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COUNTRYSIDE

& Small Stock Journal

Volume 98 • Number 4
July/August 2014

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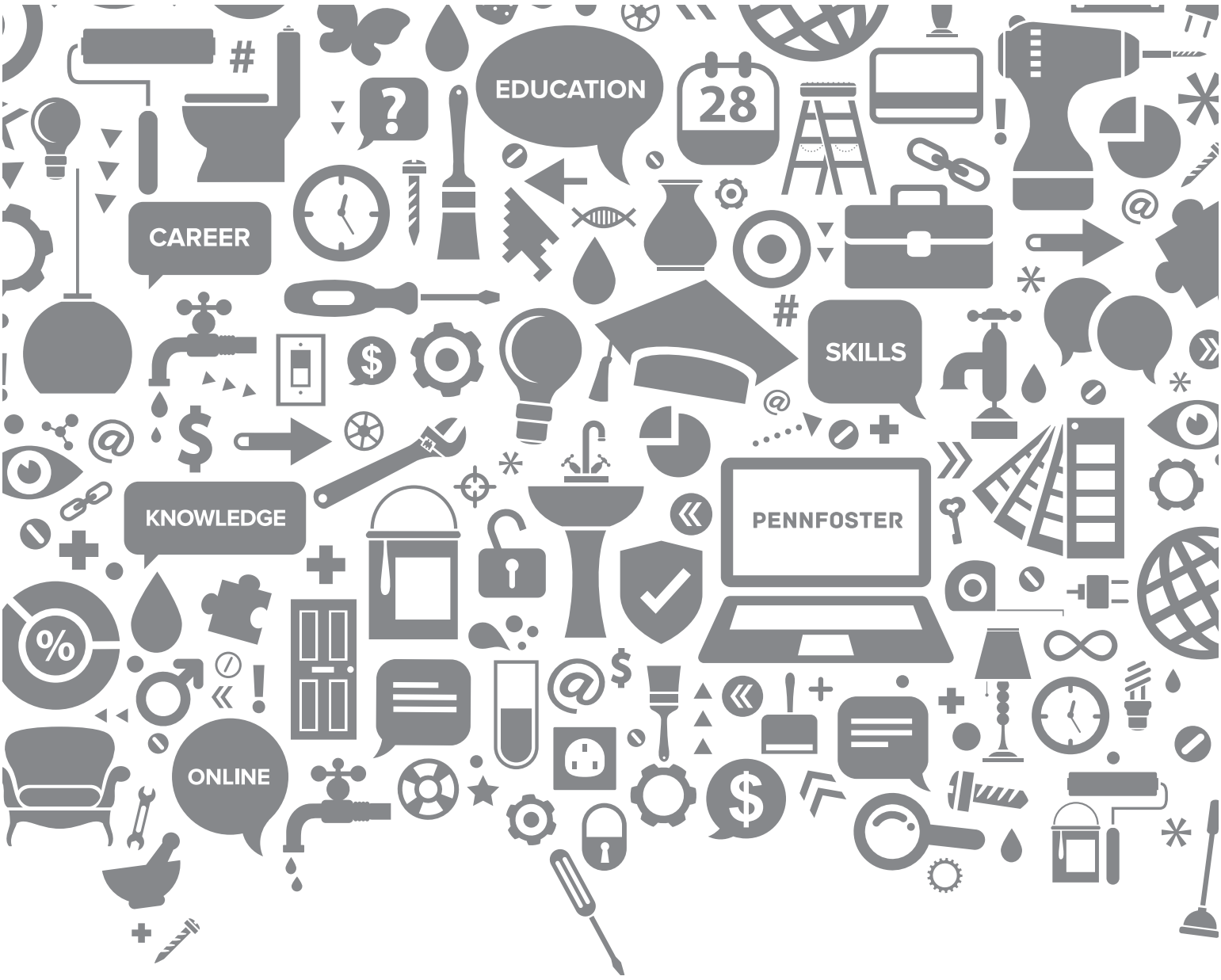

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COUNTRYSIDE

In this issue
Vol. 98 No. 4 • July/August 2014

What's happening this month on your Countryside homestead…

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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On the cover:

Looking for some added income for your homestead? Agritourism and u-pick gardens are some options to consider (pg. 39).

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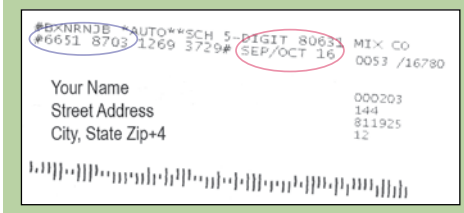

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Country conversation & feedback

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Earth is not a sandbox

COUNTRYSIDE: Regarding the article on animal agriculture and water conservation in the last issue.

Unfortunately, there is no way to eat without killing animals and other living things. In fact, people who eat only grass-fed animals kill fewer living beings than vegetarians. Here's why.

Vegetarians get much of their protein from legumes, which are annual crops that require tilling of the soil. Soil is a living ecosystem that is destroyed by tilling. Tilling kills many small animals that live in the soil—sow bugs, earthworms, nightcrawlers, earwigs, dung beetles, to name a few. These animals may not be cute, but they help create the living soil that plants, animals and humans depend on.

The soil also harbors a living web of tiny organisms such as yeasts, mycorrhizae, and bacteria. These microorganisms transform plant and animal material into water-soluble nutrition for plants. Larger animals such as rabbits, snakes, field mice, moles, voles, and shrews burrow in the soil. Have you ever noticed the flocks of turkey vultures that feast on the animals killed by a plow?

If we care for this living ecosystem, we must stop treating it like a sandbox. Let the grass and trees grow. They are the skin of Mother Earth.

And how much water is used to irrigate those peas and beans? Tilling destroys the water-retaining capabilities of the soil; much of the water runs off to rivers and away. Grassland and forests, however, hold water that seeps into the ground.

Grassland and forests store carbon. When the soil is tilled, this carbon combines with the oxygen in the air to form carbon dioxide, a major greenhouse gas. Tons of carbon dioxide enter our atmosphere this way!

Grass evolved in partnership with cows, goats, sheep, bison and other grass eaters. When we eat the grass eaters, we honor this ancient symbiosis. Eating meat is an ethical choice if meat animals are grass-fed on permanent pasture.

The health of our beautiful, blue planet depends on us making well-researched, rational choices. – *Celeste Lemire, London, Canada*

Wolfberry recipe correction:

We forgot to add the 2 teaspoons of lime juice in the last issue. The correct version is below:

Skillet Wolfberry Muffin

2 eggs
1/3 cup olive oil
2 teaspoons lime juice
½ cup water
1 ½ cups whole-wheat flour
½ cup freshly ground flax seed
1/3 cup maple syrup
1 tablespoon baking powder
1 teaspoon orange zest
¾ cup dried wolfberries
½ cup ground walnuts

Preheat oven to 350°F.

Beat eggs until fluffy. Slowly beat oil into eggs. Then beat in water and lime juice. In another bowl combine remaining ingredients. Then slowly stir the dry mixture into wet mixture. Pour batter into a seasoned, cast iron skillet. Bake 30 minutes at 350°F. Cool slightly before serving. Serve with butter, honey, or jam.

Serves 6

Cows and grain

COUNTRYSIDE: Grain fed for 30 days or more destroys a cow's rumen and their ability to produce omega-3 fat (yellow). The ability does not return. Agricultural Universities have done extensive studies on this subject and more. Little omega-3 saturated fat is produced before they are three years old. Four to six is better. We raised our last cow this way and the meat was wonderful and tender. The USDA lied 60 years ago about saturated fat being unhealthy. The beef industry wanted to sell beef at 16 to 24 months old. A UK scientist recently flatly called the USDA liars about the health effects of saturated fats. Do the research! – *H. Dezotell*

Comments on the Brandywine

COUNTRYSIDE: In response to "Big Deal—12 of the Most Overrated Garden Selections" by Mr. Jeffery Goss, Jr. in the March/April 2014 issue of COUNTRYSIDE.

I was surprised Mr. Goss considered the Brandywine tomato's flavor to be "unremarkable." I've grown

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that variety often and have been very pleased with its flavor. Even though there is no accounting for taste, I wondered if there might be more than mere individual preference behind the wide difference between Mr. Goss's perception and my own. I did some research. Two telling facts quickly emerged: the Brandywine tomato's origins are disputed, and more than one variety called Brandywine is currently in circulation.

According to Craig LeHoullier in "Brandywine and Company" at Webgrower.com, we only know one thing for certain about Brandywine's origin, that the Sudduth Strain of Brandywine "found its way" into Seed Saver's Exchange in 1982. He suggests several possible progenitors for the 1982 variety, Turner's Hybrid from Burpee, Mikado from Henderson Seeds, and a Johnson and Stokes seed named Brandywine. The result, he says, is that "numerous selections" and/or sub-strains are now "out there" (some of which are inferior in flavor or performance), with no easy way of knowing which strain you have.

William Woys Weaver in "Heirloom Tomato Varieties," *Mother Earth News,* October 4, 2013 seems certain of the true Brandywine's origins. Based on a catalog description of the tomato, he claims that "it was introduced in January 1889 by the Philadelphia seed firm of Johnson & Stokes." Nonetheless, more than one variety uses the original name. He claims that a tomato called "Red Brandywine" is genetically unrelated to the Johnson & Stokes introduction. Another variety derived from Stirling Old German is sometimes called Brandywine. He says neither of these is very flavorful. However, he judges that the true Brandywine "has the lusciousness of a Burgundy wine and tastes as though minced parsley has been scattered over it." This accords closely with my own perception of Brandywine's flavor.

I couldn't find any Internet references to the taste tests claimed by Mr. Goss to judge Dester and Vorlon tomatoes superior to Brandywine. I wonder if he would share those sources. – *Don Perkins, Missouri*

COUNTRYSIDE: Henry Leid says the Pennsylvania Dutch language "did not originally contain the words brandy or wine." This is an error. The word "brandy" comes from the German "branntwein," meaning "burned wine," so-called because it is distilled. The Brandywine River was named by the Pennsylvania Dutch (really Deutsch) supposedly for the color of its water.

Some of my ancestors were among the group of Swiss Protestants who came to an agreement with William Penn for the settlement of German-speaking immigrants in the area around Lancaster. This was in the late 17th century. – *John Vickerman, Millersville, Maryland*

COUNTRYSIDE Reunion in Indiana July 3-6, 2014

COUNTRYSIDE: We are again inviting all readers of COUNTRYSIDE magazine to our homestead, known as The Poor Farm, for a long weekend of exchanging ideas with like-minded people. We will have many homestead skills demonstrations this year, and are planning several which have not been presented here before. Come, learn, enjoy, and meet new friends. You may camp here at no charge. For your use, we have a campfire, stoves, grills, picnic tables, food preparation areas, hot and cold running water, hot showers, and a flushing toilet. Coffee and hot teas are provided each morning.

On Friday, July 4, we have a friend tentatively planning on providing a fish fry for everyone, and on Saturday, July 5, we will provide a meal, all at no charge. In recent years, most meals have become "community" events with many participating in the preparation of meals for all. You are welcome to participate in this "pitch-in" meal with other groups or may bring your own food if you prefer. We invite you to bring any ideas you would like to present to others attending so they may benefit from your knowledge. We will have a seed share-and-exchange area and welcome any (especially open-pollinated or non-hybrid) seeds you would be interested in sharing or exchanging with others. We will also have a give-away area where anyone who wants to share items (ex: old magazines, books) they don't need can offer them to others. If you have things you wish to sell, you may also bring those.

Contact information: Robert and Yvonne Hardy, 13738 N CR 10W, Gentryville, IN 47537. Email: yvonnec.0104@gmail.com. (Please put COUNTRYSIDE in the subject of the email.) Phone: Robert: 812-393-0160 or Yvonne: 812-686-3805. If no answer, please leave a message. We will return your call and provide additional information and answer any questions you may have.

Important note: Do *not* try to find your way to our homestead via Google or Yahoo maps, or with a GPS, etc. For some reason, they don't find us. Please contact us and let us know you intend to come. We will provide directions that work. This contact is also an appreciated courtesy that gives us an idea how many to expect. This helps with preparation of campsites, picnic tables, etc., since this is not a commercial campground or establishment, but a family homestead which annually welcomes COUNTRYSIDE readers to visit with and learn from each other. – *Yvonne Hardy*

They're taxing us out of the area

COUNTRYSIDE: I have not written for a long time due to poor health and other reasons. However, I felt compelled to add some information to the "High Taxes in Florida," by Miss Julie in the March/April 2014 issue.

I think at least some places in Florida want to get rid of us "low income people" to make room for the wealthy taxpayers and "snowbirds" who line their coffers with dollars.

In Marion County, where I live,

the building department is making it very hard for us to add on, repair, or upgrade our homes or outbuildings.

When you want to do the work yourself, they require things that make it very expensive and/or difficult for you to do it. I had noticed that a number of homes in our area are looking in need of repair, some even have had canvas tarps covering leaks in the roof for over a year or more.

I got the feeling that there must be more than a slow economy to account for this so I made some inquiries. First I called the building department and inquired about a permit to replace the roofing on my 9′ x 10′ back porch.

I explained that I only wanted to replace the three sheets of metal roofing that covered it. I was told the permit would cost over $125, with no refund. I would need to hire an engineer to tell me how it had to be installed and file paperwork proving that all materials met their specs. (They won't give you a copy of their requirements. So my roof would have cost around $500-plus.)

I informed the person that the 2006 requirements allowed a homeowner to repair 500 square feet of roofing without a permit, same for siding. Why had they changed everything? His answer, "Well, that's just the way it is."

I read a copy of the new "Plan Submission and Permitting Basics" and found that there is hardly anything you can do yourself without a permit. And they are looking from the air for new construction to try to catch us folks who live in the country. I found a number of people who got taken by the building dept. on permits and/or inspections. (If you do the work yourself it will never pass on the first inspection and each extra inspection will cost $85 or more.)

I also found that they will outright lie to you. One lady called about a permit to build a small deck with a roof at her back door. The guy at the building deptartment said, "If it costs less than $2,500 you don't need a permit." Thinking everything was okay, she had the deck built. Later she had

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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.*

Vinegar Diet helps mother of the Bride

This is kind of embarrassing, but here goes.

My name is Sarah Pierce. I am 58 years old, and through the years (in my mind's eye) I always thought I looked pretty decent.

Especially so when our second daughter was married. I really considered myself a rather 'smashing' Mother of the Bride.

That is, until the wedding pictures came back. I just couldn't believe it.

Here I am, definitely portly - not lean and svelte like I thought. Unfortunately the camera doesn't lie.

Since then, I heard about Emily Thacker's Vinegar Diet and decided to give it a try. What surprised me most was how much I could eat yet I was losing weight and inches. It was like I was getting thin, thinner and thinner yet with the Vinegar Diet. I just thought you should know.

- S. P., *N. Canton, Oh.*

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.

one built in the front of her mobile home (this was several years ago).

Time passed and things changed at the building department. The lady's AC unit went out and had to be replaced. The AC people did not get a permit to replace the burned out unit. (Seems you need one for everything now.)

Someone turned her in for not having a permit to fix the AC. (I found they encourage people to rat on their neighbors now—shades of the Gestapo!)

Someone from code enforcement came and informed her that everything she had built was required to have a permit. She gave them the man's name who told her it was okay to build and was informed that did not matter. Everything must be brought up to the new codes. It cost her $4,000 she did not have, to comply. The lady had to come out of retirement and take a job at Wal-Mart to pay back the bank loan.

It gets worse. An 83-year-old lady (with her husband in a nursing home) had a grand-son-in-law who offered to repair the leaking roof on her carport and extended it to cover her daughter's car. They went to the building department and applied for a permit to build and were told everything was in order and they could start anytime. The young man built the roof and called for the inspection. Of course it failed. A few days later she received a letter from the department telling her they had checked their records for her home and area, and found that a screened room, the carport roof, and a workshop/storage building that her husband had built, were without permits.

I can't say for certain, because the building department won't tell you anything they don't want you to know, but I am sure that on rural land, 30 years ago when her husband built them, a permit was not required.

Even if permits were required, they could have simply given her a fine and called things even. But not these "storm troopers." They made her tear everything down and charged her $90 for a permit to tear it down. Also, they kept her permit fee for the roof she wanted to build. The county has had the taxes she paid on the screen room and the other im-

Recipes wanted:

Are you a whiz in the kitchen?

We're looking for homemade recipes with ingredients that you can pick from the garden and as few processed ingredients as possible. Homestead raised meat, CSAs, farmers markets and foraging count, too! Be sure to include ingredient amounts, time to cook/bake/smoke, and complete instructions. (Too much information is better than not enough!) We'll compile a hearty homestead food cookbook if we get a good response.

Send your recipes (and contact info) to Countryside Recipes, 145 Industrial Dr., Medford, WI 54451 or email to: csyeditorial@countrysidemag.com.

provements for the last 30 years.

Thankfully some men from her church pitched in to tear everything down and hauled it off, or it would have cost far more.

Why would Marion County do this to people?

Well, in the area where myself and the others I gave as examples live, there is a new golf course with million dollar homes, the highway will soon be a four lane expressway, and there are rumors about a new multi-million dollar shopping complex.

Would the "powers that be" like to clear out us old folks and homesteading types to acquire our nice rural land? They may think if things are regulated and frustrating enough for us "do it yourself" types, we will give up and leave.

In Miss Julie's case, they are taxing them out of their home. In our case, I won't be surprised to learn of people's homes being condemned and declared unfit to live in. — *"Swamp Fox"*

Can I make my own essential oils?

COUNTRYSIDE: I am one of those cover-to-cover readers the minute I get each awesome issue in the mail! I am looking for information on how to extract essential oils from my home-grown herbs. I would especially be interested in building a small press if anyone has plans for one. This may be in a past issue but if so, I have been unable to track it down and would really appreciate any help you or your readers could supply. Thanks so much! — *Kirsten, Wisconsin*

There are numerous ways to express oils.

• Enfleurage consists of placing flower petals on a layer of glass spread with a thin layer of fat. The oil diffuses into the fat and the oil is extracted using alcohol. Once the alcohol evaporates, you're left with the "absolute," which is very time-consuming.

• Expressed oil is usually from fruit (orange, lemon, grapefruit), and the oil is pressed from the rind.

• Steam distillation is the method normally used, and requires some unique distillation tools to rupture the oil membranes in the plant.

• Solvent extraction uses chemicals, so that won't give you therapeutic grade essential oils. (It's mainly used in the perfume industry.)

There are a few other forms of oil extraction, but they aren't necessarily good for you or the environment.

Visit YouTube, and you'll find numerous videos of homemade distillers. There are also distillation kits available on eBay and Amazon in the $200 range. — *Source: www.experience-essential-oils.com/distilling-essential-oils.html*

Coffee roasting help needed

COUNTRYSIDE: I would like to hear from fellow homesteaders who buy green coffee beans then roast and grind them for themselves. I have a source for bulk green coffee beans and they tell me they store well for years in an airtight container. I would like to do this but all the roasters I have seen are electric and I'm working towards being off-grid.

Are there roasters that use an external heat source such as a woodstove? Or perhaps it can be done in a skillet or Dutch oven, but how hot must it be? Lehman's has a hand-cranked grinder, so that's covered. Thank you in advance for any help. contact by mail is preferred, but I do use email occasionally. — *Cameron Mecham, 1390 South Casperville Rd., Heber, UT 84032; cameron.mecham@yahoo.com.*

What else can you do with zucchini?

How many pickles can you eat?

COUNTRYSIDE: Okay, I give up! I have been preserving food for over 30 years (canning, freezing, fermenting, dehydrating) everything from bear meat to blueberries and all points in between.

For 30 years I have been trying to figure out what to do with the

infamous zucchini, other than the pickles and relish which you can only eat so much of. The most successful venture was the time I combined equal parts zucchini and tomatoes and ran it through the pressure canner. This recipe could have been greatly improved by leaving out the zucchini. My most recent effort involved dehydrating slices and then vacuum-sealing them for the freezer. As far as I am concerned, the vacuum sealer is the single best food preservation system since the invention of canning. I have eaten fish stored for over a year that tastes as fresh as the day it was caught. But…the zucchini? Foiled again! It came out leathery with a revolting flavor that cannot be described. Readers: Any advice? (Please, no zucchini bread.)

We own 130 acres in Vermont's Upper Valley, and a small vacation property in SW Oregon. Vermont is a great place in which to farm, as the working agricultural landscape is viewed as a state treasure, and receives support in the form of tax considerations, and an over-all attitude supportive of small farmers. Like many New Englanders, we hire a private forestry service to log our woods in a sustainable fashion. We have a large sugarbush and maple syrup operation, yielding around 600 gallons in a good year. While purchasing empty bottles one time, the store proprietor asked me, "Is there any money in 'sugaring'?" I replied, "Yes, my husband's." We are raising three dairy steers for 100% grass-fed beef. Since bull calves have little use in the milking barn, they can be acquired for next to nothing…well, nothing other than the powdered milk, followed by the milk replacer, followed by the tons of hay needed to get them through a northern winter, with an occasional visit from the vet thrown in. Let's not even consider our labor. Our "babies" will be butchered in the fall, and the proceeds will be used to offset some of the expenses, although I don't plan on doing the math as I fear the answer will be too depressing. In 2013 I traded horse care for a pig, and canned tuna (see below) for game meat. I plant a large garden, beginning with cool-weather greens as soon as the ground can be worked. Kale and Swiss chard are my mainstays. They plug along all summer with little or no care, can be harvested anytime, and keep going well past the first frost. Every other year I set out around 40 tomato plants which yields at least two-year's worth of product. Half a dozen cabbages usually yields enough sauerkraut for one year, although a sauerkraut abundance in 2013 has prompted me to develop new recipes and that operation will probably be expanded. Winter squash, which you set out on a manure pile in a weed patch literally needs no care, the asparagus is over and done with by June. If someone is around, we produce green beans, canned and frozen, and lately my crazy-for-corn husband has begun growing our own. Around here, that's a lot like carrying coals to Newcastle. My crops are on a three-year rotation through different, separate "garden-ettes." I like to think this is why I have been disease and pest-free.

Each June, after planting my gardens, I head out to my Oregon home, at the confluence of two wild and scenic rivers. I do this for physical, mental and spiritual health, and because I am not getting any younger. There I can 50 lbs. of tuna, which I use for gifts, for trades, as well as for our own pantry. I have been told this is the best canned tuna you will ever eat. The abundance of fruit like apricots, peaches and other delights not available in northern New England gives an added dimension to our diet, and an opportunity for new recipes. I believe I have perfected stone fruit preserves. The trade-off to this bi-coastal living is, my farming is limited to things that can fend for themselves for the summer. My husband knows his limits, and has refused to deal with a dog, or other livestock, or any crop that requires weeding or fussing. I have often thought that a book entitled something like "Just Because You Leave Town for the Summer is No Reason Not to Grow Your Own Food" might encourage other gardeners who love

the idea but cannot commit to a 24-7 work regime.

