Cut your wood, fit storm windows, gather wildflowers for winter bouquets under the dark moon.
10: Bedding Plant Season for 2016 begins now.
11: New moon today is expected to bring cold.
12: Falling leaves say it is time to fertilize trees, shrubs, the pasture and garden.
13: Thunderstorms become infrequent until February in the northern half of the nation.
14: Transplant perennials, shrubs and trees.
16: Wind speed increases to winter levels.
17: Cloud cover reaches winter levels, and the skies remain more overcast than their summer counterparts well into April.

18: Many beekeepers find that demand for honey is highest between Thanksgiving and Christmas.

19: In Louisiana, crawdads move into flooded rice fields to feed on the remnants of that crop. Plan harvest and marketing of mistletoe after leafdrop.

20: Feeding patterns often change for livestock and poultry as the weather becomes colder. Eating patterns may be different for humans, too, as the nights lengthen.

21: Around the yard, stake young shrubs and trees. Parsley and thyme should be brought inside pots for winter seasonings.

22: A poor goldenrod and aster bloom in September can cause November honey reserves to be down. Feed bees with syrup if the colonies do not have enough honey for overwintering.

23: Lunar perigee combines with full moon in two days to complicate travel throughout the country.

24: Water and mulch perennial beds to prevent drying and cold damage.

25: Full moon today is likely to intensify the final two cold fronts of November, and below-zero temperatures now become possible along and above the 40th Parallel. Thanksgiving travel will almost certainly be disrupted.

26: Average low temperatures fall below freezing in almost all of the northern and central states.

27: Sandhill cranes depart from the Midwest, flying south across the Ohio Valley.

28: The last important high-pressure system of November generally arrives around the 28th, preceded by rain or snow three years out of four.

29: Bats hibernate where insects have been killed by frost. Crows flock to winter roosts.

30: The sun's declination reaches 21 degrees 37 minutes today, just a little less than 90 percent of the way to winter equinox.

DECEMBER

1: Pastures in the southern states can still be infested with worm eggs and larvae. Keep worming your herd and flock every six to eight weeks in order to break the parasites' cycles.

2: Orchid season joins amaryllis and paperwhite seasons for the holidays.

3: Lunar apogee on the 5th is expected to soften the effects of the first December cold front.

4: Keep water for your pregnant animals between 50 and 60 degrees. They will be thirstier as the babies grow.

5: Algae growth has slowed in northern water troughs by this time in the year, but it still may be at work in the South.

Chlorinated water will help keep the algae away.

6: Make sure your bees have enough ventilation to prevent moisture condensation within the hive.

7: In the warm spells between high-pressure systems, watch for spoiled silage—a source of sick livestock in late fall and early winter.

8: Early winter, a three-week season that puts a definite end to the floral year, typically starts today and lasts until even colder conditions move in around New Year's Day.

9: The corn and soybean harvests are usually complete all around the county by the beginning of early winter, and growth of winter wheat slows in the cold.

10: The Christmas tree harvest ends, and the last poinsettias come north.

11: The moon is new today, favoring the seeding of bedding plants and cabbages, kale and collards.

12: Keep up weight and daily milking records for your herd and flock. An unexpected decline in either weight or milk production is often related to problems with feed or health.

13: Pregnant animals need to get their exercise, especially when snow and ice and bitter winds can keep a herd or flock in close quarters.

14: The Halcyon Days, a traditional two-week period of calm before the turbulence of deep winter, begin today.

15: Since winter generally brings the highest prices for goat milk, there is extra incentive to watch your production records.

16: Soil temperatures have often fallen into the mid 30s above the 40th Parallel.

17: Consider putting an entrance reducer in your hives to keep mice from coming in.

18: As you schedule estimated due dates for each of your pregnant animals, also calculate an estimated time of day for each, basing your assessment on the time of the animal's previous births or the time of day the mother gave birth to her.

19: Between this week and January 3, normal average temperatures drop one degree every four days instead of one degree every three.

20: The December 20th high-pressure wave is the first of two "white-Christmas" fronts. Perigee on the 21st is expected to strengthen this cold front.

21: The period of winter stability is setting in. In most states, average high temperatures fluctuate only about two to three degrees between December 21 and the approach of early spring in the third week of February

24: On December 24, the sun starts its ascent toward June, shifting from a declination of 23 degrees and 26 minutes to 23 degrees and 25 minutes

25: The Christmas front brings snow about half the time to the upper states in the nation, and its temperatures are brisk. Full moon today is expected to bring a bitter edge to this high-pressure system.

26: The snow and the overwintering robins pull off the honeysuckle berries. Bittersweet hulls continue to split away from their branches.

27: As the weather gets colder, wild game moves to areas where cover is thickest.

28: In most years, only eleven more severe cold fronts (seven in January, four in February) remain until the arrival of early spring.

29: Consider wrapping your beehives in black roofing paper if the winter is colder than normal.

30: Along the Gulf of Mexico, the sun is already shortening the dormancy of trees and shrubs, hurrying the gestation of spring.

31: The front that arrives at the end of the year is typically wet and windy.

LUNAR FEEDING PATTERNS FOR PEOPLE AND BEASTS OLD

Best hunting and fishing should occur with the moon above the earth. The second-best time occurs with the moon below the earth.

DATE	ABOVE; BELOW
November 1–3:	Midnight to Dawn; Afternoons
November 4–11:	Mornings; Evenings
November 12–19:	Afternoons; Midnight to Dawn
November 20–25:	Evenings; Mornings
November 26–December 2:	Midnight to Dawn; Afternoons
December 3–11:	Mornings; Evenings
December 12–18:	Afternoons; Midnight to Dawn
December 19–25:	Evenings; Mornings
December 26–31:	Midnight to Dawn; Afternoons

WINNERS OF THE SEPTEMBER-OCTOBER SCKRAMBLER SWEEPSTAKES

Prizes were promised to the 1st, the 15th, the 45th, the 56th and the 99th persons who returned the correct answers by my deadline to COUNTRYSIDE. A total of 33 correct replies were received, and Rachel Browne from Mapleton, Minnesota, was the very first. Dee Hinson was the 15th.

ANSWERS TO THE SEPTEMBER-OCTOBER SCKRAMBLER

EBSE	BEES
VIEH	HIVE
NEYHO	HONEY
TIMES	MITES
ORDOB BXO	BROOD BOX
TNISG	STING
NANINGC	CANNING
YIDRNG	DRYING
ROTARDYHED	DEHYDRATOR
LIML	MILL

SERPERUS ROKOEC
PRESSURE COOKER

UENEQ	QUEEN
LEIV	VEIL
UPRES	SUPER
EMARF	FRAME
KOMSRE	SMOKER
EZERFGNI	FREEZING
RASJ	JARS
NIRAG	GRAIN
DISL	LIDS

THE NOVEMBER-DECEMBER SCKRAMBLER

The homesteader who is able to market to people who keep the following seasons, feast days and holidays should definitely be able to increase her/his income!

DAVTEN	SAMTSIRHC
AKWAZN	HHNKKAU
AAUSHR	LA ARIJHI
GNIVIGTHNKSA	
SSLTCIOE	
CHNSEEI WEN AREY	
ARNUD RASG	TENL
EEATSE	EVORSSAP
SORH HHHNAAS	
MADNRAA	ID AL FITR

IRTARAVAN
VESTRAH OONM SEFTILAV
ROBAL ADY
DINEPNEEDECN YDA

If you are the 2nd, the 13th, the 29th or the 67th person to return your correct Sckrambler solutions by my deadline of October 10 to Poor Will, P.O. Box 431, Yellow Springs, OH 45387, you will win $5. 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. The names of any winners whose correct responses are received after my deadline to COUNTRYSIDE will appear in a later issue.

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SUPER COUPON

20% OFF

ANY SINGLE ITEM

LIMIT 1 - Save 20% on any one item purchased at our stores or HarborFreight.com or by calling 800-423-2567. *Cannot be used with other discount, coupon, gift cards, Inside Track Club membership, extended service plans or on any of the following: compressors, generators, tool storage or carts, welders, floor jacks, Towable Ride-On Trencher, Saw Mill (Item 61712/62366/67138), Predator Gas Power Items, open box items, in-store event or parking lot sale items. Not valid on prior purchases after 30 days from original purchase date with original receipt. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

SUPER COUPON

FREE

WITH ANY PURCHASE

3-1/2" SUPER BRIGHT NINE LED ALUMINUM FLASHLIGHT

LOT 69052 shown
69111/62522/62573

$6.99 VALUE

LIMIT 1 - Cannot be used with other discount, coupon or prior purchase. Coupon good at our stores, HarborFreight.com or by calling 800-423-2567. Offer good while supplies last. Shipping & Handling charges may apply if not picked up in-store. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one FREE GIFT coupon per customer per day.