Thanks to several successful inventions dreamed up by my smart husband, we are blessed with financial independence. This is fortunate, as it should be clear that our small operation is not going to get anyone rich very soon. Indeed, there is no reason why we could not chuck it all, buy an expensive condo, and retire to the lazy-boy, other than our deep belief that ours is the way life should be—for our own health, and that of the planet. But as we approach our 70s, some things will have to give. This is the last venture into cattle raising requiring us personally to make three trips to the barn every day in sub-zero weather. We hope to turn use of our barns and pastures—free of charge—over to a young farmer with more energy than capital. (Young farmers in our area: take note!) The sad paradox of farming in America is, by the time you can afford the operation, you are too old to do the work.

I have been a Countryside subscriber for over 15 years, and always enjoy the farming and homesteading tips. But I must confess that a lot of the political commentary leaves me scratching my head. Maybe it is because we were long-term residents of Massachusetts, with the only universal, mandated health insurance system in the country, that we are bewildered by the opposition to the Affordable Care Act by the very people to whom it would provide the most benefit. For example, the young man in Oregon who is finally able to realize his dream of full-time farming because an affordable, individual health plan means he can responsibly quit his day job and know that his family will not suffer from a catastrophic health event. I invite readers who hate "Obamacare"—particularly those with a limited income—to explain how they propose to meet a health emergency without insurance. And I am not talking about "free" care at the emergency room, which simply passes the bill on to the rest of us taxpayers.

In closing, let me offer my own homesteading tip: How to produce really crisp pickles. The problem: If you process your pickles in a boiling water bath for the recommended time, you will get mush. So here is what you do: Put your vegetables, dill heads, etc.—everything except the syrup in a canning jar. Put the open jars in a water bath in a few inches of water, just to heat everything up. Meanwhile, bring your syrup to a boil. Off heat, pour the syrup into the jars as full as you can get it (forget the one inch of headroom rule). Close with hot lids and rings and let the jars sit. They will seal on their own as the liquid cools. This has proven to be as reliable a canning procedure as anything else. I use this method for jams and jellies as well as pickles. And please—I would rather not hear from the Canning Police about how unsafe it is. Anyone with some experience and common-sense can figure out when a batch has failed—look for loose lids, bulging lids or murky contents and if in doubt, throw it all away.

I look forward to hearing from readers. – *Linda B., West Fairlee, Vermont*

August 8th is National Zucchini Day. Bake a cake and celebrate with the neighbors! Then send your replies to Linda at Countryside Editorial, 145 Industrial Dr., Medford, WI 54451.

Exploding skunk deodorizer!

Countryside: Just a note concerning the skunk remedy for animals which was on page 63 in the March/April 2014 issue. While I agree the ingredients should be kept on hand, do not make this up ahead of time. The mixture can explode. – *Shawn Knieriem*

All electric heaters are not created equally

Countryside: I was looking through an old issue of Countryside and read a very dogmatic article on electric

heaters, which insisted that all heaters that have the same heat rating put out exactly the same amount of heat. In other words, all 1500-watt heaters put an equal amount of heat out into a room simply because they are using the same amount of electricity. This is actually not true. The design of the heater plays a part. A heater with a reflector behind the heating bars heats a room more quickly and keeps it warmer than an electric heater that simply blows air over the heating bars. I know this from my own experience.

Since discovering this I only use heaters that have a strongly reflective panel behind the heating bars. Reflected heat is free, doesn't add anything to the cost of creating the heat, and heats a room far more quickly to a higher temperature than an old style blow heater will ever reach. – *Marls Dudley, Woodstock, New York*

Bread baking in a slow-cooker

COUNTRYSIDE: This is for the Canadian reader. Yes, you can make bread in a slow cooker. I live in Oklahoma and the summers are blistering—not exactly the time you want to run an oven. I started researching slow-cooker bread as a way to keep my house and kitchen cool. There are a lot of slow cooker bread recipes on the Internet, but the best I found was on the artisan bread in five minutes a day website (www.artisanbreadinfive.com). Good luck. – *Barbara M.*

***Artisan Bread in Five Minutes a Day: The Discovery That Revolutionizes Home Baking* by Jeff Hertzberg, MD, Zoë François. St. Martin's Press, 2007; ISBN: 0312362919, 9780312362911. (There is also a gluten-free version.) Available from Barnes & Noble or Amazon.**

A little give & take

COUNTRYSIDE: Does anyone need good quilt patterns for embroiderers, baby quilts, etc.? I also have copies of pieced quilts from the 1930s. I am looking for an old working View Master and reels to buy; a set (or singles) of

the "*Foxfire*" books from the 1970s by Eliot Wigginton; old stencils of any kind; used greeting card fronts of scenery, flowers or animals; and heirloom seeds. Let me know what you want and need, and I may find it at one of the several thrift stores in my area. – *S. Smith, 2981 W 700 S, Morocco, IN 47963*

Kudos for kids on the farm

COUNTRYSIDE: My husband and I have been farming for over 50 years. We can say that there have been good and horrible times, but we do it because we love it. I want to thank Ruth of North Dakota for that great article. I, too, would love to see more young people in this occupation, and that is actually what it is. It is a 24/7 job and not everyone can do it. My two sons and my daughter do most of the work now and hopefully it will continue for years. – *Alexis, North Carolina*

How strong is your core?

COUNTRYSIDE: Stretching is a very good thing to do. It depends on who you ask whether to do it before or after exercise, but in my experience before and after are both good. However, stretching is only part of what you need to do; exercises that work your core (back and abdominal muscles) are equally important. Keeping a strong core means that when you go out and bend over in the garden, your back won't kill you afterwards, you're less likely to fall, and your posture is better.

Planks are easily accessible exercises (like a push-up, but hold yourself in the "up" position as long as possible), and things like crunches, reverse crunches, etc., all help keep critical muscles strong. Most take nothing more than a few minutes (as long as small children and dogs don't try to "help"). — *Karen, Woodinville*

We want to hear from you! Send letters/photos to: csyeditorial@tds.net.

Budget numbers correction

COUNTRYSIDE: In the Jan/Feb 2011 issue a letter writer stated, "Our President quadrupled our national debt in his first 90 days in office." That statement needed correction then and since the Republicans in Congress are still hammering the balance the budget issue, that kind of outrageous misinformation still needs correction because too many people believe it. Here are the facts recently published by *Forbes* magazine comparing the percentage rate of growth of the national debt during recent Administrations:

Reagan, 1st term: 6.7%
Reagan, 2nd term: 4.9%
Bush Senior, 5.4%
Clinton, 1st term 3.2%
Clinton, 2nd term 3.9%
Bush Junior, 1st term 7.3%
Bush Junior, 2nd term 8.1%
Obama, so far 1.4%

These are the performances calculated by a respected magazine. — *John Bender, New York*

Nails as mosquito repellent?

Only if they contain zinc

COUNTRYSIDE: Two years ago while working on our barn I mistakenly left two containers of fasteners out in the weather and they filled with rain and stayed that way. One had uncoated nails in it, the other galvanized roofing screws. When I finally went looking for them I found that the container with the uncoated nails (right next to the other one) was full of nice green water and mosquito larva, naturally. However, the one with the galvanized screws had clear water and no mosquitos. Last summer I left a pan out, this time intentionally, all summer with some scrap pieces of galvanized electric fence wire in the bottom and it also stayed clear and had no larva. Has anyone else noticed this or does someone have an explanation? I have enjoyed your magazine for years

and it's pretty much the only thing I look forward to receiving in the mail. *– David Bishop, Georgia*

The process of galvanizing puts a layer of zinc on metal to prevent it from rusting, and zinc is a mosquito repellent, as it seems to mess with their reproduction. If you have an inquiring mind, read the paper "The Accumulation of Zinc by the Mosquito," http://jgp.rupress.org/content/46/3/617.full.pdf.

A peek at country life changed him

Countryside: I've just read the latest issue of Countryside and I am very impressed.

I grew up in Milwaukee, Wisconsin, and lived in public housing projects for a significant portion of my life. Gangs, drugs, and murders were considered normal in my neighborhood. My parents tried their best to shelter my siblings and me from those evils, but needless to say, the lure of the street life consumed my young mind in short order. My parents, trying to get me away from the road of destruction on which I was headed, allowed a family friend to take me to his Wisconsin farm for the day. It was there where I fell in love. At first I felt a little weird being the only African American among all those white people, but they made me feel so welcomed that I decided to lower my guard. There were about four or five other kids around my age who lived on the farm, so I had a chance to do kid-stuff—country style!

I remember one of the kids giving me a pocket knife (in front of the adults!) and when I looked around, all the kids had pocket knives. I was amazed.

A child has been deprived of a great joy if he/she has never experienced playing hide-and-seek in a cornfield! And the food they cooked was absolutely wonderful. I never went hungry at home, but their regular dinner was like our Thanksgiving. When I got home I was exhausted from the day's activities, and I didn't realize how much that day would affect my life.

Fast forward a few years, and I was back in the hustle of city life. I joined the military in hopes of finding a way out of the life I was living, but I didn't make the most of that opportunity and was discharged. Then my life spun totally out of control and I was incarcerated for robbery and carjacking—at the age of 22.

I've made a conscious decision to change my life. I'm a trained carpenter and I've just completed the electrical course. (I did so well my teacher hired me as his tutor to teach other inmates.) I now want to own my own farm. I don't want to raise children in the same environment I grew up in. So I set out to learn everything I can about farming.

I realize I will not be able to jump from a book into the field. I hope to find a farm that would be willing to take me on as a hired hand, so I can learn the ropes from their operation until I feel comfortable enough to branch off on my own. But until then, I'm focusing on my relationship with God and how to clean chicken coops. — *Roy Crockett, Jr., Washington*

Alternative energy:

Inverters

Change DC current to AC

By Dan Fink
Colorado

The combination of a solar electric array, battery bank and charge controller can make and store a lot of energy in an orderly fashion, but there are only a limited number of ways to power anything directly from batteries. Gadgets called inverters convert this stored energy to a much more convenient and usable form: the standard 120-volt AC "house current" we are so familiar with in our homes and businesses.

Inverters change direct current (DC) into alternating current (AC). This means that no special electrical equipment or knowledge are needed within a structure to convert it to renewable energy supply—any electrician or skilled homeowner knows how to install the standard AC house wiring for outlets, switches and fixtures. The inverter output circuits connect to the main home breaker panel just like a feed from the utility grid.

Choosing an inverter

Pull into any truck stop in the USA and you'll likely see a variety of small inverters for sale in the display case, ranging in price from $50 to $500. Which one will work to provide power for your remote home or cabin? Unfortunately the answer is, *none of them*. These "portable" inverters are designed to run only items plugged into the 120-volt AC sockets on their front panel (Illustration 1). If you rig a 120-volt AC plug from the inverter that runs to a home breaker box as so many people try, you'll create a shock hazard and could ruin the inverter itself too. To run a home, you'll need an inverter specifically designed to be hard-wired into the breaker panel. It will be more expensive and much heavier in weight, but there are still many options that won't break the bank. You won't find any of them at a truck stop, though—you'll need to contact a renewable energy dealer, either locally or online.

Illustration 1: A portable inverter like this one will work great in your car, truck or boat, but can't be connected to a residential electrical panel. *Photo courtesy Coleman Corporation*

Off-grid, on-grid or both?

If your plan is to connect to the grid and sell your extra generated energy back to the utility, you'll need a specific type of inverter and your electric utility must approve your install. They'll have to put in their own special two-way meter, you'll have to sign a pile of paperwork and the utility will likely require a licensed electrician to sign off on your system. There are two types of grid-tied inverter, often called "direct" and "islanding."

Direct grid-tie inverters don't use battery backup, so if there's a grid blackout you won't have power in your home *even if the sun is shining on your solar array*. That's a big surprise to some folks, but the main reason is simply safety for utility workers. During a grid blackout they are out there climbing poles and splicing wires, and don't want to get zapped by the power your solar array is trying to send out into the grid. There is one new direct grid-tie inverter out there that can provide a limited amount of power during blackouts when the sun is shining, without a battery bank, but for the most part when the grid is down, so is your house, unless you have a backup generator.

Islanding inverters are far more versatile—if the grid goes down into a blackout, they completely disconnect from it and supply power to your home from your battery bank, giving you a little "island" of light in midst of a sea of frustrated, blacked-out neighbors. They all will likely migrate to your house anyway to

Illustration 2: Stacked inverters to provide 240-volt output. *Photo courtesy Outback Power*

Modified sine wave madness

It all started with my much-anticipated upgrade from a propane refrigerator to a brand new, high efficiency electric one. The addition of another 800 watts of solar electric to my off-grid system made it possible. Automatic defrost! A big freezer! And little lights that come on when I open the doors—no more fumbling around with a flashlight, and no more accidentally mistaking the carton of chicken broth for the carton of soy milk at 5:00 a.m., trying to make coffee.

The big burly fellows from Lowes who delivered the fridge weren't exactly happy about the long, bumpy drive up here to the mountain or having to take my front door off the hinges to bring in the fridge, and were even less happy when we plugged the thing in and…it didn't work. One of them obviously had some experience, and asked "That isn't a GFCI outlet, is it? These new fridges don't work on a GFCI. Says so right in the owner's manual." That's short for Ground Fault Circuit Interrupter, and sure enough, though the outlet itself wasn't GFCI, it was downstream from one that was. I grabbed my portable generator, plugged the fridge into that, it worked fine, and those gentlemen left with a healthy tip.

My venerable 1500-watt modified sine wave inverter had no problem starting the fridge compressor, so I filled it with food and reveled in the luxury of electric refrigeration. After about a week, though, something seemed fishy. Literally, in fact…those trout I had in there were starting to smell a bit "off" and the fridge didn't seem very cold. I procured a pair of thermometers and over the next couple days the freezer temperature got down to 35 below zero, while the fridge compartment came up to room temperature. Uh oh.

It turned out that the computer "brain" in the new fridge couldn't handle the modified square wave from my old inverter—the defrost cycle wouldn't turn on, and the plenum between the fridge and freezer had filled with ice crystals. Running the fridge off the portable generator for a few hours proved this.

My next step was to buy an inexpensive 1000-watt portable pure sine wave inverter; I figured to run the fridge via an extension cord until I could afford a bigger one that would run the whole house. Unfortunately, even though the nameplate wattage on the fridge was only 350 watts, the little inverter couldn't start the compressor. In desperation, I ended up breaking into the piggy bank and shelling out the money for the bigger, modern inverter I really needed—and I have no regrets. It's a huge improvement.

Because of the more friendly waveform, the fridge now runs fine, all my lights and appliances are now using about 10 to 15 percent less energy than before, and I have excellent power quality compared to the old inverter, which caused a buzz in my stereo and other issues. The portable sine wave inverter has been re-purposed to charge cordless tool batteries from my truck alternator at jobsites. And when I open the fridge for a midnight snack, a little light comes on!

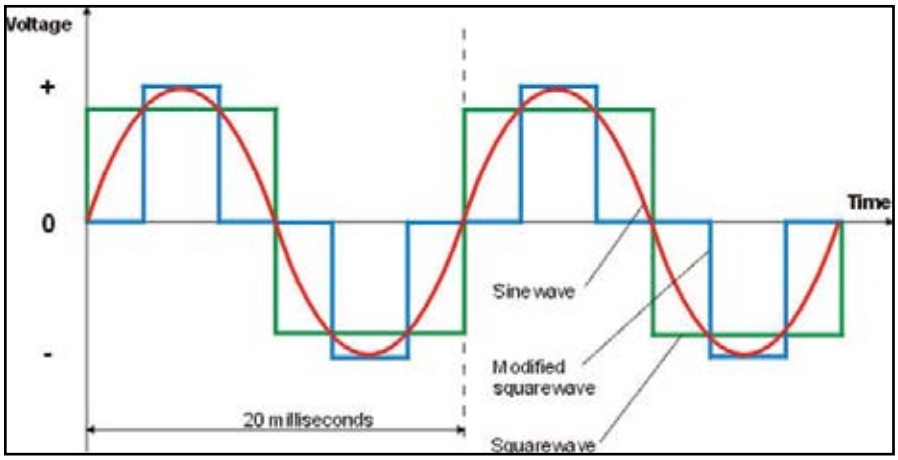

Illustration 3: A comparison of a sine wave, square wave and modified square wave. *Courtesy Panelectron Ltd.*

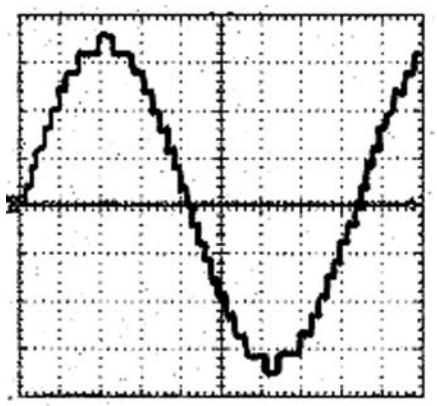

Illustration 4: Stepped sine wave approximation from a modern "sine wave" inverter. *Courtesy Ray Walters, Solarray.com*

watch the big game or charge their mobile devices, so make sure your critical load subpanel is in order so they don't suck your system dry (Countryside Volume 97, Number 6, November/December 2013). All islanding inverters also have battery chargers built in, so you can also fill your battery bank via a backup generator when needed.

Off-grid inverters are just that; they can't sell power to the grid. But most *do* have battery chargers built in, which can be run via generator or a grid connection. There isn't much price difference between off-grid and islanding inverters until you get into smaller sizes, so many off-grid homes use the latter, with the option there to connect to the grid if it ever becomes available at a reasonable price.

120-volt or 240-volt?

Most off-grid homes don't have many 240-volt circuits, as appliances that use 240v are generally power hogs and usually avoided—for example electric ranges, clothes dryers, and the like. However, many off-grid dwellers require a few common 240v loads, such as a welder in the shop and a well pump. The cheapest option for these is to simply power them from a fossil fuel generator when needed. Some larger inverters supply 240v output, and with most brands two inverters can be "stacked" to provide 240v (Illustrations 2 and 5), with multiple stacks possible to increase maximum output wattage. Another option is a 240-volt "auto-transformer" running from a 120v inverter, which is cheaper than stacked inverters but also less powerful.

A standard home breaker panel is wired for 240-volt input from the utility grid; each side of the panel is wired into one 120v "leg" of the grid. However the National Electrical Code allows you to install a jumper between the two sides on an off-grid system and power the panel from a single 120-volt inverter, as long as any existing 240v outlets are removed and the panel is clearly labeled "*Single 120-volt supply. Do not connect multi-wire branch circuits.*"

Which inverter waveform?

When you start shopping for inverters, you'll see the terms "sine wave" and "modified sine wave" prominently, with the modified version being quite a bit cheaper. In the world of inverter reality, though, both terms are inaccurate and somewhat misleading.

With only a couple rare (and expensive) inverter exceptions, the only place you'll find a "pure sine wave" is from the utility grid or a backup generator. Back in the day, inverters could only produce a "square wave." It was noisy and inefficient, and sensitive electronics didn't deal with it very well, either overheating or refusing to run at all. The problem is those quick voltage rises and drops on each wave cycle.

Modified sine wave inverters should really be called "modified square wave." They smooth the waveform out a bit, but are nowhere near a real sine wave. Illustration 3 compares all three waveforms. Some electronic devices may still have problems with modified square wave inverters (see the sidebar), and many items will see an efficiency loss of 10 to 20 percent. The waveform may also cause interference to radio and TV signals. Modified square wave inverters still have their place—they are very affordable for smaller systems, and are most often used in campers, RVs and cabins where a more expensive inverter doesn't make sense.

Modern "sine wave" inverters give a close approximation of a pure sine wave by using numerous small steps to simulate a smooth curve (Illustration 4). I have never received complaints from any clients about appliances refusing to run on a modern sine wave inverter, though interference in AM radio and sensitive recording studio equipment has been reported. In these cases, folks often choose to run the ham radio shack or recording studio from a separate (and expensive) "true" pure sine wave inverter.

Sizing an inverter

At first glance, sizing an inverter seems easy. Just add up the name-

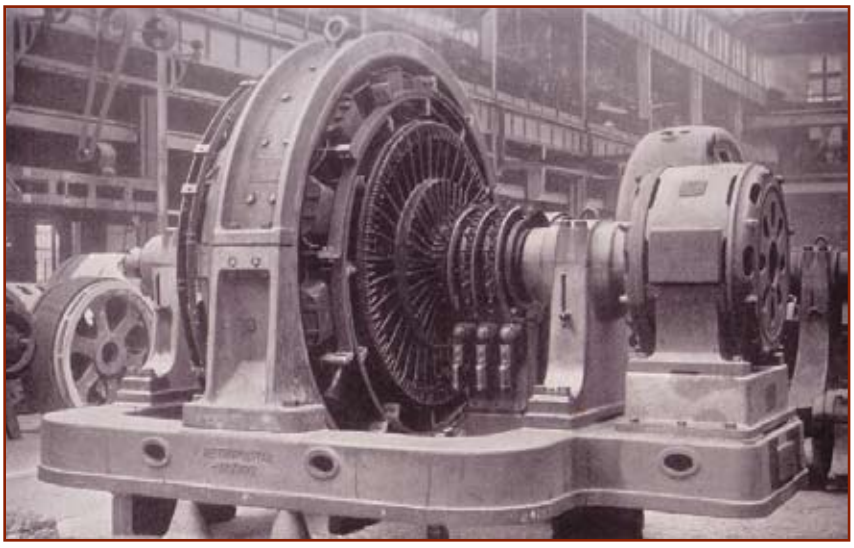

Illustration 6: A rotary power converter to change AC into DC to power electric trains.

Why is it called an "inverter?"

Because inverters convert direct current (DC) electricity from a battery into alternating current (AC), doesn't it seem more logical to call them "converters" instead? As it turns out, that name was already taken and the story is pretty interesting.

Back before the advent of semiconductors, the only way to convert electrical energy from AC to DC and back was through a complex, rotary mechanical switch called a "commutator." Big city trains, trolleys and trams ran on DC power because that way their speed could be controlled by adjusting the voltage fed to their motors, but the massive amounts of power needed to run them were produced by AC generation stations.

Big rotary "converters" with giant commutators (illustration 6) were used to accomplish this for the trains. As is turned out, converters could also be fed with DC power and produce AC on the other side by inverting the connections—an inverted converter, with the name now thankfully shortened to "inverter."

plate wattage rating of everything that might be running in your home at the same time, and select an inverter (or stack of inverters) with about 20 percent higher capacity to minimize wear and tear. For most efficient off-grid homes a maximum capacity of about 4000-watts is very typical, and many inverters are available in this size range. Inverters with less capacity are always a more affordable option, too, but may require some lifestyle changes on your part. My smallish house has a smallish solar and wind power system, so I went with a 2000-watt inverter. It's all I need—*most* of the time. I can run the rice cooker, microwave, lights *and* the television at the same time while making dinner, but there's not much capacity left over. If someone were to start a power tool or the vacuum cleaner during all that, the inverter could cope for a couple of minutes, but would then shut down and need to be reset (with no damage done).

You'll also have to consider the factor of "surge" or "start-up" current from different appliances and other loads. Well pumps and power tools

Illustration 5: Four inverters stacked to provide 240-volt output at double the power. *Courtesy Magnum Energy*

are the worst, often drawing three to four times (or more) their continuous operating current to start spinning. Even household appliances like refrigerators can pull a significant startup surge; my fridge is rated at 350 watts maximum load on the nameplate, but a 1000 watt inverter is unable to get it started.