SUPER COUPON

2.5 HP, 21 GALLON 125 PSI VERTICAL AIR COMPRESSOR

CENTRALPNEUMATIC

SAVE $70

LOT 67847 shown
61454/61693/62803

$149.99 REG. PRICE $219.99

LIMIT 4 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

SUPER COUPON

16 OZ. HAMMERS WITH FIBERGLASS HANDLE

PITTSBURGH

SAVE 66%

CLAW
LOT 69006
60715/60714

RIP
LOT 47873 shown
69005/61262

YOUR CHOICE! $2.99

REG. PRICE $8.99

LIMIT 7 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

WOW SUPER COUPON

2500 LB. ELECTRIC WINCH WITH WIRELESS REMOTE CONTROL

BADLAND

SAVE $90

NEW

$59.99 ~~$89.99~~ REG. PRICE $149.99

LOT 61258 shown
61840/61297
68146

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SUPER COUPON

12 VOLT, 10/2/50 AMP BATTERY CHARGER/ ENGINE STARTER

CENTECH

SAVE 62%

LOT 66783
60581/62334
60653 shown

$29.99 REG. PRICE $79.99

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SUPER COUPON

1/2" ELECTRIC IMPACT WRENCH

CHICAGO ELECTRIC POWER TOOLS

LOT 69606/61173
68099 shown

SAVE 42%

$39.99 REG. PRICE $69.99

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SUPER COUPON

12" SLIDING COMPOUND DOUBLE-BEVEL MITER SAW WITH LASER GUIDE

CHICAGO ELECTRIC POWER TOOLS

NEW

LOT 69684 shown
61776/61969/61970

SAVE $165 $134.99 REG. PRICE $299.99

LIMIT 3 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

WOW SUPER COUPON

44", 13 DRAWER INDUSTRIAL QUALITY ROLLER CABINET

LOT 62744/69387/62270
62591/68784 shown

US GENERAL PRO

SAVE $330

• Weighs 245 lbs.

$369.99 ~~$389.99~~ REG. PRICE $699.99

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SUPER COUPON

3/8" x 14 FT. GRADE 43 TOWING CHAIN

Haul Master

LOT 60658
97711 shown

Not for overhead lifting.

SAVE 55%

• 5400 lb. Capacity

$19.99 REG. PRICE $44.99

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WOW SUPER COUPON

PITTSBURGH AUTOMOTIVE

RAPID PUMP® 3 TON HEAVY DUTY STEEL FLOOR JACK

LOT 69227/62116/62584
62590/68048 shown

SAVE $80

• Weighs 74 lbs.

$79.99 ~~$89.99~~ REG. PRICE $159.99

LIMIT 3 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

SUPER COUPON

MOVER'S DOLLY

HaulMaster

LOT 60497/93888 shown
61899/62399

• 1000 lb. Capacity

SAVE 40%

$8.99 REG. PRICE $14.99

LIMIT 9 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

WOW SUPER COUPON

POWDER-FREE NITRILE GLOVES PACK OF 100

HARDY

SAVE 45%

• 5 mil. thickness

YOUR CHOICE! $6.49

~~$7.99~~ ~~$11.99~~ REG. PRICE

MEDIUM
LOT
68496/61363

LARGE
LOT
68497/61360

X-LARGE
LOT 61359
68498 shown

LIMIT 8 - Good at our stores or HarborFreight.com or by calling 800-423-2567. Cannot be used with other discount or coupon or prior purchases after 30 days from original purchase with original receipt. Offer good while supplies last. Non-transferable. Original coupon must be presented. Valid through 2/1/16. Limit one coupon per customer per day.