Most inverters do have a "surge rating," for example a 4000-watt inverter might be rated at 6000 watts for 5 minutes. But these ratings don't factor in how intense of a surge they can deal with. It's best to buy your inverter from a reputable renewable energy dealer who has first-hand experience with what loads different inverters can handle. Also note that the higher your system battery bank voltage is, the better the inverter can deal with heavy surge loads. This is yet another reason 48-volt battery banks are by far the most common these days and 12-volt systems are now only used for very tiny systems (Countryside *Volume 98, Number 3, May/June 2014 issue*).

Power saving modes

Modern inverters are very efficient, in most cases over 90 percent when supplying loads. But they do draw power whenever they are connected to the system, even if no loads are running. So, most inverters have a power-saving "search" mode that uses only a minuscule amount of power until a load is sensed, and the inverter immediately comes up to full power. In larger off-grid homes that feature is often disabled, but with smaller systems where strict energy conservation is needed, it can be very handy.

Which brand of inverter is best?

I'm happy to say that if you buy a non-portable inverter from a reputable renewable energy equipment dealer instead of a truck stop, *all* of your choices are excellent, sturdy and long-lasting products with solid technical support, warranty and repair policies. Outback, Magnum, SMA and Xantrex (Schneider Electric) are the main players in the off-grid inverter market, with many other brands available for direct grid-tie systems without battery banks.

You may end up inverter shopping by price, but do try to seek some advice from a renewable energy professional. I have a particular brand of inverter I prefer simply because the remote display and programming unit is so simple and foolproof to work with—I can usually walk clients through diagnosing problems and changing settings right over the phone with no need for an expensive site visit.

Back in the day…

Every time I install a new inverter, I think back to when they were so expensive, inefficient and recalcitrant that 12-volt DC house wiring and cigarette light plug sockets were the norm. Modern inverters are a marvel for off-grid and grid-tied homeowners alike, and make off-grid life "just like living in town"—as long as you pay attention to how much energy you generate versus how much you use.

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Alternative energy:

You have the power

All you really need to know about off-grid solar

By Jacki Rigoni

Last year at this time, our family of five was living in a 2,000 square foot suburban home. We turned on the faucet. Water came out. We turned on the blow dryer. Hot air blew. Laptops, tv, microwave, espresso maker—they were all plugged in 'round the clock and at the ready. We didn't think much about where our energy came from or how much we were using. Didn't need to.

That changed last summer, when we decided that being in debt for 30 years was someone else's American Dream. We donated truckloads of our possessions, sold the house, and bought nine acres in the sticks. Our American Dream, paid in full.

We plopped down a used RV as our temporary shelter while we prepared to put up a geodesic dome. We were excited about divesting from the power grid and being totally independent. We had two solar panels installed at the RV dealer and bought a hefty generator for back-up, so we'd have enough power to cover our basics—two laptops, two cell phones, an Internet dish screwed to the manzanita tree, a VoIP phone, a cell phone signal repeater and some lights. And that's when we got our Lesson One in off-grid solar power. If you want AC power to plug into outlets, you need an inverter. Without it, the panels only deliver DC power, which amounted to a few of our RV ceiling lights.

Now, if you drop everything to go live in the sticks, you've got to be good at hacking, winging it, and DIY. That's us. Geez, my husband even works as a licensed electrician. But, boy, did we feel like novices when it came to solar electricity. Suddenly, we had to think hard about getting and using energy.

Limits of a basic system

We set to work watching YouTube videos and crash coursing in off-grid solar. We were able to set up a simple system with 12V batteries from the auto store and an inverter from the electronics store.

I gave away the last of the appliance hold-outs—my beloved espresso maker, the toaster, my blow dryer—and figured out how to make coffee on the stovetop, make toast on a cast iron skillet and, well, yeah, my hair is rocking the air-dry homesteader look. Even with our energy use drastically cut, we turn on the generator every night for a half hour to charge up. Not the same as solar power, but it's getting us through.

Now, the geodesic dome is up and the initial romantic appeal of living in an RV with three kids has waned. Needless to say, we're impatient to live in the dome with some proper solar power that can support even our reduced power needs. Our DIY solar experiment has taught us that, sure, we can hack something together that does the job, but if you want to get it done right, and fast, you need a little help from someone who knows what they're doing.

DIY vs. hiring an expert

After calling around to a few solar companies, we got our Lesson Two in off-grid solar. Most of the mainstream companies are only set up for solar that's tied to the grid. Finally, I found Farrel Williams of Apex Solar (apxsolar.com), specializing in off-grid solar systems for self-reliant, off-grid homesteaders like us, both locally in California and around the U.S. It quickly became clear that: a) an off-grid solar is a whole different beast than grid-tied; and, b) this guy knew what he was talking about. Here's what we learned:

The variables are endless. It's not as easy as hooking up some panels, some batteries and an inverter like our RV system. While we learned a lot about how solar works, our solar training wheels were extremely limited and inefficient, requiring generator back-up more often than not.

In fact, there's a ridiculous number of components and manufacturers. For optimal performance, each needs to be chosen and programmed for your specific circumstances. To be factored in are: how many batteries you need, what type of batteries you need, your weather conditions, how much interaction you want with your system, and, of course, how much sun you get. As much art as science, designing the right system is a big part of getting it to work optimally, over time.

You are the power company. With a grid-tied system, the electric company is essentially your back-up generator. When your power's down, someone's working on it. With an off-grid system, though, you're your own power company. If you lose power at two a.m., you need to know your system. That starts with looking at what your system is doing at different times of day, noticing trends and recognizing anomalies before they become problems.

The real world is not in the manual. Even if you could get through the fat manuals that come with panels and components, you wouldn't know everything you need to know about setting up and troubleshooting your system. Even the tech folks who make the equipment think in terms of "If A, then B." But that's not what happens

Clean energy's dirty little secret

Off-grid solar energy isn't as green as all the marketing hype wants us to think. While the sun's power is renewable, at least as long as the sun keeps coming up, the panels themselves are likely produced with toxic chemicals like lead and cadmium.

Also, the battery used to store the energy has a life cycle that comes to an end. Batteries can be recycled, but there's no getting around the fact that these things contain dangerous acids and toxic chemicals like lead that can eventually end up in the environment.

Luckily, non-toxic battery options are becoming more available. And even considering the toxic materials, solar power is still way less polluting than conventional power from coal or natural gas.

in an off-grid situation. There are lots of ways of coming at a problem depending on the real world factors.

Our Lesson Three: even DIY-ers are better off calling in an off-grid expert to design even a small system for getting the most out of solar power. And even after it's set up, keep his number handy. The other option, even for an experienced electrician, as we learned, is starting simply, blowing through a few sets of batteries, years of learning curve ahead, compromised efficiency along the way, and as a result, blowing through more money than you needed to, as well.

What you do need to know

So if you're not going to do it for yourself from the ground up, what do you need to know? More importantly for our homestead-hacking pride, how can you have the most ownership and control over your solar power? Here's what it comes down to:

Do your homework. Read as much as you can online, in books, in

Off-grid solar: the basic components

Solar Panels: Collect energy from the sun and convert it to an electric current.

Battery Bank: Stores energy from panels to use after the sun sets or on a cloudy day.

Inverter: Changes DC power produced by the panels into AC power that we plug our everyday appliances into at outlets.

Charge Controller: Regulates power to battery bank to keep it from overcharging.

Generator: Gas-powered energy source that kicks in when batteries get too low.

magazines. Watch DIY YouTube videos on off-grid solar. Learn about all the components. Read homesteader blogs to learn about how others are doing it. That way, you'll start ahead. And you'll know if your off-grid solar partner really knows their stuff.

Set your power expectations. Know how you want to use your electricity. Do you want to live as though you're in your 10,000 square foot grid-tied home and not have to think about it? Or do you want one light bulb in your one-room cabin? Turns out even getting away to the cabin on weekends versus living in it full time affects the parameters of the system.

Adjust your expectations. Huge factories and whole towns are run off-grid. Question is, how much money do you have? This is where you take a hard look at what you really need. For example, air conditioning doubles both the entire load and the cost. So start closing the gap between money and expectations. Where those two meet is where your ideal system is. Good thing I already came to terms with my homesteader hair.

Some things, you can DIY. There's a lot of room to put in some sweat equity. For example, you can dig the trenches for conduit and knock off a lot, instead of paying to have an electrician do it. Roll up your sleeves and do some of the dirty work. If you really want to do it yourself, get the system custom-designed, assembled, programmed, and tested by your off-grid provider for you to install.

Watch and learn. If you're not doing it yourself, be there for the install and ask a lot of questions. A good off-grid installer should be happy to show you the ropes and walk you through what they're doing. They know that an informed owner translates into a system that runs better.

Monitor the system. After the install, you're in the honeymoon phase. Understand that this is the best your system will ever work. It's only going to go downhill from here. Know what the best looks like and keep an eye on it as things change.

Maintain the system. Renewable energy is somewhat of a misnomer. At some point, you'll need to replace those batteries. And like any electrical system, components can wear out over time. Just remember that this isn't a case of set it and forget it. Your best DIY skills actually come in handy in maintaining your system. Make sure your installer shows you how.

We're almost ready to pull the trigger and make the move from our RV to our tiny home-dome. With our commitment to paying as we go and not ever again having debt, it'll be a few months before we can work with the folks at Apex Solar to customize and install a system. At least now we feel like we have a better handle on what we're getting into. Though if it's like everything else we've done since moving to the sticks, there will still be plenty to learn the hard way.

About the author

Jacki Rigoni is a freelance writer and recovering Silicon Valley suburbanite, newly living off-grid with her husband and three kids in the mountains of Morgan Hill, California. She blogs insightfully and often humorously about their steep learning curve at postconsumerlife.com.

Alternative energy:

Whaddya mean, burn smoke?

By Ben Hoffman

Just what I said, burn smoke. If you burn wood, chances are 35-50% of the energy in the wood goes up the chimney as creosote, gases and smoke. Wood gasification furnaces burn everything at high temperatures and reduce your wood chopping (about 40% less wood) and air pollution. It's a win-win, muscle and time saving opportunity. And no more chimney fires!

Wood gasification has been around for years, used by the Germans and Russians to power trucks during World War II and now adapted to heating and electricity generation. It's big in Europe because of their shortage of energy resources, the high cost of oil and the need to reduce emissions from burning coal. A few commercial wood stoves use the technology, even some sugar arches, and there are a few American furnace manufacturers. But gasification furnaces are mass produced in Europe at low cost and with a proven track record. Google "wood gasification furnaces" on the Internet and you'll be surprised at what comes up.

At my age, I am getting tired of logging, cutting, splitting and stacking firewood (and nearing the age that I won't be able to do it). But $600 last year for oil to heat domestic hot water was the straw that broke the camel's back. So I bought a small (89,000 BTU) wood gasification furnace that burns wood and its gases at 1,800-2,000 degrees. By hitching this furnace to a used, 500-gallon propane tank full of water, I can run the furnace flat out for eight hours, heat the water, then circulate the water for a day (cold) or two (mild). By insulating and enclosing the tank, it loses less than one degree an hour in sub-zero weather.

My furnace (left) and domestic water heater (right). Just to the right of the furnace is my old oil furnace, a backup when away from home.

In mild weather (30-40°F) I make a fire every 1-1/2 to two days, but at 15°F below, I fire daily and keep it going until the weather moderates. With my boiler set at 190°F, I can maintain a constant fire by reloading the firebox every five to eight hours. That keeps my tank at 165°F, a good temperature for both heat and hot water. In summer, one fire a week should suffice for domestic hot water. Plus, I can schedule fires when convenient. You can also get outdoor wood gasifiers, but the heat loss from my furnace and tank keeps my cellar warm (and dry) rather than warming the man in the moon. Power outages can be a problem, for once you get gasification, you must keep water circulating until the fire goes out, otherwise the furnace can overheat. My solution was a small solar back-up (two panels) for the furnace, emergency lighting and freezers.

Gasifiers cost about the same as normal wood furnaces, but water storage lets you run the fire at max and store the heat for use as needed. Insulated tanks cost upwards of $2,000 so I found a used propane tank and insulated it heavily. Open (non-pressure) tanks are cheaper but allow oxygen into the system that corrodes cast iron boilers. Pressurized systems eliminate this problem. You can use heat exchangers with open tanks, but they raise the cost. And if you have a wood furnace, adding a tank and burning wood with more draft/higher temperatures may greatly reduce your wood needs by burning it more efficiently. My 89,000 BTU furnace is too small, so in sub-zero weather I run the fire more hours and sometimes use the kitchen cook stove on bitter cold mornings. I also keep a log of outside, boiler, tank and return temperatures to guide me in when and how long to run a fire.

You can use a gasifier without a tank but that means running a fire constantly. Without a tank, when boiler water temperature reaches the top, the fire shuts down and "idles" until there is a demand for more heat, then the fan comes on for both burning and gasifying. The only advantage of the tank is to be able to store heat in warm weather and not have to build fires as often. You can also use a gasifier with hot air heat by placing a water-to-air heat exchanger (a high efficiency radiator) in the

The flame in the combustion chamber is much like a blowtorch, burning wood, smoke and gases at 1800-2000F.

plenum chamber.

There is much info on the net about burning wood, but the best I found was at www.caleffi.com. Caleffi manufactures quality plumbing/heating fixtures and each year publishes a booklet online entitled *Idronics*. The 2012 edition has everything you need to know about burning wood. Unless you can find an installer with experience in gasification and water storage systems, download this booklet—an absolute must, for both of you. Gasifiers will work without a tank. The fire is active while there is a demand for heat and it idles when there is no demand. And you can use a gasifier for hot air heat by installing a water-to-air heat exchanger (a super efficient radiator) in the plenum chamber of your hot air furnace.

Gasification offers a chance to cut your wood needs by about 40% and it's nice to look at a smokeless chimney on a cold day—all of the heat and potential global warming stays in the house.

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FIRE!

What you need to know about emergency evacuations and livestock.

By Mary Wilson
Half Creek Farm
Bickleton, Washington
halfcreekfarm@gmail.com

The year 2013 was an informative and challenging year for Half Creek Farm in Bickleton, Washington. In late July and early August, we got our first "opportunity" to give farm evacuation a try. We pretty much sucked at it.

I raise Kiko meat goats, British White cattle, and Gotland sheep. I have a llama and a Holstein heifer. We also run a small herd of British Guernsey milk goats, a zillion free-range chickens, ducks, geese and three dogs.

Our animals are generally very gentle and used to us handling and touching them. We don't have any craziness here (in the livestock sense). This fact led me to anticipate that should I ever need to evacuate, it would be a fairly simple thing to load all my gentle, well-behaved animals into the horse trailers and canopy and, away we'd go. Hah! That is not what happened.

First, and foremost, you need to realize that all those friendly, sweet, easy to handle animals become raving lunatics when they sense something is wrong. My sweet Daisy (one of the British White cows) jumped her enormous girth (which I had no idea was even possible) onto a four-foot cattle panel and squashed it in half to escape the loading pen I'd thrown together. In spite of my warnings of oncoming barbecue weather, it took hours to lure Iris (the other British White heifer) into the horse trailer. That's when I discovered that two of these girls weren't going to fit in the horse trailer. So I took Iris and the llama to our friends' farm in Goldendale (30 miles), dropped them off, and headed back. Daisy was having none of it, and ended up never being loaded out.

All of the meat goats were loaded up into the big horse trailer and hauled to Centerville, Washington (40 miles). When I arrived to unload the goats I discovered that one of my re-

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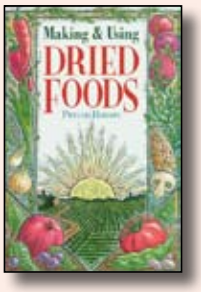

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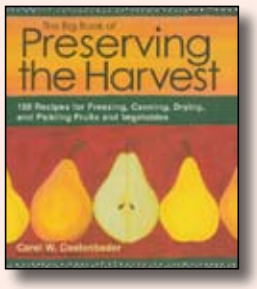

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First views of the fire, looks pretty small and pretty far away. We went to the fair and didn't think too much about it, even when it got bigger, still seemed so far away. It just didn't seem likely it would be a problem.

This is the view we were getting a week later. This is no longer the view from the highway, now it's the view from our property looking west. Suddenly that piddly little plume has become something more ominous.

ally nice registered Kiko doelings was crushed in the load. Not only is this heartbreaking, it's a financial hit, as evacuation is not cheap! I unloaded the goats into the pasture provided by a friend's farm and fed them to help settle them down. I was sharing a fence line with her goats, which made me nervous, and I didn't have time to reinforce the fence between the two herds. This proved problematic, as the hay is always greener on the other side, and her herd broke through the fence and mixed with mine. That meant that a few months after I got my herd home I had to have the whole group blood tested for CL and CAE. Another expense I hadn't counted on.

I didn't even try to move the poultry, choosing instead to shelter in place. We have a large area behind one of the barns that's void of grass and debris, and we put food and water out hoping for the best. The dogs stayed with us the whole time, traveling in the trucks while we moved livestock. The cats disappeared into the woods, not bothering to look to us for saving them.

Then we loaded the dairy goats and took them to a third farm. The dairy goats were near kidding and we were worried about them. We'd spent a lot of time and money having them AI'd and didn't want to lose anyone. The people who owned the farm worked, which meant the girls would be alone for the day. They also didn't know much about goats, so couldn't tell when kidding was imminent, leaving us to check on them often. This farm was 25 miles from us on a side road.

Just when you think you're finally set, you realize you've only begun with the hassle of evacuation. Once you have your animals moved, you are then responsible for making sure they get fed and watered. This was a really expensive challenge for us, as all of our shelter farms were about 30 miles away. We got up each morning and loaded up hay and buckets, and headed out to each farm to care for our animals. We couldn't leave extra hay just sitting at our host farms because they had animals as well and their animals didn't know our hay from their hay. So each day we'd drive out, feed and water all our animals, make sure they were doing okay, then in the evening we'd repeat it. One of the farms put the llama and the British White out on pasture so we didn't have to do anything with them. This was so nice!

Normally well-behaved livestock will sense something is up in an emergency and may not be cooperative when you need it most.

As we had feared, one of the British Guernsey dairy goats did indeed kid. We found her and her kid on one of our evening rounds and took her home, figuring if it got bad, we'd put her in the back seat of the car and run for it.

Dave made runs around our house and property with the Bobcat to help provide protection. There were tons of flying ash pieces in the air, and for weeks after the fire they remained on every surface on the farm. It's amazing they didn't start more fires as some of them were really large.

We brought the animals home in waves, about five days later, and then sat down to make a plan for next time. We live in the rural west and wildfires are a fact of life. We have to be prepared to evacuate. However, remember there are many other reasons to evacuate, or to be prepared for disasters. From floods,

Don't latch gates or close fences—wildlife need an escape route, too. And they'll appreciate a filled stock tank or bucket of water.

to earthquakes, to volcanoes, we pretty much have it all and should be ready to provide for our animals as well as our families. With this in mind, I'm sharing with you some of the things that might help you in times of uncertainty.

Level 1=get ready, level 2=set, level 3=go!

We began waking up to heavy smoke in the air and flying pieces of ash. The fire departments sent trucks down to warn everyone to get ready to evacuate (Level 2). They started advising steps to take to help minimize damage if the fire overran their fire line. It was a tense time. The smoke in the air was a constant reminder that all was not well.

Another thing to remember is that local wildlife is also on the run. Once your animals are out, open your gates, fill the water troughs, and close up your barns. You don't want others running from the fire to be cut off from escape, or trapped in your barn thinking it's safe, or full of your hay.

Pay close attention to local authorities and when you are moved from Level 2 to Level 3, assume you won't be permitted to re-enter your place once you've left. All your animals need to be rescued before this point.

Finally, try to make sure valuable farm equipment is under shelter, and

Once your livestock has been transported out of harm's way, the trailer makes a good storage spot for extra hay and feed.

you've cleared around the shelter as much as you're able. By now we've all had it drilled into us to clear a defensible area around our houses, but you should also have that same area around your barns and storage shelters. No debris, scrap lumber, or usual farm "stuff" should be banked up near any structures. If it's valuable enough to keep, put it under cover; otherwise toss it, or put it in a pile in the middle of a clear field and away from structures.

So, I've told you how we did it, now I'll tell you things that we would do differently, and things we've learned.

1. Your tame well-behaved animals will become strangers. They won't follow you like they always do, they won't pay attention to the dogs, they'll run everywhere but where you want them. Have a good livestock handling area set up in advance. It will make your life easier anyway so just do it. Sturdy aisles, good working gates, and a well-built loading area will make things so much better.

2. If you have a lot of animals be sure you have room for all of them at host farms. In the case of a fire, you can't just board at your neighbor's because he's boarding somewhere too. You need to be far enough away from the disaster to provide safety. Setting up reciprocal agreements with other farmers in advance is something you can do this week!

3. If you have a lot of animals and it looks serious, start moving them when you reach Level 2. You may not be allowed back if you wait until a Level 3 and have to make several loads.

4. On your final trip, leave a horse

Forestry trucks cruise past the farm warning to evacuate.

trailer at the host farm. When you return to check on your animals the next morning, bring plenty of hay and store it in the trailer. This way you can take a more economical vehicle for the rest of the evacuation period as you won't have to haul hay every day.

5. Make sure all of your animals have positive identification on them, whether it's a brand, an ear tag or tattoo. Have current pictures of unmarked animals and keep accurate records of where everyone went. It's easy to lose animals while they are hosting at someone else's farm, especially if everyone is working and there's no one to watch your animals.

6. If you have to leave an animal behind, don't chain them, or contain them where they will be trapped. Place them in a cleared area with enough food and water for 72 hours. Don't rely on automatic waterers as you may lose electricity.

7. Make sure the host farms have all your contact info. Place contact info on your door when you leave.

8. When you have completed your evacuation, put a sign at the end of your drive, advising fire and rescue that you have evacuated. You don't want them to waste precious time going in to check to make sure you are safe when you aren't even there.

9. Be sure to take important papers like registrations, health records and vaccinations.

10. If you are unable to evacuate all of your animals, you need to decide which genetics are the most valuable. Prioritize if you can't take them all.

An animal unit (AU) is the amount of feed an animal requires as compared to a cow (which is 1 animal unit)

For instance, one cow will eat about 20 pounds of hay a day (1 AU). This figure helps you determine the feed needs of multiple species during evacuations so you can plan to provide that quantity.

Adult cow .....1 AU (20 lbs good hay)
5 Goats.....
5 Ewes.....
1 Light horse.....

Phone numbers

Vet_____

Neighbors_____

_____

_____

Work _____

_____

Doctor _____

_____

The 5 P's of immediate evacuation:

1. People, pets and livestock
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3. Prescriptions—medications, eyeglasses, hearing aids
4. Pictures—Irreplaceable memories
5. Personal computer

Before an evacuation:

• Make a list of priorities. What will you pack when you leave? Write it down so that if it ever comes up, you can pull your list and begin loading the car.

• *Keep a kit:* This should include a first aid kit, some emergency tools, a battery powered radio and flashlight with extra batteries, a spare set of car keys, credit cards, cash, water, non-perishable food, blanket/sleeping bag, a waterproof tarp, all packed in a backpack or carryall so you can grab it and go. Keep several packed and in handy places, like one in each car, and one in the utility room.

• Always establish two escape routes in case of disaster.

When you leave your home:

• Leave your electricity on and a light on!

• Move flammable furniture to the center of the room.

• Close shutters, blinds and heavy drapes. Remove light-weight drapes and curtains.

• Close fireplace screens and dampers.

• Shut all interior and exterior doors and leave them unlocked.

• Place a note on the front door stating names of all evacuees and your destination/contact info.

• Place a ladder outside for roof access.

Homestead business:

How "micro-agritourism" can boost the small or part-time farm's income

By Barbara Berst Adams

On-farm visitors can help even the smallest farms increase the bottom line. Whether a farm is full-time or part-time, many very small farms are doing things like offering an herb cooking class on the farm or replacing a less profitable crop with a small u-pick cherry tomato patch. And many don't realize they're participating in agritourism, a growing trend to bring the non-farming community onto the farm in ways that are pleasant for the farmer and increase revenue at the same time. According to Purdue University, agritourism is the fastest-growing tourism-industry segment in the United States.

But don't be fooled into thinking agritourism is for the big guys or that you must become a large entertainment destination. The thought of ongoing crowds can unnerve the farmer who purposely chose the peaceful rural or even small town backyard garden life. It's one thing to chase the goats out of the hay field. But explaining to human non-farmers why they can't park in the hay field is quite another. Here's how that process went for us one year:

Us: Sir, could you back your car off and park where the field is mowed short?

Him: What's wrong with driving on the tall weeds?

Us: These aren't weeds, this is our hay crop.

Him: My car doesn't kill it, does it? They just make it lay flat?

Us: Yes, but when we mow over flattened hay, the mower can't pick it up so we waste that amount of hay.

Him: Well doesn't it just spring back up again?

Us: Not necessarily in time, and we're mowing the field in two days.

Him: Why can't you wait to mow until it springs back up again?

Us: Because we need specific weather to mow, and the weather forecast says in two days it will be perfect. We can't just mow whenever we want to.

Him: Why?

Okay, you get it. But with agritourism, you don't have to open the floodgates to high numbers of the general public at all in order to benefit from it financially—which will be explained more fully below. Also, even if you do think you'll eventually want large agritourist numbers, you can start small at first and gain experience to see if agritourism is a good fit for your farm–while adding a little income during the experimental stage, then growing gently to larger numbers over time if that's your ultimate goal.

How agritourism helps the bottom line

The obvious way on-farm visitors help a farmer financially is by bringing them to the farm to buy the farm's products retail. The costs of extra liability insurance and any visitor set-ups on the farm are weighed against potential on-farm sales with no delivery time or costs to the farmer. Another direct way agritourism helps farmers is if they choose to offer experiences such as tours or farm crop cooking classes for a fee. But the indirect way is customer loyalty and word-of-mouth promotion for the farm. When customers get to know the farmers behind their food, they develop a relationship that no commercial brand can compete with. Plus, people talk about their farm experiences to others in a unique way that tends to be almost magnetic, and free farm promotion spreads to even more potential customers. A one-day pumpkin patch open-house on our farm generated many inquiries from people who heard of our farm through those who had attended our event, including a request to grow a section of pie pumpkins for a large church congregation, and to hire us to bring our ponies for upcoming kids' birthday parties. When I was on the other side of agritourism -- the visitor to another's farm, the promotional benefits became even clearer. A handful of folks were given a free tour of a local quince farm. The farmers had been selling value-added quince products in the food co-op where I shopped regularly for years, but I'd never noticed their products. After that tour, their products stood out to me on the shelves, and I purchased them and told others about them.

Start small, start slow, and start unique

The following three methods to gently break into agritourism can help you see choices for building your agritourism muscle, and eventually generate revenue in a fashion that reflects what your farm is all about.

Project 1: The one-day workshop

Host a one-day, one-time workshop that reflects who you are as a farmer, and see how you feel about it. Jessica

and Jeremy Little, owners of Sweet Grass Dairy in southern Georgia, started their agritourism venture by giving appointment-only guided tours, which boosted sales of their cheese and added another revenue stream.

But at the time, Jeremy was living just one of his dreams as a dairy farmer. He also would've enjoyed being a chef.

"He is an amazing cook and really loves food," says Jessica. So when a customer inquired about artisan cheese-making classes, Jeremy tried out a one-day class with a small group of a half a dozen or so and liked it so well, he continues to offer the workshops based on customer requests.

This offered him another stream of agritourism income that also satisfied his appetite for preparing artisan foods. Maybe small-scale cheese-making classes wouldn't authentically represent the personality of another dairy farmer, but they're perfect for the one operated by the Littles.

Perhaps you aren't a great teacher but know others who are talented at teaching flower arranging, cooking, bird watching or composting. You can offer your farm as a location for a one-time event, either charging rent directly to the teacher or splitting profits on fees per head, making sure there's a limit to the number of attendees. With this type of partnership, the teacher can be responsible for soliciting students and collecting fees.

If you're doing your own promotion for a first small on-farm workshop, advertise it online and in local classifieds, ask store owners if you can put up fliers (such as a cooking demonstration flier at a kitchen shop), and limit the number to four to six paid attendees, allowing a waiting list in case any cancel at the last minute. Don't hold on to expectations about how it's supposed to turn out; just do it once and assess afterward how you feel about it.

A small group of people enjoy touring a quince farm. *Photo courtesy Adams & Davis, LLC*

Project 2: The small-group farm tour

You might be enticed by the idea of thousands of paying tourists flocking to your farm.

The thought of a year's worth of Sunday afternoon tours and 7,000 annual visitors at $10 a head does sound good—plus the added retail income from on-farm purchases made by all those customers. But unpredictable crowds and exhausting tourist disasters can result from jumping in too deep, too fast.

If you want to give farm tours, consider starting with "pre-made groups" first for building up your crowd-pleasing agritourism savvy and confidence.

Instead of calling in the general public, start by targeting an existing group. For example, contact a member of a local garden club to gauge interest in touring your farm. Send the members fliers for an exclusive walking tour at $5 per head paid in advance.

This lets you know ahead of time about how many people will show up and that those people should be well-behaved because the members already co-mingle on a regular basis.

As another method for testing the farm tour idea as touched on above—connect with one teacher at the local elementary school and invite her classroom out for a tour at $3 to $7 per head. In this case, you'll have a teacher familiar with his students who will help control the behavior of the young tourists who have already had practice at being together as a group. The teacher already knows which ones are apt to behave and which would ignore the instructions for keeping the gates closed.

Another small group to solicit is your local Slow Food community. Go to the Slow Food USA website to see if there's a Slow Food "convivium" in your area. These members often enjoy farm tours and are happy to pay an entry fee to support the farmers and to buy locally farmed products during their visit.

Open houses are more casual than farm tours but can have the same impact. Host a one-time Saturday open house for a local church or the regional Audubon Society.

Other pre-made group opportunities include your region's Society of Retired Citizens, veterans associations, or civic and ethnic organizations. Don't be shy to explain that fee-based farm events help local farms stay financially stable, but if you have enough on-farm retail products to sell, you might choose to not charge for tours and instead use your retail as the agritourism income stream.

One common example of this is the pumpkin patch farm that offers a free "haunted barn" to entice more customers to visit the farm and subsequently buy the farm's autumn crops. As mentioned, it's valuable, indeed, when you don't have to ship products, rather you have customers gladly arrive at your door to pay retail.

If you want to test out-of-area tourists on a small-scale basis, network with another small, local tourist

attraction, such as a bed and breakfast or antique shop, offering fee-based Saturday afternoon tours exclusively to their customers. When only that business's customers get to experience your farm, it adds value to that business's products or services, as well. They can promote your exclusive offer to their customers in a variety of ways. Just make sure you don't sign long-term agreements in case you want to keep this business relationship as a one-season experiment. No other groups should be allowed onto the farm while such an agreement is made. Yet you should also have an outlet in writing you both agree on to where, if the business doesn't seem to be doing any enthusiastic promoting of your farm, you're free to move on to other sources.

Project 3: Test a small u-pick patch

Plant a half acre of an annual crop that's popular as a u-pick: pumpkins, flowers, small tomatoes, berries, sweet corn or green beans work well.

Or, tape off a small segment of an existing crop area and test the waters as a u-pick operation. This is a small-scale way to discover what it would be like to have customers harvesting your fields. Many u-pick-operation owners find it satisfying, which might explain why u-pick is one of the oldest and most familiar forms of agritourism.

Large numbers of people filling your fields can be overwhelming at first. Gain experience and foundational insight with small, controlled numbers. If you already have a several-acre sweet corn patch or a full-production blueberry field, for example, use temporary fencing or tape and mark off a just a small segment. Perhaps advertise it as open by appointment for adults only before opening up to families. Or, try having u-pick hours for a limited number of hours per day during your ripening season. Be prepared to harvest any remaining crops as usual that don't get picked. Once you've tried the idea, you can decide if you want to open up more of your fields, plant more u-pick crops, allow children or solicit more u-pickers.

Creating a u-pick opportunity can add some extra cash to your pocket.

What agritourism activity should you choose?

Think out of the box when choosing agritourism activities, especially during this flexible test stage. There's nothing wrong with the usual corn mazes and hayrides.

But do you, as a farmer, grow or feed corn? How about hay? If corn and hay are your farm's crops or something actually used on your farm, they would be authentic agritourism expansions that reflect your farm. If not, they can become overdone Old McDonald stereotypes that don't reflect what you really produce or the treasury of what sustainable small farms have to offer.

The lavender farmer might be better off offering walking field tours, and the heirloom vegetable grower might do well hosting a food-preserving workshop.

Greenbank Farm, a CSA and mixed produce farm in the Pacific Northwest, hosts an annual poetry festival on the farm. A poetry society arranges the event with readings, workshops and, of course, opportunities to purchase the farm's products.

If you, as a farmer, are also a poetry fan, antique addict or experienced quilter, you may want to rent out the farm porch for a summer-afternoon poetry-writing workshop, hold a single three-hour quilting demonstration in the living room, or convert part of the barn to an antique museum and try a once-a-year, fee-based open house.

As you grow into agritourism, remember to expand your liability coverage and compliance to your local and state regulations. Every location has different rules. In some areas, you may greatly reduce the risk of lawsuits by simply putting specific signage in certain areas on the farm. In other locations, signage may not make any difference. Or, the fact that you're charging a fee may make a difference in liability issues. Could be a very inexpensive one-time insurance rider will cover you for up to a million dollars for a one-time large even, or your current homeowners' insurance may already cover you for, say, four non-fee events a year, but you don't know until you speak with your attorney and insurance agent. Once you know your limits, you can then make better choices on how and when to expand into agritourism.

 Barbara Berst Adams is the author of The New Agritourism: Hosting Community & Tourists on Your Farm. *She also writes for the Micro Eco-Farming Center at www.microecofarming.com.*

Scott Turpin Farm

A family affair

By Heather Smith Thomas
Idaho

"My dad is a farmer and I grew up on a farm," says Scott Turpin, who lives southeast of Burley, Idaho. "In 2002 I graduated from Utah State University, then came back home and rented some ground. My dad and I still work together; we work some ground together and share equipment. I own some of the land and he owns some, and we own some of the equipment together. With his help, I was able to get started in farming," Scott says.

"I've raised sugarbeets, wheat, alfalfa and potatoes. I farm about 400 acres of my own ground and hire a couple of the neighbor kids to help move the sprinklers. All of our ground is irrigated with wheel lines," he says.

The crops are rotated on the land, but the rotation doesn't follow any set schedule. "I usually plant about 100 acres of beets and usually have 80 acres of spuds. I rotate the hay and wheat, and like to have another crop in between beet crops for at least two years—whether hay, wheat or potatoes—before I go back to beets again."

The alfalfa makes a good rotation with the other crops because it puts nitrogen back into the soil. "It's good for the ground. I also like following beets with potatoes because there is some residual fertilizer from them, too, that I can take advantage of," he explains.

"I prefer to grow fall wheat; it seems to do better than the spring wheat. We usually plant the wheat after we harvest the sugarbeets. We do a little light tillage—some disking—when we go from beets to wheat. If we do the same crop back to back we usually plow under any residue. It seems to do better, plowing it under." This puts more organic matter into the soil.

This year he will have about 100 acres of alfalfa. "This fall we'll take

out one of the older alfalfa fields, to prepare for another crop. We follow alfalfa with beets and this works very well. The alfalfa we're growing now has been in for five years; it's been a really good stand. We've sold it green, off the stump, to dairies. The fellow who has been harvesting it has been green-chopping, hauling a certain number of loads per day to a dairy, to be fed that day," Scott says.

Selling it this way takes the risk out of growing alfalfa, in terms of weather risks. "It can be harvested and we can get right back on the field immediately with the irrigation water," he says. A person cutting it for hay is always at the mercy of the weather; during a rainy spell the hay can't be cut at the proper time; you have to wait for dry weather. If cut hay gets rained on before it's baled, the quality and value drops and it can't be sold as dairy hay. There may be a delay in getting water back onto the field if the hay can't be taken off because it's still drying after a rain.

"I may be crazy but I thought I might try baling some of it this year on my own, and try for the dairy hay market. Top quality alfalfa hay is worth a lot," he says.

A local company buys the sugarbeets. "Our farthest haul is only five miles, so this has been very convenient for us, raising this crop. We work together with our neighbors; they help us during harvest and planting and we help them. We share some equipment with them, and this spreads out the expense. We can all take advantage of the expensive equipment and not have to own so much of it ourselves. It's been really good to have good neighbor relations," he says.

The kids: Casen, two; Kessa, nine; Taya, six; and Kailey, 11. Last year Kailey raised some sugarbeets for a 4-H project.

Scott and his wife Amber have four children. The oldest girl, Kailey, is 11. "Last year she wanted to raise some sugarbeets for a 4-H project. She helped move the wheel lines; she was able to start the motors on them and move them, and was very good help. She's excited to do it. The younger ones want to do this, too, but at this point they aren't quite old enough yet, but they all like to go out and help. Kessa is nine, Taya is six, and Casen is only two-years old," Scott says.

His wife Amber helps a little with the farming operation, but also works for the school district during winter. "This works out well for us because in the winter the farming demands are slower and I can help with the kids when she is at work," he says. Family teamwork helps this operation run smoothly and it's a satisfying life to be able to do it as a family.

All four kids like to help in the fields as much as they can.

The Real Future Farmers of America

By Jerri Cook
Countryside Staff

For the better part of the last decade, economists have been warning that the aging of America's farmers would lead to the demise of the small-scale family farm as we know it. That time has come. According to a report by the Oakland Institute titled *Down on the Farm*, a quiet land rush has been under way in the United States for years now, with three of the biggest players in the financial sector grabbing up every bit of productive farmland they can lay their hands on. As recently as 2008, these financial sector giants came into ownership of most of the top-producing land in the United States. Now, because of the government's policy of quantitative easing, they're coming after land that doesn't produce quite as well.

When the financial crisis of 2008 came bearing down on the financial markets, the Federal Reserve began printing money in order to shore up what was left of the economy. To keep inflation from running rampant, the financial sector withheld a stunning amount of cash from the economy, choosing to reserve it at no interest rather than invest it and risk a spike in inflation. However, now that the crisis is apparently easing, the powerhouses of the financial sector are folding to the demand of impatient investors who want to see some return on their money—and they have their sights set on all the productive and not-so-productive farmland they can get their hands on. And how do they plan to acquire this land? From the retiring family farmer whose family can't, or won't continue the family tradition. As we sit by and watch, some 400 million acres of family-owned farmland will be acquired through the generational transfer of wealth to global investment companies in the next decade.

The Oakland Institute calls attention to three of the largest investment companies that are at the forefront of this goliath transfer of land and wealth: UBS Agrivest, a subsidiary of the biggest bank in Switzerland; The Hancock Agricultural Investment Group (HAIG), a subsidiary of the biggest insurance company in Canada; and the Teacher Annuity Insurance Association College Retirement Equities Fund (TIAA-CREF), one of the largest pension funds in the world. The first two, UBS and HAIG, are familiar to anyone who even remotely follows the financial markets. These two global financial powerhouses have their tentacles into every aspect of our lives, from the clothes we wear to the medicines we use. That they now seek to own as much productive American farmland as possible is no surprise. Neither is the way these companies treat the land.

Clearly, investors don't actually farm the land they collectively own. They either rent the land to someone who is already farming, or hire a corporate farm management service to hire employees who do the actual work.

As you might expect, those who merely seek to profit from the land, don't particularly care how the land produces. Corporate-owned lands are exclusively Monsanto territory, using herbicides, pesticides, toxic chemical fertilizers, and genetically modified seed. The land is managed to produce the greatest return for the investors. Period.

However, the revelation that TIAA-CREF allows the wholesale chemical saturation of the farmland they own is disconcerting. This is the fund that manages wealth for college professors, public school teachers, and non-profit organizations. Arguably, the sustainable agriculture movement owes its existence to these very people. It was in the halls of academia that the idea of a viable farming model based on organic production began. It was non-profit, grassroots groups that lobbied for recognition of national organic standards. To learn that these same groups are now poised to profit from the biggest corporate land grab ever is bad enough, but to learn that TIAA-CREF knowingly allows its agriculture interests to fester in a pool of Monsanto chemicals just to make a profit is painfully disappointing.

Make no doubt about it, all TIAA-CREF cares about is making a profit. If the individual members are concerned about sustainable farming, their fund managers aren't listening. "You have growing populations in China and India, and growing middle classes that want to eat meat protein. It takes five to seven pounds of grain to make a pound of meat. If you own grain land in the grain producing countries of the world, you're probably going to make money over the next century," says Heather Davis, managing director of TIAA's farm investments.

Because the rents required by the financial sector are astoundingly high, beginning farmers and sustainable farmers are being forced out of the rental market altogether, and since the corporate demand for tillable land is at an all-time high, they're also precluded from owning

land due to ever-climbing land prices. USB and HAIG can outbid the small buyer every time.

It would seem that all that is left for the beginning farmer is what the financial sector has passed over—the marginal land. The good news is that marginal land is far less expensive than land that has been worked and improved. Many sustainable farmers have turned nutrient-deficient land into high-producing fields. All it takes is lots of hard work and a little time. So, maybe that's the way to go. Let the global financial sector pay through the teeth for the most productive farmland, while beginning farmers and homesteaders quietly build a life by caring for the land. Not so fast. Someone else already owns most of it.

According to the Institute for Energy Research, the United States government owns "…over 600 million acres of lands and minerals onshore, and owns or manages a total of approximately 755 million acres of onshore subsurface mineral estate. Offshore, the federal government owns some 1.76 billion acres of lands and mineral estate, extending out 200 nautical miles from our shores. The federal government's total mineral estate holdings are therefore about 2.515 billion acres of lands. Thus, the federal government's mineral estate land holdings surpass the total surface land area of the nation of Canada."

The Institute, which is essentially a Big Energy think tank, believes these federal resources are vastly underused. The energy industry is poised to make billions of dollars from oil exploration and exploitation on public land, but they're certainly not alone. The mining and timber industries are also long-time beneficiaries of government contracts and are lobbying for even greater access to government land. The millions of acres owned by the federal government aren't being improved for farming. Instead, the land and the communities around federally owned land are being exploited for profit. While some government agencies like the Bureau of Land Management tout that they make these large companies leave the land as good as they found it, the whole idea is preposterous when you consider it was marginal land when the drilling, fracking, mining, and extraction began. And to add insult to injury, instead of allowing small-scale farmers a chance to build the soil and work the land, the government maintains it for open space, once big industry has left.

If you already own your land, your task in the near future may be to hang on to it in the face of rising land prices. If you're dreaming of owning a piece of land, no matter how small, you might want to accelerate your acquisition plan. The race is on, even for the marginal land, which is the only affordable land left. At the very least, take time to read *Down on the Farm*. To get your free copy visit www.oaklandinstitute.org/down-on-the-farm. Also, visit the Institute for Energy Research at www.instituteforenergyresearch.org/?p=15346 for a fascinating look at the above- and below-ground assets owned by the federal government.

Plywood septic tanks? Why not?

By Ben Hoffman

Why not? Probably because they are not approved by your government jurisdiction

When I visited rural communities in Alaska in 1989, I was appalled at the "septic" tanks made from sawmill slabs. Reminded me of the cesspools common in rural Virginia in the 1930s. With much of Alaska accessible only by airplane, boat in summer, snowmobile in winter, it is not easy to move a septic tank. Even light, fiberglass tanks are too bulky to transport. Imagine what many of these communities use—outhouses, with potty buckets indoors in winter (when it may be 55 below). Even in the lower 48, when the bridge to the house site would not support a truck loaded with a concrete tank, I built a concrete block tank capped with reinforced, treated plywood.

In 1995, in Alaska, faced with the need for a septic tank, my first thought was to use pressure-treated southern pine plywood, the same product used in Permanent Wood Foundations (PWF). PWFs have been in the ground for over 60 years and are far more comfortable than concrete. The materials are easily transported by plane, boat or sled. The only drawback—a rural house fire takes all—the "cellar savers" can't save a plywood basement. I pursued this idea for several years with agricultural engineers, wood scientists and government officials, to no avail. So rather than hire a truck to haul a septic tank 250 miles, I hauled PWF plywood and 2x4s in my pickup and built a 1,200 gallon septic tank—probably illegal. And after 18 years, it still works. Just before I left Alaska, I finally found a health official who thought plywood might be a good idea, but we never pursued it.

A septic tank has two chambers, a large one to separate the solids and liquids and a smaller one to allow any solids that make it out of the first section to settle before liquid enters the leach field. There is plenty of information on the Internet about sizing and designing tanks. Generally, the bigger, the better, and increasing size does not affect cost that much. So I built mine with southern pine PWF plywood with 2x4s in the corners, screwed and glued to the plywood. The 2x4s were inside so that screws were outside, not exposed to acids in the effluent. Inside and out were also coated with asphalt foundation coating. I included a capped, six-inch access pipe to facilitate pumping.

To my knowledge, plywood tanks have not been approved by any government. It's all right to install a steel tank that will rust out in 20 years or less, but plywood may not be an approved tank. So if you build your own tank, you may be violating the law. Check state and local regulations before proceeding. From 16 years in military and government, I have found two schools of thought: (1) if the book says you can do it, you can do it; and (2) my outlook, if the book doesn't say you can't do it, you can do it. Everything doesn't fit into a box. And if you do opt to build your own tank, be sure to use properly treated plywood. Most of the junk you find at Home Depot and the local lumber yard is not rated for ground contact and will rot almost as fast as untreated wood.

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The garden:

Build your own greenhouse

By Grace Faulk
Chilton, Texas

I notice you are seeking information that others may profit by. I am very elderly; I don't have a computer, nor do I want one; I wouldn't know how to use it. But I do feel that I know something that I am willing to pass on. It is how to build a greenhouse if you live down south. I have had two. We learn by our mistakes, plus I have picked up bits of knowledge from others as 90 years went by. So here it is, for those who would like to know.

Use 4 x 4 for your corner posts. Place in the ground about 18" deep. Use 2 x 4 for the rest of the structure. I advise using 2 x 4 x 12' mostly. Build a three-foot wide aisle between the planters.

Your rows should be no wider than you can reach across to the center, but your plants will spill over into the aisle.

Dig down and bury a 2" PVC pipe for underground irrigation about a foot down or so. Drill holes in that PVC with a 1/4" drill for water to come out of, watering underground where the roots are. Turn the water off as soon as the moisture comes to the top of the soil. Do not let it get soggy!