SUPER COUPON

NEW

900 PEAK/ 700 RUNNING WATTS 2 HP (63 CC) 2 CYCLE GAS RECREATIONAL GENERATOR

LOT 60338/62472/69381 shown

STORM CAT

SAVE $80

$99.99 REG. PRICE $179.99

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ALPACAS/LLAMAS

Missouri

WEGENER FARMS,LLC, Dawn Wegener, 3659 Rock Creek Valley Rd., High Ridge, MO 63049. 636-376-2324. <dawnquitmeyer@gmail.com> <www.wegenerfarms.com> Llamas: Champion breeding stock, herdsire, bred & open females, gelded males. Top Quality fiber, calm temperment, all GORGEOUS! Boarding available.

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Wisconsin

DREAM CHASER FARM ALPACAS, Ann & Maurice McKercher, 6106 S Dedham Rd., Foxboro, WI 54836. 715-399-8527, cell: 218-348-4823. <amckercher56@yahoo.com> <www.alpacanation.com/dreamchaserfarm.asp> Quality fiber and breeding stock for sale. $400 and up.

EARTHCARE SURI ALPACAS, Ed & Darlene Geiser, 146 N Honey Lake Rd., Burlington, WI 53105. 262-534-4091, Cell: 262-210-2081. <earthcare@wi.rr.com> <www.earthcaresuri.com> Suri alpacas. Quality bloodlines, reasonable prices, packages: 15 for 15K & others!

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Idaho

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CATTLE

Kansas

LA DORADA, Elizabeth Lundgren, DVM., 22484 W. 239 St., Spring Hill, KS 66083. <watusi@aol.com> <www.ladorada.com> Ankole-Watusi cattle.

UNDERHILL FARMS, Lynn & Karen Kaufman, 187 21st Ave., Moundridge, KS 67107. 620-345-8415. <info@underhillfarms.com> <www.underhillfarms.com> Belgian Blue Cattle.

Missouri

HIGH-LAND FARM, Harold & Jann Ramey, RR 73, Box 3549, Alton, MO 65606. 309-251-4114, Cell: 309-251-5832. <jannlr51@gmail.com> Scottish Highland Cattle.

Nebraska

REGISTERED BRITISH WHITE PARK CATTLE, Walter & Nancy Bohaty, 1371 42nd Rd., Bellwood, NE 68624. 402-367-4741. <nbohaty@gmail.com> <www.britishcattle.com>

DOGS

Oregon

AMERICAN WORKING FARMCOLLIE ASSOCIATION –A national performance registry. Tish Toren. 920-883-7430. <craftyshepherdess@gmail.com> <www.farmcollie.com> Multipurpose Farm Dogs: English & Australian Shepherds, Standard & Border Collies, Shetland Sheepdogs and Kelpies.

Tennessee

CASTLEROCK'S SPECIAL ASSISTING CANINES, Giant Schnauzer & English Springer Spaniels, livestock guardian, service dogs. Cindy Choate, Memphis, Tennessee. 901-553-9401. <castlerock003@yahoo.com> <http://castlerockspecialassistingcanines.homestead.com>

EQUINE

Ohio

STRASSERHUTEN FARMS, Robert & Corinne Strasser, 4318 Hattrick Rd., Rootstown, OH 44272-9770. 330-325-1373. <rstrasser@neo.rr.com> <www.strasserhutenfarms.com> Irish Dexter cattle, miniature donkeys. Grass-fed freezer beef for sale.

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Minnesota

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GOATS

California

AMBER WAVES Pygmy Goats. Ship Worldwide. 951-736-1076. Debbie@amberwaves.info Text Only 951-444-0074. Amber Waves offers the largest selection of registered pygmy goats and Nigerian Dwarf Goats available anywhere. We are the leading exporter of miniature goats worldwide. Whether you are looking to add a family pet or a whole herd we can help. Visitors always welcome by appointment. Herd Testing Negative for CAE, CL and Johne's. Lifetime Support Why is this important to you? ASK!

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TALL-TAIL'S, Dorothy Lovato, 4181 Leon Dr., Clayton, CA 94517. 925-672-3097. <dilovato@aircloud.net> Oberhasli & Saanens. Buck service.