As you replace the soil in your rows, throw in barnyard manure, leaves, grass clippings, shredded paper, anything that will decompose. Border it with a 1" x 6' to separate it from the aisle, forming a raised bed. Slip some fiberglass or plastic between the board and the soil, so it doesn't rot the board. The same goes for the backside, too. Use the cheapest you can get, just so it's waterproof.

There are as many ways to build a greenhouse as there are people who build them.

Now let's talk about the roof over the rows. That is made of clear corrugated fiberglass. Drill holes in it with a half-inch drill to let rain in. Drill the holes about 6–8" apart. There is no water like rainwater. Extreme heat will escape through those holes, too.

Place a solid roof over the aisles (I used wood). That is very important. It will shade you as you work and keep the rain off you and make it so much cooler in there. That is one thing I sure learned the hard way.

In a hard rain, those 1/2" holes aren't going to let the water leak in as fast as it rains. Put rain gutters all around the outside, with it falling in a rain barrel. Pipe the water from the barrels to the rows, with a faucet at the end of each row. That is your underground irrigation system. If you need to water and it hasn't rained, run water into your barrel from your outside faucet.

The sun doesn't shine in the north end of the greenhouse, so that is the end you work from. Make it solid wood, like the roof over your aisles. Come winter, you'll be glad you did. Place your rain barrel at the northwest corner of your greenhouse, your work bench at the north end of your aisles. Place shelves over it for storage for hand tools, etc.

See if you can install an old sink at the end of the row on the east side. It is important to keep your hands and tools as clean and sterile as possible. Fungi spread easily.

Now let's talk about the sides of your greenhouse. Screen it to help keep grasshoppers and other insects out. Put it down the center of your wall. Under that, make it solid with green fiberglass—it's quite economical. Dig down about two or three inches so the grass won't grow into the greenhouse and help keep snakes out. Nail it to the *inside* of your posts, to keep moisture from rotting them. Extend the fiberglass up to the bottom of your screen. Your screen wire isn't wide enough to reach the top roof. Put some more of your green fiberglass on up to the roof. When the sun gets that high, it is getting too hot in the summertime anyhow. You might want to put some on the east end and

farther down on the west side, to shut out that hot afternoon sun even more, but of course, not all the way. You need some sun, especially in winter. You could put it up in the summer and take it down in the winter.

You can use a plastic drop cloth on the sides in winter. Install them so you can roll them up and down easily, because in spring and fall you will need to lower and raise them according to the temperature. Make a hem at the bottom of your drop cloth and insert a 1/2" PVC pipe to make it easier to roll up.

What goes for the west side goes for the south end. The sun shines in from the south, too, but not as direct.

That is where you'll have your entrance door—at the end of the aisle on the south end. Put a screen on that door, just like you do on your house, so you can leave the door open on warm days.

Now let's talk about row covers. They are important. Build them out of 1 x 4s as wide as your row, about 12-18" high and about 8' long. Rip your 1 x 4 that you use at the top, so make them 1 x 2 higher because you will move them around a lot. Cover with screen that will keep insects out because you can use them on your outside gardens, too. When it's cold, drape clear plastic over it. Use little twist ties to fasten your plastic at the four corners over your screen to prevent the wind from blowing them off.

Some bugs will get under your screening, but it will help tremendously. Remember some bugs are beneficial. For instance ladybugs will gobble aphids in no time. A spray bottle filled with a water/hot pepper/garlic spray works well. When we had our first greenhouse we sold tomatoes to a big grocery store and a café. We couldn't use pesticides so we used hot pepper and garlic spray. One year we had a bad infestation of little inchworms. As soon as we sprayed, they jumped off the plants and crawled down the aisle as fast as they could to get away from that hot spray! All we had to do was stomp down the aisle on top of them. It was so funny!

Frogs eat bugs, too. Encourage them to live in your greenhouse by leaving a little pan of water under your work table for them to drink.

Birds eat bugs, so leave a pan or two of bird seed on your shelf over your work table and they will come to it if you leave the screen door open for them. If you want to keep them in there, shut the screen door behind them. They will share the water with the frogs, but I think it would be best to leave them a container of water beside their feed on a shelf.

Companion planting

Plant basil on one side and oregano on the other side of your tomato. Their roots emit a substance that is very good for tomatoes.

French marigolds throw off a scent that bugs don't like. You may plant them in hanging baskets throughout the greenhouse.

Nasturtiums and parsley attract aphids, which is good if you can find any lady bugs to put on the plants, otherwise you'll have to spray.

Scented geraniums provide food for beneficial bugs. Sage, hyssop and chives discourage cabbage moths. Herbs grow well in hanging baskets and since chives bloom and don't use much space, sneak them in with herbs that don't bloom to beautify your greenhouse. And I hope you have some pretty red, blue and yellow birds flying around. Spinach and lettuce would tolerate the shading from bigger plants. And radishes mature in 28 days or so.

Plant climbing vines on the west side, so their shading is more of an asset. Plant vines that don't require a lot of sun.

Beets make big roots while spinach and lettuce are shallow rooted.

Some plants require more nitrogen than others. Leafy plants, like greens, require a lot. Don't give beans and peas a lot of nitrogen or you'll get more vine than vegetable.

Remember it's easy to plant too much of one thing and not enough of another. Take all this into consideration as you plant.

Happy gardening!

Don't *you* wait 90 years to share your gardening (or any other) tips. Send them to: csyeditorial@tds.net or Countryside Editorial, 145 Industrial Dr., Medford, WI 54451.

The garden:

Directing rainwater from roof and gutter to a rain barrel with a screened top is a great way to save on watering costs.

By Anita B. Stone

I am not a wealthy gardener who can spend thousands of dollars on an irrigation system. After a bit of research I learned some smart methods to save money, time and water in the selection of irrigation techniques.

The biggest favor you can do for your landscape during any season of the year is to give it the proper water requirements while maintaining water conservation. But saving money doesn't mean neglecting plants by bordering too close to the dry-soil level. There are many clues that reveal just how thirsty your plants are. The question I always ask is, "Are my plants drooping or losing leaves?" The answer is to feel the soil surrounding them. If the top two inches have dried out, it's time to water. One major component is that infrequent deep watering is better than frequent, shallow watering because that promotes deep root growth. Shallow watering promotes the development of roots in the top two inches of soil rather than at a deeper depth.

Deep watering should moisten the soil to a depth of six inches. Here is where irrigation possibilities enter the scene and should be considered a major part of the homestead.

Ways to check on whether your irrigation system is reaching the proper soil depth is to dig into the soil and measure with the length of a Popsicle stick, insert your finger into the soil up to your knuckle, or use a shovel to see how far the water has penetrated into the root zone. As a general rule, the average amount of water should be left running up to two hours to apply one inch of water for 1,000 square feet.

Several methods of irrigation are available, from hand-held surface hoses to sprinklers and drip devices. Drip irrigation is one of the most efficient and effective methods, delivering water drop by drop to the desired plant. (Why water the weeds?!) This method also slows evaporation and reduces water loss while alleviating direct leaf hits, which cause fungus. In-ground drip irrigation also provides maximum crop and plant hydration without being overwatered. By installing a timer hooked into the in-ground drip system, you control the amount of water applied, allowing conservation and management of water bills. Drip and trickle irrigation systems are available through garden centers or you can create your own by purchasing parts and constructing your systems.

A soaker hose is the least costly type of irrigation, approximately $12 for a 50-foot length of hose and connectors. Easy to install and use, soaker hoses can be found at nurseries, hardware stores and home-improvement facilities. Soaker hoses slowly release a stream of water through pin-prick-size holes to the base of plants, and are easily moveable no matter where they are placed. The mobility of soaker hoses creates choices of location. I often wind soaker hoses around raised beds, within container plants and snake them along rows of vegetables or flowerbeds. When turned on via a faucet hookup, water trickles from the tiny perforations in the hose and saturates the soil under my watchful control.

Another type of irrigation offers a long tubular hose with one or more spikes attached throughout the length of the hose that can be wound around and placed into a variety of containers. The tubes and spikes work well with mass plantings, including trees, shrubs and specialty beds.

The use of rain barrels has become a popular irrigation tool. Rain barrels catch and collect rainwater run-off. Just one-quarter inch of rainfall run-off from an average roof to a downspout will completely fill one 55-60 gallon barrel. Collection from rooftop runoff provides an ample supply of free "soft water" containing no chlorine, lime or calcium. Because it has less sediment and fewer dissolved salts than municipal water, rainwater is considered natural and ideal for the environment, providing a multitude of applications, including biodynamic and organic vegetable gardens, raised planter beds for botanicals, indoor tropical plants like ferns and orchids. Just three filled barrels supply ample water for the garden and house plants for several months, including any drought season that may arise.

Typically, water run-off collects on the roof, puddles or flows from the roof down through the gutters and ends up in the sewer system or river. Collecting this precious natural resource in a rain barrel also reduces the demand for treated tap water, decreases the burden of water treatment facilities and municipal drainage systems, and saves money by lowering monthly water bills. The barrels are fitted with a screened cover and spigot, and are attractive and easy to use. They can also be painted.

Alternative systems such as free runoff from falls, pond circulators or in-ground water spouts can be used as fresh, yet recycled water for conservation purposes.

Tubes and individual spikes attached to main hose for container irrigation.

In-ground water spout system placed to keep soil moist for plantings and mass beds.

When considering any type of irrigation, whether hand-held or an in-ground system, consider the amount of land, the area involved, the crops affected and the weather. Financial consideration should also be taken into account. Irrigation is a major consideration for any homestead area, so be as frugal as possible. Keeping a daily, weekly or monthly water journal on-hand insures proper irrigation is hitting your landscape with the best possible results.

**Ed note: Check on the use of rain barrels in your area. It's illegal to collect rain water in some communities, especially in western states where drought has been prevalent the past few years.*

Tips for irrigation and water conservation

• Be aware of over-irrigation which creates too much moisture that leads to fungus and disease in the landscape.

• Recognize wilt, brown edges and stunted growth in irrigation techniques, including under-watering and over-watering.

• Construct a water basin to irrigate plants in a circular fashion that self-contains water in the root zone area.

• Use one or more rain barrels to collect runoff from downspouts as a free source of water.

• Utilize irrigation systems on a timer early in the morning and before sunset to reduce evaporation and insect, mold or fungus.

• Water deeply with one or more irrigation systems to promote root growth and lessen water usage.

• Mulch around needed areas to retain moisture.

• Compare, plan and select the best irrigation system for the area to promote growth and conservation.

• Use a rain gauge to measure how much water has been given within a week and supplement when necessary.

• For larger shrubs and trees, check four to six inches below the surface to make certain enough water has reached the root system.

• Select irrigation systems for easy maintenance and lessen the financial obligation for the homestead.

The garden:

The ants go marching

By Lisa Jansen
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I'm an old farm girl. As a child, when on our way to the family cabin at Lake Tahoe, we'd sing, "The ants go marching one by one hurrah, hurrah." Good thing this is an article and not a recording. I can't carry a tune in a bucket. The song went on, "the ants go marching two by two, the little one stops to tie his shoe…" You get the idea. Where there is one ant there is two and most likely 200 or 2,000. I've rarely seen a single ant. I live in the Tahoe National Forest today on my own little micro organic research farm and the ants are still marching.

I feel like Bill Murray in the movie Caddy Shack at times. The last couple of years I became obsessed with how to kill them. I am living in an old RV now because my home burned down, and I've not yet replaced it with a permanent structure. There are so many types of economically sound and environmentally wise ways to go, I've not yet finished the research part of that project. This RV was given to me because it is old and in poor repair. The folks that owned it were throwing it out. It is serving its purpose without cutting into my home replacement budget, however, it is full of entry points for ants, spiders, mice and more. I don't mind living with the wild life, flora and fauna, but I don't care to sleep and eat with them. Looking over my freshly caught and cooked trout to a stream of ants makes me mad. I'll tell you how I avoided camouflage and dynamite in the ant wars.

I don't have just one type of ant. Oh no, that would make it too easy. I have at least four kinds. There are more than 22,000 species of ants. Wikipedia reports ants as 15 to 25% of the terrestrial animal biomass. That's lots and lots of ants. If you want to avoid ants altogether you'd have to move to Antarctica. I have a feeling farming would be a bit more challenging there so I'm stuck with this battle. I have small black ants that are attracted to sugar, large black carpenter ants, small red biting ants and large red biting ants. Some of the larger black ants seem to be attracted to grease or protein, so I may have two species of large black ants. The carpenter ants live and breed in rotten

stumps and fallen trees. My forest is full of potential ant apartment complexes. Wikipedia also says ant colonies range in population size from a couple ants to millions. Bill Murray didn't know how easy he had it.

Ants don't eat garden vegetables you may say. They don't bother my flowers. Wrong you are! While studying plant propagation in college I learned that ants carry aphid eggs, mealybugs, white flies, scale insects and leafhoppers, which eat both flowers and vegetable. Well, technically aphids suck the moisture from the plant and will eventually kill it. Personally I don't want to have to buy a boatload of organic insecticides to stop what ants have started. I don't want to spend hours battling bugs and eat and sell poor quality, bug-gnawed fruits and vegetables. The war is on. There are a number of weapons to choose from, let's open the arsenal.

Conventional ant killers

My grandma Jansen used old-fashioned ant stakes in her garden and they worked. Ant stakes are still on the market and are rather cheap in comparison to the many types of ant traps. Grandma went off label, so to speak, and used them even in the kitchen. She taught us they were poison and not to touch them. I'm not sure what was in them in the old days, but I suspect it was a stronger poison than is allowed today. Grandma didn't fool around.

The little creeps crossed my last strong hold. They touched my dessert!

I confess I tried ant traps inside the RV. I prefer organic methods, but after waking up with ants in my bed and finding ants in my food it was time to try heavy artillery. A popgun was not gonna get it! I purchased three different brands of ant traps over the summer and was disappointed with them all. They were poison, expensive and had a short life of effectiveness. They also took up too much space in the tiny RV and were dangerous to my pets. At the best they reduced the amount of ants coming in, but never eliminated them. What a waste of money for me.

One website advised putting all foods in glass, plastic, or metal storage containers. The containers need to be snug and air tight. Plastic bags will not do because ants can chew right through them. It continued with instructions on cleaning the entire house with bleach to remove food residue on counters and in cupboards. Lastly it said to put out cornmeal mixed with insecticide. The ants eat the cornmeal and are poisoned to death. Oh, goody! I like the dead ant part, just not the poison on my counters and cupboards part. I put food on those surfaces. In my mind food and poison don't mix. The bleach is to be used again to clean off the dead ants and poison, I guess. This method also required that the entry points be found and sealed. That's not going to happen in my RV. It has no sealed areas, even the door does not latch. Furthermore, in the home that burned down, it would have been just as impossible. The walls had open spots big enough for small mice to enter. It was an old cabin built by semi-skilled hippies

with site milled cedar. Carpenter ants nest in cedar.

Safer's Soap and other organic solutions

In a fit of rage I went out and grabbed my Safer's Soap. I use Safer's Soap on some vegetables and flowers but found further disappointment. Safer's Soap does not kill ants. Then I remembered a friend who was very sensitive to pesticides. She used diatomaceous earth. A line of the exoskeleton scratching and drying powder makes a barrier. If the ants cross it they are injured, dry up and die. Kind of like crop dusting—cool! You'll find the body count in the morning. It was a cheaper solution but messy and again took up too much space. The little buggers just seemed to find a way around it anyway.

At this point I had a taste for death. I wanted to see them suffer and die. They violated the sanctity of my home. They slept in my bed. The little creeps crossed my last strong hold. They touched my dessert.! They attacked my strawberry rhubarb pie! Time to turn to the big guns. Chemical warfare.

Agent orange

I am a bit of an absent-minded professor. My background is as a lab rat. I worked in agricultural research in labs, libraries, and fields. I was a clinical lab technician and best of all, a phlebotomist (the person that draws your blood). Yes, I enjoy torture. Oh, in the right setting that is, and only for the better good. Like the good of my vegetable garden, my fruit trees and my pies. Really, you can check my greenhouse and barn. I have yet to create any Frankenstein-type plants or animals, but the temptation is there. Flubber might be a possibility.

While messing around with massage oil recipes I created "garden" agent orange. There's probably something on the market like it, but I didn't check. I live very remote. I can't just hop in the car and run down to the corner garden shop. Besides, why spend the money when I can whip

it up in my lab, I mean kitchen? I took mandarin peels, some rubbing alcohol, cloves and apricot oil, put it in an empty bottle and stored it in the cupboard for treating sore muscles. Additionally, I crushed the mandarin seeds and popped them in the bottles. That was an absent-minded professor afterthought—I wanted the strength of the orange oil, the essence. That was last winter.

Fast forward to spring. I went to the greenhouse to start propagation for the summer vegetable garden and found ants. Not just a few. I heat my all-solar greenhouse with compost. Waste vegetables from a local store go into three small compost piles inside the greenhouse. In other words, I heat my greenhouse with ant food! My greenhouse is a geodesic dome. It has a wooden frame with an 18-inch high perimeter framing member that makes a perfect highway to all three compost piles. The walls are covered with sheet metal 18-inches high also. I'm not sure but I think some ants are nesting behind the sheet metal. It is a warm, moist and sheltered wooden area that ants prefer for colonies.

I stomped back to the RV and the well house complaining about the ants, and my brilliant *leban gotte* (that's German for live-in man) said to try the massage oil. He's a very smart and resourceful man. I knew that orange oil is acidic and kills bacteria, so I took his suggestion. I put approximately one-quarter cup of the concentrated oil in a two-quart watering pot. That is likely stronger than it needed to be, but this is war and as my mom always said, "All's fair in love and war." I marched to the greenhouse with pure ill intent! It was simple and lethal! Sweet success. It was immediate. It was grotesque. Just what every garden warrior craves and lusts for. Their little bodies flopped over, curled up and died. Rigor mortis set in before my very eyes. I rubbed my hands together and rumbled with satisfactory laughter. My eyes gleamed with pride at the watering pot. The ultimate weapon. Oh, I forgot to mention, I also worked in pathology and as a firefighter and EMT. I'm a bit of a ghoul, too. And, my garden and fruit trees and especially my pies are safe. Farm girls need to eat. We work hard. I won the war against ants and so can you.

Garden Agent Orange

One orange peel

Crush all seeds from the orange and add to a small bottle. Brown bottles are the best, but any type will do in a pinch.

One cup almond or grape oil

A few whole cloves, crushed

A tablespoon rubbing alcohol or witch hazel

Put it all in the bottle and store in the dark for two months or until needed. When needed add 1/4 cup of "agent orange" to two quarts of water. I keep a special pot for homemade insecticides and use it for nothing else, thus eliminating killing a plant while watering, by mistake. I poured the water directly on the ants and in the seam where the sheet metal met the perimeter beams in the greenhouse. I've only seen one small ant since then. There were no ants for over a month. The orange oil soaks into the unfinished wood and seems to last well. I'll retreat when I see more than one ant.

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Have eggplant your way

By Nancy Pierson Farris
South Carolina

How do you like your eggplant? When I started growing this vegetable, the standard Black Beauty produced dark purple, oval fruits. Since then, growers have developed shapes varying from round to long and slender, and a range of colors including white, lavender, and purple streaked.

Varieties I have grown include Whopper (Park's), Black Bell (Vermont Bean Seed) and Burpee Hybrid. My favorite is Purple Rain (Burpee), which is purple streaked with white. This one matures in 66 days and has a mild flavor and small, tender seeds.

This year, I am trying Ping Tung Long (Shumway), which is small and slender. It should work well when I want to slice it lengthwise or make strips to add to a noodle casserole or a stir-fry dish.

I start my plants in mid-February, six weeks before my last expected frost date. I use homemade flats, which are four inches deep. Into this, I place two inches of good soil, then add an inch of sterile soil. I mark rows in the soil, dribble water into the furrow, then place the seeds so plants won't overlap as they grow. I cover the seeds with sterile soil, water the whole flat well, then wrap the flat with plastic to keep soil moist and protect emerging seedlings. After sprouts appear, I remove the plastic and water regularly so soil surface does not dry out.

When the seedlings have strong second leaves, I pot them into 12 ounce Styrofoam cups. Formerly, I mixed my own potting soil, but now I usually purchase a good potting soil for this. While moving young seedlings, I handle them with care by the leaves or roots because stems are fragile and easily broken. I put a little soil into each cup, then gently set a plant in and fill with potting soil. I set these cups into a vacated flat and place them under fluorescent lights. As seedlings grow, I adjust the light fixtures to keep them about two inches above the plants. I feed weekly with a fish emulsion solution.

Since eggplants are not cold tolerant, I hold them in my cool greenhouse until frost danger has passed. As weather warms, we open the greenhouse during the day and if night temperatures drop below 45 degrees, we close the window and door overnight.

When I am ready to move the eggplants to the garden, I choose a spot that will receive several hours of

For my favorite casserole, I saute slices of eggplant. *Photo by Don Farris*

sunlight daily. I dig holes about one and a half feet apart, put in a shovelful of compost and a half-shovelful of soil. I pour about a pint of water into the hole, then set the plant and cover with dry soil.

To guard against cutworms, I place something alongside the stem so the worm cannot wrap itself around the stem to cut it off. The most effective thing I have found is a piece of dried basil stem. Toothpicks or other twigs will work, but the odor of basil seems to repel the worms. Since I always leave some basil to go to seed for the birds, I have plenty of stems.

Eggplants need to grow quickly and attain robust size before fruit set begins. The USDA recommends side-dressing with 5-10-5 fertilizer to encourage bloom and fruiting. Since I find water soluble fertilizers most convenient, I create a shallow moat around each plant and fill it with water into which I have placed fish emulsion and compost. I apply this every other week till blooms appear.

If rains don't come, we irrigate at least once a week to keep soil from drying out. Since eggplants are subjmect to fungal disease or powdery mildew, I avoid watering in a way that would cause water to remain on the leaves, especially overnight. Sometimes I do the job by hand, pouring water around the base of each plant. Or, we lay a soaker hose along the row to get water to the roots.

In Low Country South Carolina, our well water comes up through limestone. In times of drought when we must irrigate frequently, I check soil pH and if the reading goes above 6.8, I take steps to reduce alkalinity. Organic matter helps to control pH. We are surrounded by pine trees, and I often rake back the top layer of pine needles to get to partially rotted material underneath. Used as a mulch, that adds acidity to the soil.

In the past, all eggplants were dark purple ovals. I like Burpee's Purple Rain, which is mild and tender. *Photo by Don Farris*

Eggplants do have a few enemies. Flea beetles eat tiny holes in the leaves. Catnip helps repel flea beetles. Healthy plants can withstand some damage without reduction to the crop. Only if infestation is severe do we dust or spray with poison that might hurt beneficial insects.

Occasionally, eggplants may succumb to wilt or blight. Resistant varieties are the best prevention. We rotate all garden crops on a three-year plan so that soil borne diseases are less likely to reproduce and attack the crop in subsequent years.

Eggplants produce an attractive bloom, then set fruit. For best texture and flavor, pick eggplants while skin is still shiny. When it dulls, seeds quickly harden and may become bitter. The flesh may develop a pithy texture.

Our grandmothers prepared eggplant by breading and frying the slices. We are smarter now about fat and carbohydrates. Eggplant slices can be broiled, grilled, or baked. Diced eggplant adds bulk and fiber to almost any casserole. Eggplant layered with sweet onion slices and baked, makes a good side dish. Since eggplant has a mild taste, it absorbs the flavor of whatever combination of seasonings I use—Italian, Mexican, or Eastern. I add strips of eggplant to my chicken curry.

For my favorite eggplant casserole, I sauté slices of eggplant and layer them with onion, garlic, and tomato sauce. When the casserole reaches "hot, bubbly, and fork-tender", I sprinkle on grated cheese and put the dish back into the oven just till the cheese melts.

Some health experts say that purple foods are good for the brain. Red foods contain lycopene, which may help prevent some cancers, and garlic may lower cholesterol. With my "senior moments" becoming more frequent, I figure I need all the brain food I can get and if I can smother it in something that prevents disease, I like it that much better!

Grow some eggplant this year, and prepare it any way you like it.

The homestead kitchen:

A salute to salad

By Jerri Cook
Countryside Staff

It's the middle of summer, and the last thing anyone in their right mind wants to do is fire up a stove of any sort in order to cook a meal. Even outdoor cooking is unpleasant in oppressive heat. That's why salads are the natural go-to meal this time of year. Compared to cooking a full meal after a long day's work, vegetable salads can be a convenient and healthy alternative to the joys of slaving over a hot stove.

Salads are an integral part of modern American life. We can get a vegetable salad virtually anywhere on demand—from fast food restaurants and even out of vending machines. While salads are arguably a staple of our modern lives, this wasn't always the case. As far back as the Roman Empire, people would rather slave over a hot stove than eat a fresh green salad, even though they fully understood the need to eat raw foods.

When in Rome

For the Romans, the consumption of raw greens and vegetables was for medicinal purposes only. Medical practitioners of the time believed that eating raw vegetables was highly beneficial to maintaining good health, and then, as now, people wanted to be as healthy as possible. They regularly ate leafy greens soaked in vinegar and salt, but they didn't call the various greens—lamb's quarters, dandelion, sorrel—salad. It was just the way one ate a raw green or vegetable. It wasn't supposed to be an enjoyable experience, just a necessary one. The term "salad" didn't appear until sometime in the 14th century.

Eating their greens wasn't something the Romans did happily, and only after the meal was finished. However, someone noticed that the vinegar-soaked greens caused the after-dinner wine to taste odd, and the consumption of salad was moved to the beginning of the meal. That way, they could just get it over with and not have to continue with a feast, all the while dreading what awaited them at the end—bad-tasting wine. Good thinking.

In Western societies, salad has been served at the beginning of the meal ever since. Even so, salad didn't enjoy any real appreciation until the late-20th century, when Americans decided to fight the battle of the bulging waistline.

Belly up to the bar

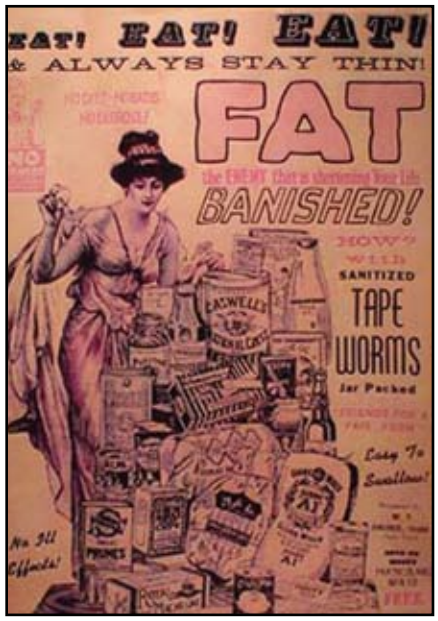
The American salad experience began in New York City in the early 19th century, when fine hotels began serving the side dish of greens to their wealthy patrons. By this time, salads were made from domesticated greens, not the wild greens the Romans routinely consumed in their salads. Because they were expensive to grow, clean, and prepare, green salads were expensive, and would remain a food of the elite until well into the 20th century. Other than a mention or two in a home economics class, no one really knew or cared about creating raw vegetable or leafy green salads. Salads made with pasta, potatoes,

meat, boiled eggs, and Jell-O were the order of the day. Leafy greens and raw vegetables were something you ate if you were ill—knocking on Heaven's door ill, and you certainly didn't eat them in public. If it could be mixed with mayonnaise, drowned in non-dairy whipped topping, or set in flavored gelatin, it was a salad. If it was a leafy green or vegetable, it was a garnish. Period.

As it turns out, the ancient Roman medical practitioners were right. Although they didn't know the first thing about pasta mixed with mayonnaise or canned fruit set in Jell-O, they did know that for humans to enjoy optimal health, we have to eat raw foods. As early as the 1950s, Americans began to realize this, and once again salads made from leafy greens and raw vegetables began to take their place at the head of the American table. But the restaurant industry wasn't as willing to give up highly processed and highly profitable non-vegetable salads.

Even though you've never heard of him, Russell Swanson forever changed the course of popular American cuisine, heavily influencing the rise in obesity rates. In 1950, in a small supper club in Stevens Point, Wisconsin, Swanson introduced the first all-you-can-eat salad bar. The two concepts have been inseparable ever since. The salad bar craze quickly spread across the nation, and it wasn't long before every mid-priced family-dining establishment in the country featured a salad bar—complete with pasta salad, potato salad, fake bacon bits and heavy mayonnaise-based dressings. However, the dining public would soon figure out that all-you-can-eat pasta salad isn't such a great deal, at any price.

After living through the hard years of World War II, when Americans endured the rationing of many necessities, including food, the idea of all-you-could-eat anything seemed like the light at the end of a long, narrow tunnel. It's not hard to understand how, as the all-you-can-eat salad bar gained in popularity, Americans gained hard-to-shed pounds. But the all-you-can-eat trend had an unintended and dangerous consequence—the fad diet.



Nothing is quite like the early tapeworm diet.

During the 1950s, Americans devised several ways to lose the weight they were fast amassing. It was during this decade that the grapefruit diet and the cabbage soup diet were invented. So it began—the endless cycle of binge eating high-calorie processed food and then starving to undo the damage. And for those who just wanted to keep gorging themselves, there was the tapeworm diet. Just swallow a few tapeworm eggs in pill form and belly up to the salad bar, making sure to have a second heaping helping of that creamy potato salad for good measure.

It's what's for breakfast

As Americans have struggled to maintain their weight and health, leafy greens and vegetable salads have steadily gained acceptance as meals in and of themselves. Those enjoying a big plate of leafy greens are no longer the odd man out. In fact, these days you're more likely to be mocked for devouring huge amounts of anything other than leafy greens or vegetables in public.

Even though salads were traditionally consumed at the beginning of the noon or evening meal, that's no longer the case. The dawn of salads has arrived, and breakfast will never be the same. One of the most popular and easiest breakfast salads is the bacon and egg salad. Made using fresh spinach leaves as the base, this salad is simply crumbled bacon and cooked eggs, some croutons, a little onion and a vinegar-based dressing. I prefer my eggs boiled for this one, but others in my family like a nice over-easy or basted egg on top.

Dole Foods has several recipes for breakfast salads using their packaged salads as the base. Visit them at www.dolesalads.com, and while you're there check out the recipe for the Salsiccia Italian Breakfast Salad. You won't be disappointed. Even if you grow and pick your own greens, the Dole website is a great idea-generating resource for creating great salads that are stand-alone meals.

No matter how rushed you are, everyone has time to open a bag of store-bought salad mix, but if you can grow your own mixed greens, so much the better. Fresh leafy salads are the perfect solution for those of us who are too busy enjoying summer to worry about cooking. For the most part, they require minimal preparation and keep in the refrigerator for days—even longer for vegetable salads with a vinegar or brine-based dressing.

Of course, meal-worthy salads are about more than leafy greens, and if you're looking for something hearty and filling, check out the recipes over at www.ohmyveggies.com. Leave it to the vegetarians to come up with beautiful, raw vegetable-based meals.

Not only has salad become acceptable as a stand-alone meal, the epicureans of ancient Rome would be pleased to know that you can enjoy a salad and wine at the same time. According to the folks over at www.sunset.com, Sauvignon Blanc and Pinot Grigio go well with salads that include a vinegar-based dressing, and adding bridge ingredients like nuts, cheese, and fish help to bring out the wine's flavor. Silly Romans. All they had to do was change the wine and add a little parmesan to the greens.

Fast-growing plants *for impatient gardeners*

By Armani Tavares

For those of us who suffer from a chronic condition known as impatience, here are some plants that I can recommend growing. They're easy, they're fast, and they're what make up a bountiful garden harvest in only a month.

First place has to go to green onions grown from sets. That's right. They can go into the ground, and that's most any ground, at almost any time of the year, they are the earliest thing I harvest in regards to both days to maturity, and how early they can be planted. Plant them as soon as you can work the soil in spring, all the way through the year until freeze up. You'll have a harvest from the sets in as early as two weeks, varying due to the time of year and depth planted. I like mine planted deep, around four inches, as to get longer white stalks (or red when I plant red onion sets). If you have some mechanism for creating furrows, that's great, but I dig a trench with a hoe or heavy rake and place the sets as close as possible to each other down the length of it. Then push the dirt back over, water, and you're done.

Second place is taken by radishes. I personally never liked radishes very much, that is, for eating. But they're great for growing and if you plant all the different colored ones, white, red, purple, and pink, they're just plain fun, and quite attractive. I grow them because of that. Of course I figure out some place to use them, usually salads. Some varieties can be harvested in as early as 18 days, such as Saxa II, offered by Baker Creek Heirloom Seeds (2278 Baker Creek Rd., Mansfield, MO 65704; ph. 417-924-8917).

Baby greens of all types will produce a harvest in as early as two or three weeks. They are also very easy to grow, not giving much time for problems to show up! There are all sorts of options here: Kale, mustard, lettuce, arugula, spinach, cress, mizuna, tat soi, and pac choi all make great salad greens that pass the one-month to harvest test. You can create the best salads yourself, and wow is it rewarding.

Kale. Surprise! The Territorial Seed Company (PO Box 158, Cottage Grove, OR 97424; ph. 800-626-0866) offers a variety, Wild Garden Kales, which offers a wonderful array of shapes and colors of Siberian kales. It has a days-to-maturity of 30 days—it passes the test. I love growing kale, and the earlier, the better. Super-food nutritious and my favorite green for adding to stews and such dishes. Also great made into kale chips, made by marinating the kale leaves, stripped from the stalks and torn into bite-sized pieces, in a concoction of your choice (something like salt, pepper, vinegar/lemon juice) then baking in the oven at the lowest possible temp until dry and crisp all the way through.

Another crop that barely passes is a variety of bok choi named Shiro. It's available from Johnny's Selected Seeds. Shiro is a "baby," single serving bok choi. These Asian vegetables deserve greater publicity due to their relative ease of growing and adaptability. It does best in cool weather but tolerates year-round production. They have a mild, mustard greens-like flavor, though much crisper.

Everything listed above will produce satisfactorily in your average garden without special care, yet can provide extra special rewards within a month's time of sowing. You know, when you're caring for your garden day in and day out, mopping-wet with sweat under the scorching sun while weeding some plants—plants that by now you've almost forgotten are for eating—20 days difference until harvest can make a big difference in boosting you until the rest of things come into production! Well, okay, I admit it, I'm just impatient.

The homestead kitchen:

Got wild blackberries?

Make a scrumptious, seedless, low-sugar jam!

By Allison Carroll Duffy,
Master Food Preserver and author of
Preserving with Pomona's Pectin

A couple of years ago my family and I moved into an old farmhouse on a few acres. We soon learned from neighbors that wild blackberry bushes used to cover the back of the property, and that the previous owners had spent a lot of time and effort trying to get rid of them.

Some people do consider them a nuisance, and indeed the bushes are thorny, but I happen to adore the gorgeous, deep-purple fruit they bear. Fortunately for us, the previous owners were not entirely successful in their task—a lovely, modestly sized wild blackberry patch remains along the border of our yard.

While the thorns are definitely large and sharp, I find that wearing a long sleeve shirt and long pants while picking provides enough protection that thorns aren't a big deal. However, there is one thing about wild blackberries that I'm really not crazy about, and that's the seeds.

Cultivated blackberries tend to have fewer seeds, but wild blackberries are absolutely loaded with them. In the past, I've made jam just by mashing the wild berries, but I never was crazy about it because of all the seeds. Now that we have our own, prolific patch of these berries, it was time to come up with a seedless version of blackberry jam.

Making seedless jam from wild berries isn't hard to do, but it does take a little time and persistence--both in the picking and the making—but I can tell you that the results are absolutely worth it. If you're planning on using wild berries, be sure that you pick in an area that has not been sprayed with weed-killers or anything else. If wild blackberries don't grow in your area, cultivated berries are an equally delicious substitute.

The basic idea in making a seedless jam is to separate the seeds from the fruit pulp. I find that the easiest way to do this is by pressing the mashed berries through a mesh strainer. When choosing a strainer, make sure that the mesh is fine enough so that the seeds don't get through, but not too fine—if the mesh is too fine, only the juice of the berries will go through, not the pulp—and you want as much pulp as possible to pass through the strainer.

Most standard kitchen strainers should fit the bill. You can use whatever tool you are comfortable with to press the mashed berries through the strainer; I like to use the back of a wooden spoon, along with my (clean) fingers. This process can take a little time, but stick with it if you can—the more pulp you press through the better, as you'll ultimately be composting the seeds and whatever else doesn't get pressed through the strainer.

You should end up with about four cups of lovely, purple blackberry pulp—almost totally free of seeds—with which to make your jam. In the end, you'll be rewarded with a luscious, smooth, spreadable jam that is delicious slathered on pancakes, muffins, toast and—according to my two young boys anyway—just about anything else.

Seedless Wild Blackberry Jam

Yield: 4 to 5 half-pint (8-ounce) jars

Before you begin:

Prepare calcium water. To do this, combine ½ teaspoon calcium powder (in the small packet in your box of Pomona's pectin) with ½ cup water in a small, clear jar with a lid. Shake

well. Extra calcium water should be stored in the refrigerator for future use.

3 quarts of blackberries
2 teaspoons calcium water
1¼ cups sugar
2 teaspoons Pomona's Pectin powder

Directions

1. Wash and rinse jars, lids, and screw bands. Set screw bands aside until ready to use. Place jars in boiling water bath canner with a rack, fill at least 2/3 of the way full with water, and bring to a boil. Boil jars for 10 minutes to sterilize (add 1 additional minute of sterilizing time for every 1000 feet above sea level), then turn down heat and let jars stand in hot water until ready to use. Place lids in water in a small pan, bring to a low simmer, and hold there until ready to use.

2. Pick through blackberries, discarding any stems. If blackberries look clean, rinsing them is optional.

3. Place berries in a large bowl and mash them thoroughly (a potato masher works well for this).

4. Place a mesh strainer over a large bowl, and transfer mashed berries into the mesh strainer. Press the mashed berries through the strainer (the back of a wooden spoon, as well as clean fingers, work well for this), so that the blackberry pulp goes through the strainer into the bowl below, while the seeds remain in the strainer.

5. Measure out 4 cups of the blackberry pulp. (If you have any left over, you can use it for something else.) Pour the measured pulp into a large sauce pan. Add calcium water and stir to combine.

6. In a separate bowl, combine the sugar and pectin powder. Mix well and set aside.

7. Bring blackberry pulp to rolling boil over high heat. Add sugar-pectin mixture, then stir vigorously for 1 to 2 minutes, still over the highest heat, to dissolve pectin. Return jam to a boil, then remove from heat.

8. Can Your Jam: Remove jars from canner and ladle jam into hot jars, leaving ¼ inch of headspace. Remove trapped air bubbles, wipe rims with a damp cloth, put on lids and screw bands, and tighten to fingertip tight. Lower filled jars into canner, ensuring jars are not touching each other and are covered with at least 1 to 2 inches of water. Place lid on canner, return to a rolling boil, and process for 10 minutes. (Add 1 extra minute of processing time for every 1000 feet above sea level). Turn off heat and allow canner to sit untouched for 5 minutes, then remove jars and allow to cool undisturbed for 12 to 24 hours. Confirm that jars have sealed, then store properly.

Pear-Cranberry Conserve with Almonds and Crystallized Ginger

Excerpted from *Preserving with Pomona's Pectin* by Allison Carroll Duffy

The combination of pear and cranberry is a delightful one for fall. The addition of ginger really makes the flavors sing, and the almonds provide a chewy crunch. For the best texture, use pears that are still quite firm so that the pear pieces remain intact when cooked. While unsweetened dried fruit is generally preferable in conserves, it's very difficult to find unsweetened dried cranberries, so feel free to use the sweetened version if that's what you have available.

Before you begin:

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

Yield: 4 to 5 half-pint (8-ounce) jars

2 pounds ripe, firm pears
½ cup dried cranberries
2 tablespoons finely chopped crystallized ginger
½ cup sliced almonds
1½ cups water
½ cup lemon juice
4 teaspoons calcium water
1 cup sugar
3 teaspoons Pomona's Pectin powder

Directions:

1. Wash your jars, lids, and bands. Place jars in canner, fill canner 2/3 full with water, bring canner to a rolling boil, and boil jars for 10 minutes to sterilize them. (Add 1 extra minute of sterilizing time for every 1000 feet above sea level.) Reduce heat and allow jars to remain in hot canner water until ready to use. Place lids in water in a small sauce pan, heat to a low simmer, and hold until ready to use.

2. Peel, core, and dice pears.

3. Combine diced pears in a saucepan with dried cranberries, crystallized ginger, sliced almonds, and the 1½ cups water. Bring to a boil over high heat, reduce heat, and simmer, covered, for 5 to 10 minutes or until fruit is soft, stirring occasionally. Remove from heat. Mix well.

4. Measure 4 cups of the cooked mixture (saving any extra for another use), and return the measured quantity to the saucepan. Add lemon juice and calcium water, and mix well.

5. In a separate bowl, combine sugar and pectin powder. Mix thoroughly and set aside.

What is crystallized ginger?

This recipe calls for crystallized ginger—essentially, slices of fresh ginger root that have been cooked and preserved with sugar. Crystallized ginger is easy and quick to chop, so it's very convenient in recipes. It's available at Asian markets and at many natural food stores.

Interview with Allison Carroll Duffy

AUTHOR OF
PRESERVING WITH POMONA'S PECTIN

What inspired you to write *Preserving with Pomona's Pectin?*

When I first learned of Pomona's, I was really excited to try it out. As a Master Food Preserver, trained through the U. of Maine Cooperative Extension, I loved the idea of making jam with lower amounts of sugar and having the flexibility to use honey and maple syrup—two of my favorite sweeteners. So, when I was approached by Fair Winds Press to write a book of Pomona's recipes, I knew I wanted to take it on. The project aligned perfectly with my personal viewpoint and what I was already teaching and writing about – the importance of making jams and jellies with low quantities of sugar or alternative sweeteners, and how to do that using Pomona's Pectin.

How long have you been canning?

I've been preserving food for about 13 years. As for canning specifically, I got more heavily into that about five years ago. I teach food preservation classes and have written about food for various publications and my own website/blog—www.CanningCraft.com. I've also taught jam making and canning with Pomona's on *207 Kitchen*, WCSH6 in Portland, Maine.

What makes *Preserving with Pomona's* different from other preserving books?

Most jam-making books focus on "traditional" added-pectin jams, or on no-pectin-added jams, both of which require lots of sugar. While some jam-making books do include low-sugar recipes, and some do include recipes that use Pomona's Pectin, this book is the only one that focuses exclusively on using Pomona's. Additionally, this book is the first and only "official" Pomona's Pectin cookbook.

6. Bring pear mixture back to a full boil over high heat. Slowly add the pectin-sugar mixture, stirring constantly. Continue to stir vigorously for 1 to 2 minutes to dissolve pectin while the conserve comes back up to a boil. Once the conserve returns to a full boil, remove it from the heat.

7. Can Your Conserve: Remove jars from canner and ladle jam into hot jars, leaving ¼ inch of headspace. Remove trapped air bubbles, wipe rims with a damp cloth, put on lids and screw bands, and tighten to fingertip tight. Lower filled jars into canner, ensuring jars are not touching each other and are covered with at least 1 to 2 inches of water. Place lid on canner, return to a rolling boil, and process for 10 minutes. (Add 1 extra minute of processing time for every 1000 feet above sea level). Turn off heat and allow canner to sit untouched for 5 minutes, then remove jars and allow to cool undisturbed for 12 to 24 hours. Confirm that jars have sealed, then store properly.

If you haven't seen Pomona's Pectin in your local grocery store, try a natural food store in your area or look online. Pomona's website (www.pomonapectin.com) has a store locator that can help you. *(See ad on page 98.)*

New product review:

Ball® FreshTech Automatic Home Canning System

By Kelly Weiler
Countryside Staff

My first reaction on seeing this sleek black and stainless-steel Ball® FreshTech Automatic Home Canning System was, *wow*—that's stylish, but probably too fancy for the homesteader who is actually canning. Don't let its sleek modern appearance fool you. This is a must-have for this busy single mom of twins putting as much food away in the summer as she can! Every jar I add to the pantry is one more item I don't have to buy come winter. The freezer gets full fast, so you have to know how to can. Plus, I know where the food came from and what is *not* sprayed on it.

What I found is this new FreshTech Automatic Home Canning System is perfect for a variety of reasons. If you have a small garden, you know all about bringing in fresh produce and some gets eaten fresh, but you can't eat it all at once. If you have enough left to can just two-to-four jars worth, use the FreshTech Automatic Canner and preserve that produce. That way when tomatoes are ripening a little at a time at the beginning of the season, they don't have to sit in storage for a week waiting for more of the crop to ripen to make canning worth your while. The canner is preprogrammed for a variety of tasks, so all you do is press a button. Talk about easy!

Versus traditional water bath canning, this Ball® product uses 60% less energy and 85% less water. It automatically adjusts to your latitude and preserves 30% faster. (So no hot, steamy kitchen!) The exterior stays cool to the touch.

The manual gives step-by-step instructions and has tested recipes. There's no guessing what to do next, which we know can be dangerous. After you place the jars inside the canner, you touch three buttons and the canner does the rest! I *loved* the feature they put on this canner to preheat your jars. I felt this whole process was easy and safe enough that my 11-year-old daughter was able to do it. She was able to operate it and be a total success.

Get your kids involved in gardening and preserving. Trust me, if they help they appreciate eating fresh-tasting food. This is definitely a great tool for someone just starting out with canning (although maybe they should have to learn the hard way, like we did. Grin.). Even if you already know how to can, this is a time saver. I love the fact I can walk away after getting it all going and not be stuck in the kitchen watching over a hot steamy stove while it processes.

The unit retails for $299.95. If you can your own tomato sauce, the unit will pay for itself in about 2 ½ years (and comes with a one-year guarantee). The time you save using this is worth the money spent. Although it doesn't hold the quantity of jars you may need during the surplus produce weeks, you won't regret adding a Ball® FreshTech Automatic Home Canning System to your kitchen or to give as a gift. You'll be able to save vegetables from those "skimpy" produce weeks without all of the extra processing (boiling water/electricity) normally used in conventional water bath canning. (Who wants to heat a

21-quart pot of water for two jars of pickles?! It's just not economical.) The canner holds three quarts, four pints or six half-pint jars. The inner pot is removable for cleaning and is dishwasher safe. (Note: This is not intended for low-acid food preservation.)