Iowa

D & E DAIRY GOATS, 2977 Linn Buchanan Rd., Coggon, IA 52218. 319-350-5819. <rranch@iowatelecom.net> Alpine, Saanen & LaMancha. Selling 200 head annually.

Massachusetts

MENDING WALL FARM, Ed & Judy Lowe, PO Box 722, Assonet, MA 02702. 508-644-5088. <mendingwall@meganet.net> <www.mendingwallfarm.homestead.com> Nigerian Dwarf, Tennessee Fainting.

Pennsylvania

GOATSVILLE ACRES, Marilyn Ryan, 15 Carbondale Rd., Waymart, PA 18472. 570-488-5369. <mlryan@echoes.net> <www.goatsville.com> Purebred Mini Nubians.

HERITAGE SWINE

HOGS

Arkansas

FARMERS HEREFORD HOGS, Thomas Hardin, 13776 E. Hwy. 56, Ash Flat, AR 72513. 870-219-6285. Registered Hereford hogs.

Nebraska

MEADOWLARK FARM, Larry Rauert, 4767 N. Quandt Rd., Grand Island, NE 68801. 308-381-1518. <meadowlarkfarm@lycos.com> Registered Hereford hogs. Boars, gilts, feeder pigs, multi-bloodlines.

Wisconsin

WHITE BISON FARM, Dave & Jodi Cronauer, 5711 Karls Ln., Laona, WI 54541. 715-674-2287. <apache_jc@yahoo.com> <www.whitebisonfarm.com> Idaho Pasture Pigs, KuneKune Pigs, American Bison, Gypsy Vanner Horses.

KUNE KUNE PIGS

Pennsylvania

SCENIC RIDGE FARM, 436 Churchtown Rd Honeybrook, PA 19344. 717-725-4666. Breeding services available from Lassiter. Piglets available. Registered Kune Kune Pigs.

LARGE BLACK HOGS

Kansas

UNDERHILL FARMS, Lynn & Karen Kaufman, 187 21st Ave., Moundridge, KS 67107. 620-345-8415. <info@underhillfarms.com> <www.underhillfarms.com> Large Black hogs.

Michigan

HORTON FARMS, Robert & Christine Horton, 11650 Remick Rd., Blanchard, MI 49310. 989-561-2386. Large Black Hogs. Taking orders for breeding pairs.

Oklahoma

PARHAM PHARM LIVIN' THE DREAM, Phillip and Dena Parham, Swink, Oklahoma. 580-579-8680. <info@parhampharm.com><www.parhampharm.com> Like Us:<www.facebook.com/parhampharm?fref=nf>

Registered Large Black hogs. Registered Dexter cattle.

MINIATURE CATTLE

Colorado

TWO SHOES RANCH. Registered Miniature Herefords. Bill & Dona Shue, 696 Co. Rd. 22, Craig, CO 81625. 970-629-5761 or 970-629-5760. 2shoesranch@gmail.com http://2shoesranch.com Grass-Fed, Quality Genetics, More Meat, Less Feed.

MINIATURE LIVESTOCK

Alabama

LNL MINIFARM, Levon & Lynn Sargent, 663 Hulsey Rd., Henagar, AL 35978. 256-657-6545. <www.lnlminifarm.com> <lnlsargent@farmerstel.com> ADGA Nigerian Dwarf goats, AGHA Guinea hogs, KuneKune crosses, AMJA %Jersey, crossbred mini beef cattle & Babydoll Southdown sheep.

PIGEONS

Pennsylvania

Pigeons, a great hobby. Full color quarterly magazine. NATIONAL PIGEON ASSOCIATION 626-820-8080. www.npausa.com

POULTRY

California

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Illinois

CHICKEN SCRATCH POULTRY, Larry & Angela McEwen, RR3 Box 44, McLeansboro, IL 62859. 618-643-5602. <larry_angie@chickenscratchpoultry.com><www.chickenscratchpoultry.com> Coronation Sussex, Light Sussex, Lavender Orpington, Chocolate Orpington, Jubilee Orpington, Black Copper Marans, Blue Copper Marans, Blue Laced Red Wyandotte, Welsummers, Blue Ameraucana, Black Ameraucana, Rumpless Araucana, Olive Egger.

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