To see how it works, visit: www.freshpreserving.com/autocanner.aspx. Order yours at www.FreshPreservingStore.com or at Sur La Table stores.

Book review:

An Introduction to Heritage Breeds

240 pages, 7x10 paperback, $19.95
Reviewed by Gail Damerow

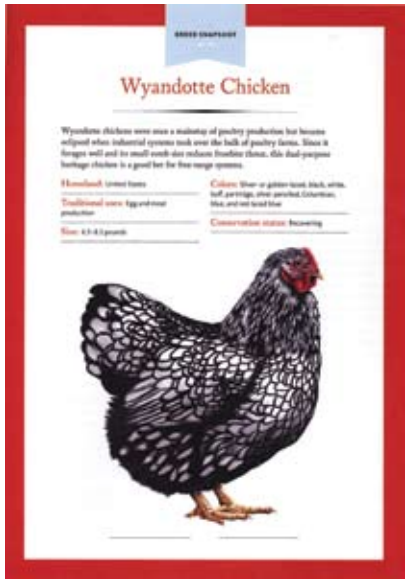
An Introduction to Heritage Breeds is a long-overdue book describing the importance of heritage livestock to the future of sustainable farming. It explains how to select and manage a species and breed that best suits your particular situation, and discusses options to help ensure the future of your chosen breed. "The rich genetic legacy embodied in these breeds is a key to the future of sustainable agriculture, but heritage breeds are now critically endangered," state the book's authors — three staff members of the non-profit Livestock Conservancy in Pittsboro, North Carolina.

Phil Sponenberg, Professor of Pathology and Genetics at the Virginia-Maryland Regional College of Veterinary Medicine, contributes his down-to-earth approach to livestock management and selective breeding. Jeannette Beranger has the plum job of traveling around the country visiting conservation breeders, helping them implement breed conservation programs, and shooting pictures of their livestock. Her photos appear throughout the book. Alison Martin is director of Conservancy's Research and Technical Programs. This team has written an outstanding book that should be read by anyone with the slightest interest in the conservation of heritage livestock breeds.

So what exactly is a breed? As explained in this book, it's a population of animals that trace their origins back to specific offspring of the original genetic parents; that share a common history over the generations; that were selectively bred for their desirable traits; that have a characteristic appearance distinguishing them from other breeds; and that have a certain degree of genetic uniformity, allowing them to consistently transmit their breed type from generation to generation.

Heritage breeds result from a combination of original genetics, environment, and human selection, with a history that "goes back at least ten thousand years, to the handful of small areas of the globe where agriculture began and the earliest farmers first domesticated the now-familiar species of farm animals. As human populations grew, farmers spread out into diverse climates and terrains, bringing along their domestic livestock, which provided essential food, power, and fertilizing manure.

"The resources of these early farmers were usually limited — even hay was a luxury for many. As a matter of necessity, owners quickly learned to keep and breed only those individual animals that thrived and provided a good return for the farmer's (often minimal) investment of feed, shelter, and labor. Characterized by limited resources, these farming systems produced breeds of animals that are still productive today, as well as uniquely adapted to local conditions, a key feature of heritage breeds."

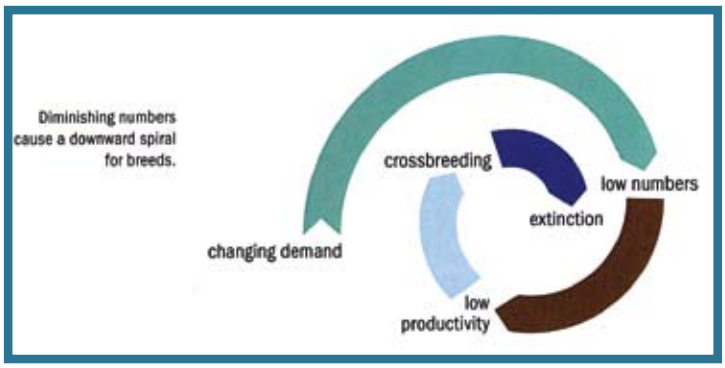


An Introduction to Heritage Breeds **includes colorful paintings of 45 different breeds in 11 species, skillfully rendered by artist Carolyn Guske.**

"Unfortunately for the survival of heritage breeds, agriculture has changed more in the past century than in the previous 10,000 years," explain the authors. "Diversified farming based on adaptation to local conditions is being replaced by the trend to make agricultural systems the same everywhere on the planet. To succeed, this approach requires confinement of animals, standardized feeds, and only the few modern breeds that produce the most in such systems. Thus has the long, historic trend of agriculture toward development of more and more breeds, each better and better adapted to specific regions and multiple purposes, now been reversed. Heritage breeds, and with them their rich genetic diversity, are disappearing rapidly."

An Introduction to Heritage Breeds is here to show how you can help reverse the trend. In ten fast-paced chapters it covers what heritage breeds are and why they matter; breed background; how heritage breeds fit into farms; choosing a species; getting started; basic maintenance; selecting a project for your farm; the art and science of breeding; rescue of breeds, strains, and individuals; joining a breed community. Among this book's attractive features are 45 full-page breed snapshots, consisting of a large and clearly rendered painting of a particular breed of goat, chicken, horse, and so forth, accompanied by a brief profile plus data on its homeland, traditional uses, size, color(s), and conservation status. A handy appendix lists many more heritage "breeds at a glance," with such important details as place of origin, purpose, temperament, mothering ability, and required degree of owner skill.

The book's excellent information on selective breeding for conservation is of particular interest to me.



Helpful infographics like this one appear throughout *An Introduction to Heritage Breeds.*

I've been breeding the same line of Nubian dairy goats for 30-plus years and was anxious to find out if I'm doing it "right."

Nubians, I think, should qualify as a heritage breed, although they are not considered to be rare or endangered. However, when I started my herd, Nubians were a dual-purpose goat kept here in Tennessee as much for meat as for milk. Then in 1993 the meat-producing Boer goat was imported from South Africa and suddenly everyone in our area was riding the Boer bandwagon. Since full-blooded Boers were extremely expensive, a lot of goat breeders bought a Boer buck to breed to their Nubian does, and then bred back the offspring to increase the percentage of Boer blood in their herds.

According to *An Introduction to Heritage Breeds,* the same thing happened to the Spanish goat, "effectively eliminating the purebreds in a single generation." Apparently, though, enough of us stuck with our full-blooded Nubians to ensure their continuing survival. However, thanks to the Boer, the bottom dropped out of the market for surplus Nubian bucklings (weaned male goats) as meat animals, eliminating an important source of income for Nubian breeders. A few years after Boers were introduced I asked a buyer at the stockyard if anyone in our area still kept Nubians; as far as he knew, I was the only one left.

Since then I've been happy to see renewed interest in the Nubian breed. But, at least in my area, the Nubian appearance has gradually changed from a stocky goat with a large rib cage and a strong jaw to a lanky goat with a narrow rib cage and a pinched face. My Nubians are year-around grazers, so I breed for an active goat with strong, sturdy legs; a well rounded rib cage to provide lots of room for hay and browse to fuel milk production; and a strong jaw for efficient grazing.

One of the characteristics of old-style Nubians is their long ears, which hang well below their muzzles, while many neo-Nubians have ears that are not much longer than their faces. What the significance of long ears is, I have yet to discover, but old-timers in my area recognize my long-eared Nubians as being the real deal.

A hallmark of old-time Nubian dairy goats is their super long ears. *Photo by Gail Damerow*

So, although Nubians are not considered to be endangered, they are being gradually transformed right before our eyes into a breed that Grandma might not recognize. Meanwhile I'll continue selectively breeding my herd to retain the old-time attributes that favor cost-effective grazing over costly dairy goat chow from the farm store.

"The issues of selection can become complicated and overwhelming," say the authors of *An Introduction to Heritage Breeds,* "but an orderly approach can help to simplify them so that they make as much sense in the farmyard as they do on paper." As I have learned over the years, and as verified in this book, an orderly approach includes balancing such desirable traits as ability to produce, mothering ability, disease resistance, temperament, foraging behavior, and adaptation to the environment.

But you don't have to become a livestock breeder to make a significant contribution toward conservation breeding. "For example," the authors point out, "heritage poultry breeds benefit greatly from demand created by flocks that never reproduce a single chick. Consumers increasingly want heritage breed birds for non-breeding backyard egg production and for the production of niche market broilers and fryers. The use of these hardy, attractive birds instead of industrial birds results in heightened demand for the day-old chicks of those heritage breeds. This, in its turn, allows hatcheries to raise more birds, thereby creating a much wider pool of candidates from which producers can choose the next generation of breeder birds. With more birds to choose from, the productive quality within flocks is more easily kept to a high standard, assuring a breed's competitiveness. In this situation, the non-breeding flocks of birds have a critically important role to play in the fate of their breed."

The bottom line is that, although industrial breeds "easily out-compete heritage breeds in high-input, standardized, confined settings, [they] cannot effectively thrive and produce in the low-input, locally adapted farm systems where heritage breeds thrive." As promised by its authors, this must-have book will show how you, too, can help conserve the past to secure the future.

Gail Damerow is the author of The Chicken Encyclopedia, The Chicken Health Handbook, Storey's Guide to Raising Chickens, *and several other books about raising poultry, dairy goats, and other livestock.*

Countryside Bookstore

Ball® Complete Book of Home Preserving

400 delicious and creative recipes for today

By Judi Kingry and Lauren Devine

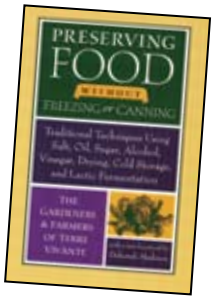
From the experts, the new bible in home preserving. Ball® Home Canning Products are the gold standard in home preserving supplies, the trademark jars on display in stores every summer from coast to coast. Now the experts at Ball® have written a book destined to become the "bible" of home preserving. As nutrition and food quality has become more important, home canning and preserving has increased in popularity for the benefits it offers:

- Cooks gain control of the ingredients, including organic fruits and vegetables
- Preserving foods at their freshest point locks in nutrition
- The final product is free of chemical additives and preservatives
- Store-bought brands cannot match the wonderful flavor of homemade
- Only a few hours are needed to put up a batch of jam or relish

Home preserves make a great personal gift any time of year. These 400 innovative and enticing recipes include everything from salsas and savory sauces to pickling, chutneys, relishes and of course, jams, jellies, and fruit spreads. The book includes comprehensive directions on safe canning and preserving methods plus lists of required equipment and utensils. Specific instructions for first-timers and handy tips for the experienced make the *Ball® Complete Book of Home Preserving* a valuable addition to any kitchen library. **448 pages, $ 22.95**

Preserving Food Without Freezing or Canning

By The Gardeners and Farmers of Terre Vivante



Typical preserving produce books nearly always assume that modern "kitchen gardeners" will boil or freeze their vegetables and fruits. *Preserving Food Without Freezing or Canning* deliberately ignores freezing and high-temperature canning in favor of methods that are less costly and more energy efficient. Offering more than 250 easy and enjoyable recipes featuring locally grown and minimally refined ingredients. It is an essential guide for those who seek healthy food for a healthy world. **197 pages, $25.00**

How to Store Your Home-Grown Produce

Canning, Pickling, Jamming, and So Much More

By John and Val Harrison

- Did your tomato plant produce twice as many tomatoes as you'd planned?
- Grow too much cabbage?
- Harvest too many blueberries?

If so, here is practical advice on how to bottle, dry, freeze, and even salt home-grown fruits and vegetables. Discover extra storage space in your home or learn how to convert a shed or garage to store your tasty products. Learn how to make chutneys from fruit; pickles from cucumbers; and ciders, jams, and even ketchup from your garden! There is even advice here on drying foods, with instructions on how to store them in oil as well as ways to freeze and blanch your fruits and vegetables. **186 pages, $12.95**

Keeping the Harvest

Discover the Homegrown Goodness of Putting Up Your Own Fruits, Vegetables & Herbs

By Nancy Chioffi and Gretchen Mead

Enjoy your abundant harvest of garden-fresh fruits and vegetables throughout the year by following the simple, satisfying home-preserving techniques in *Keeping the Harvest*. Completely updated to reflect the latest techniques, equipment, and USDA guidelines for home preserving. Now you can capture the goodness of "garden-fresh" and save money, too!

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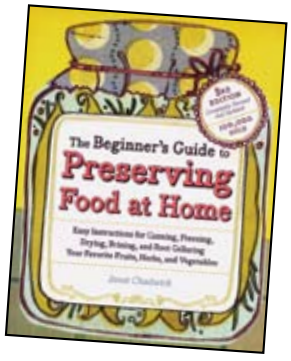

A wonderful thing is happening in home kitchens. People are rediscovering the joys of locally produced foods and reducing the amount of the grocery budget that's spent on packaged items, out-of-season produce, and heavily processed foods. But fresh, seasonal fruits and vegetables don't stay fresh and delicious forever they must be eaten now…. or preserved for later.

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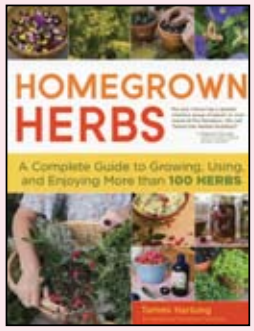

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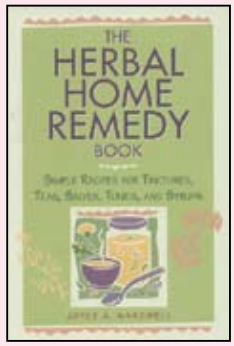

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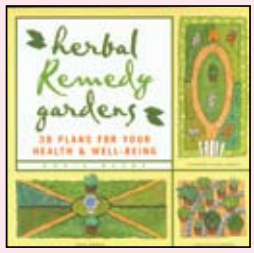

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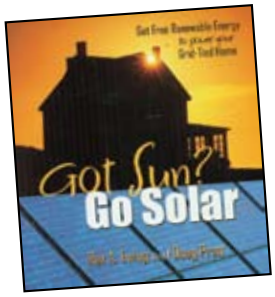

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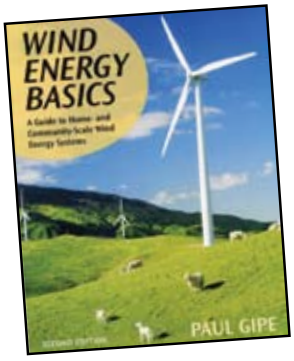
By Paul Gipe



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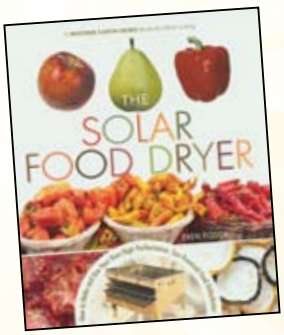
The Solar Food Dryer

How to Make and Use Your Own High-Performance, Sunpowered Food Dehydrator

By Paul Gipe



Solar food drying is the healthy, sustainable way to preserve high-quality, locally grown foods. Food drying has become very popular in recent years, with electric food dryers now available in almost every department store. But instead of using costly electricity for the job, you can easily build yourself a dehydrator that uses the power of the sun to dry your food. *The Solar Food Dryer* describes how to use solar energy to preserve your summer's harvest. With your own solar-powered food dryer, you can quickly and efficiently dry all your extra garden veggies, fruits and herbs to keep their goodness all year long – with free sunshine! Solar food dryers perform amazingly well under a wide range of conditions, working effectively in almost any climate where you can grow fruits and vegetables. Included are: complete step-by-step plans for building a high-performance, low-cost solar food dryer from readily available materials, solar energy design concepts, food drying tips and recipes, resources, references, solar charts and more. Highly illustrated with both photographs and helpful design and construction plans. **122 pages, $15.95**

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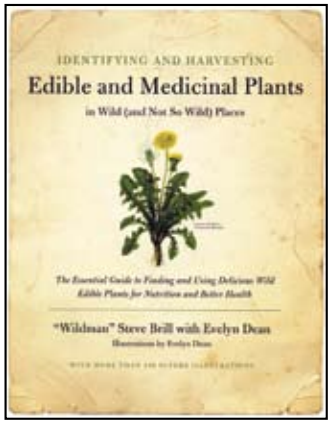

By Steve Brill

Identifying and Harvesting Edible and Medicinal Plants in Wild (and Not So Wild) Places shows readers how to find and prepare more than 500 different plants for nutrition and better health, including such common plants as mullein (a tea made from the leaves and flowers suppresses a cough), stinging nettle (steam the leaves and you have a tasty dish rich in iron), cattail (cooked stalks taste similar to corn and are rich in protein), and wild apricots (an infusion made with the leaves is good for stomach aches and digestive disorders). More than 260 detailed line drawings help readers identify a wide range of plants — many of which are suited for cooking by following the more than thirty recipes included in this book. There are literally hundreds of plants readily available underfoot waiting to be harvested and used either as food or as a potential therapeutic. This book is both a field guide to nature's bounty and a source of intriguing information about the plants that surround us. More than 70 recipes! **317 pages, $21.95**

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The aviary:

Adventures in amateur beekeeping

D. Parnell
Tennessee

I am not a professional beekeeper in any way, shape or form. It's been said that if you speak with 25 different beekeepers, you'll learn of 25 different methods of beekeeping. So, here's my story of many mistakes and a few triumphs.

I started keeping bees in April 2012, with two hives obtained from a local beekeeper. "They" say it's important to start with two hives so you know what normal bee hive activity looks like. It's true, and it does help a lot. Having loaded the nucs (nucleus—a small colony of bees) inside my SUV, I drove home very early in the morning, sweating the fact that several bees had hitchhiked on the outside of the nucs and were now angrily buzzing at the back window of my car toward the rising sun. Thankfully I was driving west so the sun was at my back. Still, I made it home unscathed although my dog, who eagerly jumped into the opened back hatch before I finished unloading the hives, let out a surprised yelp.

After setting up both hives, it was clear from the start that one hive was much weaker than the other. Whether the queen was older or the hive just not as strong, the colony never seemed to grow like its companion hive next door. I fed it sugar water from a front-mounted jar all summer long. I learned later, this is a bad idea as these types of feeders attract robber bees. It did. By October the hive was completely robbed out—no bees, no honey, a couple of hive beetles and a small amount of wax moth activity. I tore down the hive, threw out the nasty parts, saved the clean comb, and wrapped all the reusable parts in large plastic leaf bags then sealed them with duct tape.

The second hive was looking strong and clean. There was lots of honey in the two supers by November and the hive bodies were looking good with capped brood. Following advice of experts, I left the open screened board on the bottom of the hive so it could breathe during the winter and not build up moisture. No honey was removed that first year—leaving all for the bees.

Then the rain started. The end of 2012 and the beginning of 2013 was cold and rainy for weeks on end. That weather was hard on everything. Even my chickens were wet and discouraged. Finally in February, a dry, warm day presented itself and I opened the hive. The top super was still full of honey—a good sign. But going further down, the bees were clustered at the bottom of the hive body, all dead. A few had ventured up to try and get some food but were found dead, headfirst in an empty cell. The cold winter had made it impossible for the members of the hive to venture far enough away from the warm cluster to get any honey. They had starved to death with food only a foot away.

The beehive "screened porch" lets the worker bees enter, but confuses the robber bees.

The small rectangular bee entrance.

Brokenhearted, I culled some of the honey to eat and wrapped the remaining honey-filled frames, again sealing them tightly so no ants or wax moths could infest them. The honey was wonderful with a touch of grape flavor bestowed by a vine that I had let ferment just for the bees in late summer.

By March, I began calling around locally, but there were no nucs for sale. It had been a bad winter for all. At least I took some comfort in that, as an amateur, I faired not much worse than the pros. Buying out of state was the only option. So we loaded up my SUV, this time with several yards of nylon netting and drove four hours to Brushy Mountain in North Carolina. There, I bought another nuc, paying extra for a guaranteed young queen. The car hummed and buzzed all the way home, but this time the bees were all safely under the netting.

The new hive looked great from the start, active and happy. This time, using a feeder frame filled with honey and water that fit inside the hive body, ensured that extra feeding would not attract robber bees. Spraying the ground around the base of the hive with microscopic predatory nematodes helped to eliminate hive beetles larva and planting mint would deter tracheal mites and mice. It was a long, cool rainy summer, but that meant lots of flowers and lots of honey. The girls had two supers full by September and the grape vine was loaded with drunken bees gathering more fermented grape juice.

Then, in November, I saw the signs again—robber bees swarming around the front of the hive. Checking one of the supers, it was clear—their honey supply was definitely reduced. I immediately closed up all the hive openings, leaving only a half-inch slot large enough for one bee at a time. The fighting around the opening was fierce and the foraging bees who were coming home with pollen-loaded saddlebags were having a tough time getting inside the hive. Not sure what to do, I watched the hive anxiously when I realized the pollen-loaded bees were crawling beneath the hive. Getting a mirror, I looked under the hive. The ingenious girls were traveling underneath to the open screened board and trading off their pollen to the workers inside the hive!

Then I had a thought—if the sugar water attracted robber bees, maybe it could lure them away too. It worked—a jar of sugar water 10 feet away from the hive distracted the robber bees as they went for the easy haul. Even though I kept moving the jar a little further from the hive every day, it wasn't a good answer to the problem. The jar had to stay filled and the robbers had to stay diverted. One bad day and my hive would be robbed out completely. It doesn't take long—especially with aggressive robbers.

A search on the Internet provided an interesting answer—a front screened porch. The theory is that the homies can find their way in and out, but the robbers become confused. So I quickly built the screened porch and put it in place overnight, using wire to pull it tightly against the hive body. To be on the safe side, I covered the top of it with a light piece of screen that could easily be removed, but still provided a slight opening along the

length of the hive. Success! Most of the robber bees could not get in. The few that did crawled around on the screen and could not find their way back out. But my own girls were coming and going with no problem at all.

Concerned now that the honey supply for my hive was too low for the winter, I bought some bee food online. The ingredients weren't listed, but I trusted the company—until the food arrived. I was horrified to see that the number one ingredient was high fructose corn syrup. The next was hydrogenated oil followed by genetically modified corn, soy and other nasty components. The five-pound brick went into the garbage. I don't eat that kind of junk and don't expect any of my animals to either!

Luckily, I had also ordered the book, *Natural Beekeeping* by Ross Conrad (available from the Countryside Bookstore), and now read it cover to cover. For bee food, he offers a recipe of shortening and sugar. You can add peppermint for tracheal mites and thymol for varroa mites. I used organic shortening to ensure there was no hydrogenated oil and used cane sugar since almost all beet sugar comes from GMO beets.

This time, to make sure the hive stayed warmer, I closed it up and transported it to my driveway via the riding lawnmower, where it would get more winter sun and be protected from the north wind by a large shed. I sewed a cover of ripstop nylon and polyester batting that secured with

A breathable blanket helped the bees survive last winter.

Velcro straps to wrap around the hive. This was breathable, but not waterproof. A tarp draped lightly over the hive solved that. When the wind blew, a tie-down strap held the tarp in place. Even though the screened bottom board was left in place, a piece of greenhouse plexiglass slid underneath the screen provided warmth, with only a small amount of airflow around the edges. The little hive door opening was left passable.

Then winter of 2013/14 hit. It was a bad one. The temperature got down to zero degrees, not even accounting for wind chill. Our pipes froze and the chickens were brought inside the garage on a couple of nights in a dog carrier, just in case. I wondered how my bees would survive.

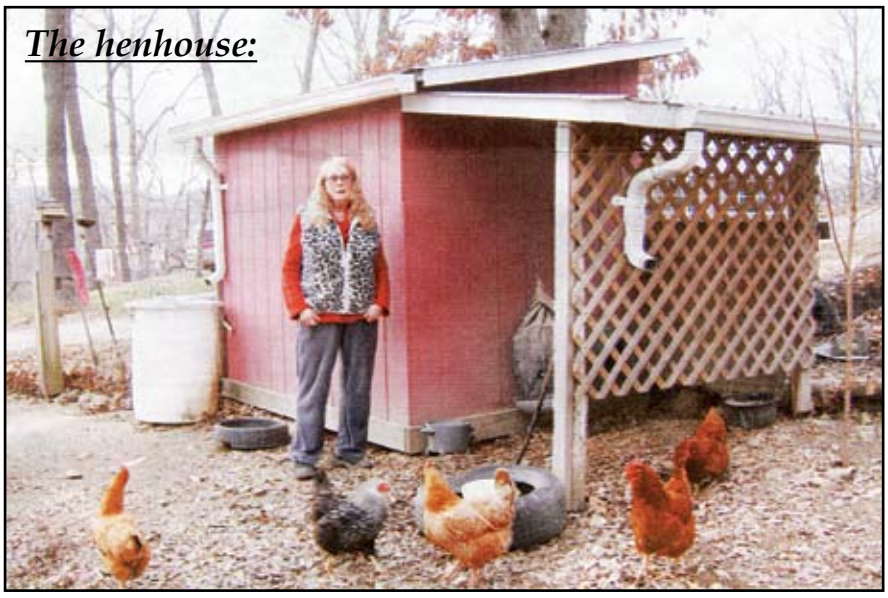
Finally, a warm day arrived in February and I held my breath as I unwrapped the hive and had a look. Happy bees! And they were ready to do some house cleaning. One girl struggled to pull out a dead bee and went flying across the field with it, hauling it far away from the hive. Other bodies were just pushed out the front door. Still, there were only five or six bodies in front of the hive.

By the end of February with some beautiful weather, the girls were restocking their hive, returning with pollen-filled saddlebags. I have no idea where they were finding any pollen at that time of year, but I'd like to think maybe the nasty robber bees didn't make it through the winter and my girls were getting their own stores back. The hive was clean and neat. There were no hive beetles and still some food left. After feeding them some more sugar patties, I removed the plexiglass from beneath the hive—lots of debris and two things that might have been varroa mites. So, just to be on the safe side, waiting until late afternoon on a 60-degree day, I opened the hive, removed each frame and sprinkled as many bees as possible with finely ground sugar. Bees swarmed on the nearby shed, but the queen was not with them. They were grooming each other outside the hive, cleaning off the sugar and knocking off any varroa mites that might be clinging as well. Within a half hour, everyone had flown back inside their home. *Natural Beekeeping* said to make your own finely ground sugar by using a coffee mill. Don't use powdered sugar as this contains cornstarch, which the bees cannot digest.

The next day I checked the plexiglass, but there were no mites on it. It may have been a false alarm, but now I knew the bees were clean and healthy.

Was this labor intensive? Oh yes! But a labor of love. My garden, flowers, even my clover-filled "lawn" and orchard will benefit from these wonderful pollinators. And maybe this year, they'll be able to donate a little grape-flavored honey for my dining table.

My methods are probably not for professional beekeepers who must harvest lots of honey from lots of hives. There are so many chemicals that bees encounter now—pesticides, herbicides, high fructose corn syrup, GMO's—that I can't help but think that all these artificial chemicals weaken the bees. One thing I do know—garbage in = garbage out. I'll give my bees the very best in honest, good clean ingredients and expect the same from them.



Patricia stands next to her chicken coop.

No poop in my coop
(At least, not for long)

By Patricia Millard
Missouri

I have had chickens for at least 30 years and have learned a thing or two along the way. I'd like to share a few of my ideas.

For starters, I like my chicken coop to be clean. In fact, any animal I have had during the past 50 years had it made in the shade. Any animal deserves a solid building, clean water and good food. After all, they can't do it themselves.

Chickens poop at night from their roosts. The secret to keeping a clean coop is very simple. I take a 50 lb. plastic dog food bag and cut the top off, then cut along the side so I end up with a nice oblong bag. I slide this bag under the roosts. I need two bags in my coop, as my roosts are rather long. Each morning after I let the chickens out, feed and water them, I go into the coop, pick up the bags and walk outside to discharge the poop to where I need the fertilizer. I then lay the soiled bags on the ground and spray them down with the hose. The remaining poop slides off the plastic bags and they are clean as a whistle.

Patricia places feed bags under the roosts to collect droppings.

If you don't have access to water, a bucket of water will do just fine, then sweep with a corn broom.

Here is a cost saving idea. I use a mixture of dried grass clippings and leaves in my chicken nesting boxes and on the coop floor. I throw a few handfuls of cedar shavings on the floor for the wonderful clean smell. My hens like it too. This combination makes good bedding and I have an endless supply of both. Make sure the leaves and clippings are fully dried before using. I have a shredder bagger on my lawn mower so I change the bedding quite often. No more buying and hauling bales of straw. I like the price, too.

My husband installed gutters and downspouts on my coop. The water runs into a 55-gallon plastic barrel so I have water at all times. To keep the water clean and fresh, I put two cups of bleach in each full 55-gallon barrel. The water becomes crystal clear within a day. Add one cup of bleach each week or so if the water becomes cloudy. We have an ample supply of rainwater here in Missouri, so I keep an eye on the clarity of my water. If the water gets murky and is no longer fresh and clear, empty the barrel and start again. My husband made a screen top for the barrel to keep leaves and dirt out of the water.

I place my chicken water buckets in an old car tire stuffed with leaves and grass clippings. Make sure the tires are really packed solid. This prevents over-turned water buckets, keeps the water cool in the summertime, and slows freezing in the winter. Place in a sunny, well-sheltered area.

I was using way too much grit. The chickens would get into the pan and scratch it all over the place. What a waste! I'm now using an old, oval crock from a crockpot. It has high sides so they cannot get in and scratch the grit out. Old crocks make good water containers, too. They keep the water much cooler than a plastic bucket.

Moving the chickens from one yard to another prevents manure build-up.

Water buckets placed inside old tires prevents tipping.

I try to keep the inside of my coop free of dust and cobwebs. A good old corn broom does the trick. When the grandkids come to visit they like gathering the eggs, but they don't like the cobwebs. (They are city folks, you know.)

The tools for my coop are very basic: a rake to keep the floor material nice and even, a corn broom for cobwebs, a jar of petroleum jelly for treating their dry, scaled legs. Just smear each leg with a good dollop and the chickens peck the scales off their legs themselves. Beside the chicken pen gate I have a nice shelf, a washcloth, and towel. I like to wash their food and water containers often.

A lean-to on the sheltered side of the coop is really a nice addition. Your chickens can get out of the rain, snow and hot sun. To help the chickens stay mite free, I sprinkle a cup of wood ashes in each dust hole.

I'm fortunate to have two fenced adjoining chicken pens, so I can move the chickens from one pen to another so they have fresh pasture to feed on.

I do have one problem that I have not been able to overcome. Snakes in my coop make me plumb mad. It only happens once in a while, but it sure does scare the dickens out of me. When old Bob sees me running and yelling, he knows it's time to grab a spade or hoe and take care of the situation.

My one downfall is I keep my chickens too long. I procrastinate when it's time to butcher and say goodbye to my little feathered friends. Guess it's my age.

The henhouse:

Langshan chickens

A heritage dual-purpose breed for the homestead

By Leah Leach
Texas

Last year, our eight-year-old son, Ethan asked if we could get chickens. Our last flock, a mix of mostly Wyandottes, Araucanas and Buff Orpingtons, had been decimated by a bobcat and we missed having them around. We were getting ready to move to my parents' 70-acre farm and it seemed as good a time as any to start another flock, so we told Ethan to choose a breed that he would like to raise.

Since we are fans of heritage breeds, he looked at the American Livestock Conservancy website, and the breed that he chose was Langshans. My response was, "what are Langshans?" A little research led us to believe that this old breed would, in fact, make an excellent addition to our homestead.

Langshan chickens originated in China, where they have been raised for centuries, and were imported to England in 1872 by Major A.C. Croad, resulting in the name "Croad Langshans." Langshans are on the American Livestock Conservancy's "threatened" list, meaning that there are fewer than 1,000 of these birds in the United States and that the global population is less than 5,000.

A large, upright breed, they are known for their depth of body and their feathered feet, although the feathering is not as heavy as Brahmas and Cochins. Roosters tip the scales at around 9 ½ pounds, while hens weigh in at around 7 ½ pounds. As chicks, they are a mottled black and yellow but they mature to a solid black with a shimmer of iridescent green. They lay large amounts of dark brown eggs (some say that they can be so dark that they are almost purple) and their meat is tender and flavorful.

After their importation to the west, some Langshans were bred for certain traits, resulting in several subgroups. The Germans bred to get rid of the feathering on the feet, and this variety is called the German Langshan. In England, some people bred for shorter legs and others for longer, more like a game chicken. People bred a white and a silver Langshan. But the best all-purpose homestead bird, in my opinion, is the original black one.

We ordered 10 hens and three roosters from Ideal Poultry (www.idealpoultry.com). Since we live in Texas, shipping was free, which made Ideal the best option for us price-wise, but Langshan chicks are also available from Murray McMurray (www.mcmurrayhatchery.com). We lost two chicks in the first few days and since sexing day-old chicks is not entirely accurate, we ended up with five hens and six roosters.

At exactly six months old, in the

The Langshan is a heritage breed of chicken, good for meat and eggs. They're also docile around young children. If you're not fond of black, they also come in white and silver varieties.

middle of winter, our hens began to lay, and between the Langshans and a few White Rock hens that we found on Craigslist, we get from five to seven beautiful brown eggs daily. They have continued to lay faithfully through some of our coldest weather. The eggs are still small but we expect them to get larger as the hens mature. Also at six months old, we butchered four of the roosters. They dressed out at around four pounds each, and they make one delicious pot of chicken soup! My only complaint is that since they are such a tall bird, they are hard to fit into a conventional plastic freezer bag if we want to freeze them whole for roasting. The drumsticks and breasts are very long. I managed to squeeze them in, but next time we will probably cut them up before freezing.

Since we have five children, temperament is important to us and one of the things that appealed to us about Langshans was their reported docile behavior. When we had many roosters, they were somewhat aggressive, but since we thinned them out and competition for the girls is not as fierce, we haven't had any issues. Our three-year-old can walk right up to the rooster with no problem, and the hens come up to us and even seem to enjoy when the kids carry them around.

Langshans are known for being a hardy breed and we can personally attest to this. One of our little hens was mauled by a stray dog and her back was injured so that her tail is bent to one side. We wondered if this might affect her laying, but she is one of the hens most often in the nest. Also, we recently had a fox in the henhouse (how is that for a classic homestead problem?). My husband was able to shoot him, but not before he had grabbed one of the girls by the head. The next day, both of her eyes were swollen shut and she couldn't find water, so we put her in a small cage overnight. The next morning, there was an egg in the cage…she might not have been able to see, but that didn't interrupt her production! Our chickens free range during the day and we lock them up at night since we live in an area with lots of predators.

Breed reports say that our hens should get broody around April or May and we look forward to raising another generation of this beautiful and versatile breed. I strongly encourage other homesteaders to give them a try and to help increase their population.

Good choice, Ethan!

The henhouse:

Tennessee's first small farm poultry processing facility now open:

Niko & Company

By Mary Malamatos

The dramatic expansion of industrial agriculture has made it increasingly difficult for small poultry producers in the United States to stay in business. The Malamatos family has raised poultry on a limited scale for the last five years. They know firsthand the difficulties encountered in trying to find a processor for their birds so they can sell them or donate them in the community where they live. It is illegal to sell processed poultry in Tennessee unless it has been processed at a USDA-certified facility. Until recently there was no USDA certified poultry processing facility in the state that would process birds for small farms. The large, corporately owned processing facilities only process "company" birds. The Malamatos family saw the need for an on-farm processor to serve small farms and cooperatives throughout Tennessee and the surrounding region. Niko and Company was born of that awareness. By supporting local businesses and farmers and by providing jobs and a much-needed service to the area, Niko & Company hopes to fulfill its mission, namely: to facilitate the success of small farmers and enable them to increase their business by providing a USDA-approved facility for processing their poultry. The small, family-operated facility is located in Walling, Tennessee, about 20 miles south of Cookeville, midway between Nashville, Chattanooga, and Knoxville. The primary products of Niko & Co. are processed broiler chickens and turkeys. They anticipate employing 10 to 14 people eventually, and hope to add rabbits to their products list if they can convince legislators to change the classification of rabbits from "exotic" to "livestock."

Poultry raisers in Tennessee are thrilled to have a processing plant for small orders.

The plant is operated by Steve and Mary Malamatos, and daughter Kelly Tyler. After moving to Tennessee six years ago, Steve's respect for farming and concern for the loss of family farms spurred him to find a way to help keep farmers going. He researched the poultry industry and found just the niche to assist farmers. He is confident of the need for this on-farm poultry processor and is determined to make it succeed. The company is named after Steve and Mary's son, Nicholas—"Niko" being a nickname for Nicholas in the Greek culture, Steve's birthright. Steve has 30 years of experience as a successful business owner and is able to manage their business, run day-to-day operations, and plan for future needs and changes. Mary is a registered nurse who oversees quality assurance, Occupational Safety and Health Administration (OSHA) compliance and employee training, and communicates with customers, employees, and regulatory agencies. Kelly manages the evisceration and packaging areas, inspecting each bird alongside the USDA inspector, and ensuring quality and cleanliness every step of the way. Niko & Company's goal is to provide consistent, high quality processing at an affordable price to help small poultry producers market and sell their products.

Marketing for Niko & Company has been virtually effortless. Tennessee growers contacted them, eager to learn their start date well before they opened their doors for business in June 2013. Growers repeatedly voice their excitement about having a processor in Tennessee, saving them travel time and expenses. Cost to process a whole vacuum packed broiler is $3 for less than six pounds and $3.50 for birds over six pounds and roosters. Cut-ups are available for an extra charge, and giblets can also be harvested and packaged as well. Labels contain the USDA inspection stamp, safe handling instructions, the producer's farm name, weight of the bird, and price of the bird based on the producer's price per pound. Birds are processed and returned to the farmer on the same day. A minimum of three birds can be brought in and Niko can process several small orders in one day or orders as large as 200 broilers. All orders are by appointment only and are booked one to two weeks in advance. Please visit the Niko & Company website for more information (www.nikoandcompany.com) or phone 931-743-4898.

Homestead dogs:

Protecting livestock with large guardian dogs

By Kimberley Strunk
Skiatook, Oklahoma

I look out at the fresh spring growth of green coming forth from the earth and I have a secure feeling once again about the farm and all the livestock. Just a few weeks ago I had a reminder of what it's like to have to worry about all the animals here on the farm while we are away working.

Our farm lies 20 miles north of Tulsa, Oklahoma. We keep a variety of farm animals that support us and provide quality food for the family. It has not always been easy keeping our livestock all well and safe. Many years ago we learned the importance of having good guardians for our herd of goats, cows and laying hens.

We have a team of guardian dogs that keep all the livestock safe from the danger of being eaten by predators. It seems the fox and coyote population has really increased here over the past few years. It's not been a problem for us until recently. One of our guard dogs Oy, who is a Great Pyrenees/Anatolian cross, became injured. We are not sure just what happened, but suspect that he might have been kicked by a cow. It appeared that his hindquarter was very tender, but no wounds were apparent.

Oy still continued to stay with the goatherd as they moved across the fields picking choice weeds each day. We did, however, notice that he was staying stationary as much as possible. Oy was not making his usual rounds to check property lines, which is common for these dogs. However he continued to keep a vigilant watch over the herd and could be seen scanning the distant tree line for possible threats from where he lay as the herd grazed. If a threat did occur he stayed put with the herd allowing our other guardian to do the running and warning off of the possible offender.

Oy has always been quick to greet us any time we entered the barn yard or field, but now he moved slowly only looking longingly in our direction with a little flip of his tail as a greeting. The only time he moved was to get up to eat and move when the herd moved out of his view. Even while he was in pain Oy couldn't stand the thought that his herd might go unprotected.

Sadie guards weanling kids in the barn yard.

Our second guardian is Sadie, a Great Pyrenees, that we rescued from a sad plight. She was much older when we got her and the training we gave her was only effective to a degree. We have become resolved that Sadie is a valuable dog to the farm for more limited tasks. Sadie has always been a keeper of the barnyard area and has never been one to spend her time out in the fields. While Sadie does respond to Oy's warning barks and often joins him to fend off predators, she prefers to stay close to the barn. This works out just fine for us, as the laying hens, geese, ducks, and any newborn kid goats need a watchful eye tending to them as well.

However we were pleased to find that when Oy became injured Sadie seemed to understand and picked up some of the slack in security. My husband and I noticed that Sadie began making more frequent rounds of the property lines. Sadie is not a jumper and stays within the fences. Oy on the other hand, can in good health clear the fence with ease like a deer. While Oy stays within the fence's boundaries most of the time, we are aware that Oy does makes nightly rounds further than our fence lines. This was a great concern at first to us, but we have come to realize that Oy never stays gone very long from his charges. It appears that Oy's rounds of marking the territory beyond the man-made boundaries of our fence line has been part of his way of keeping the farm safe.

My husband had been taking down some of our old perimeter fence that was in bad repair and rebuilding it. During the time that Oy was feeling out of sorts with his hindquarter, our geese got out and wandered close to the creek that runs next to our property. It was early in

the morning that one of our ganders met his fate. The female goose was pacing back and forth in the barnyard later that morning in distress of the loss. The geese had been escaping our property sometimes and we knew this, but Oy had been on guard and kept them safe. Now that Oy was down we had the first loss that had occurred in several years. Sadie was tending to the animals and watching over them picking up some of the slack, but not the same as Oy would if he was feeling better.

My husband finished up his fence building as Oy continued to heal. We knew by Sadie's actions when Oy was able to become more active in patrolling the fields and boundaries of the farm. We noted that Sadie once again took up her station in the barnyard, leaving the goatherd for Oy to attend.

The Akbash is another breed of guard dog. This one watches over a flock of sheep.

I was able to find a replacement gander for our goose. It has been our experience that geese often die of a broken heart if they lose their mate. We searched and made several contacts before finding a gander that needed a mate. When we did find one, we had to drive two hours to get him and pay $40. We were happy to find the gander, but I began thinking about how much we have on our little farm and how valuable our dogs are.

I began thinking to back before we had our guardian dogs, and the money I kept putting out on replacement laying hens. Then there were vet bills when a stray dog attacked our goatherd tearing up the hindquarters of a champion buck. This current situation was just a reminder of the security these dogs bring to our little farm. They protect all our animals and make it possible to keep them alive and safe.

Since we live on a corner piece of property where two county roads meet we get quite a bit of traffic. It has become common for people to pull up alongside our property and watch our animals in the fields. On more than one occasion I have had people see me out in the garden and pull into our driveway to talk to me about our guardian dogs. There is always a buzz of excitement when visitors have had the opportunity to see our dogs in action sending out barks of warning to the herd of goats and moving them to a place of safety as they fend off a threat. Over the years we have become known for having these wonderful guardians that protect the farm and I often get phone calls and e-mails asking questions about them.

Last spring after receiving a string of such calls, I sat down at my computer and began writing about our large guard dogs here on the farm. There are not a lot of books on the subject and many people have no idea how to train a pup to be a guardian. As I wrote the book I felt it was important for people to get the information that is needed to train and teach one of these dogs to meet the needs of their farm. While the book is full of information, it's presented in a story format of true events that took place here on our farm.

I submitted the book to a publisher and held my breath. The word came back within just a week that the publisher was excited and accepting my book for publish. *Jumping Boundaries* (by Kimberley Strunk) is now available at Amazon.com. It is my hope that other herd owners can find the peace and joy we have by having these amazing dogs protecting their livestock.

The sheep barn:

Bow Peep

After a rough start, she's now a healthy sheep

By Shirley Kelly
Glade Park, Colorado

I was looking through my archives last week and found this story I had written about a little lamb. I was visiting a sheep ranch out in Loma, Colorado, in the spring, looking for some bum lambs to raise. (Lambs that had lost their mothers at birth.) There were only three and none of them looked well, but this little ewe lamb picked up her little head and looked at me with pleading eyes. I could see it had some tape on one front leg and the shepherd told me, "it broke!" I offered him $1, picked up the lamb and left.

When I got home, I inspected the little thing and found it had two broken legs on the same side and a fractured left hip. I knew then that it would be a miracle to save her. Fortunately, I had some colostrum in the freezer, which is a sheep's first milk and is essential for the first three to four days after birth, because it is rich in antibodies and vitamins.

I called my friend Mary Lou who is a savior with saving young critters, to see if she had a sling I could use to support her. Next I made another call to my vet who told me to bring her down right away. Brian fitted her with splints and three hours later I was back up the mountain with the lamb, diapers and the sling, which I hung up from the living room ceiling fan. Now came the long vigil of feeding her every two-to-three hours, diaper changes, and in and out of the sling. I had forgotten what it was like to have a baby! My border collie Katie was chief baby sitter, giving her licks and staying beside her.

A couple of weeks later Mary Lou called and asked me if she could take Bow (the lamb) for a while, and what a relief that was. I went to visit her every time I was in town and she was doing well with all the extra attention. Six weeks later she went back to the vet and he said she seemed to be making an incredible recovery. She was now able to get herself up on all fours and hobble around.

Three weeks later, we went back to the vet, the splints came off and bandages with tongue depressors for a little support were put on. By this time she was fat and sassy and running all over the place. Three months later, her bandages came off and she looked like a very normal, fat young lamb with no hint of her injuries.

Footnote: Miracles really do happen if you have faith, determination and good friends.

The goat barn:

Packgoats rest on the trail. Normally goats should be disbudded, but the horns add protection from predators in the wild.

Justice and our goats *Stand united now*

Countryside: All of us who have known the love of our caprine friends knows how special they can become. No matter the breed or mixture, they all bring something very special into our lives. Those who have never experienced these wonderful creatures have no idea what they are missing.

So when our caprine friends are unjustly accused and treated unfairly the goat community must unite and right the wrong, fight the good fight. That is what the North American Packgoat Association is trying to do. It seems the U.S. Forest Service is unjustly attempting to expel all the packgoats from the forests that have any population of Bighorn sheep (which is quite a large number across this country).

The Bighorn sheep have been experiencing a die off for a long time now, and the U.S. Forest Service biologists have not been able to determine the exact cause. Some of the U.S. Forest Service land has private sheep herding operations in their forests and have decided to expel these domesticated sheep so they won't possibly infect the Bighorn sheep. They have decided that goats should be expelled too, even though they can not produce any viable evidence proving that goats are of any kind of a threat to the Bighorn sheep. In fact they seem to be making up a lot of misinformation as they go. The North American Packgoat Association has all the correct science on their side and it appears the U.S. Forest Service has nothing on theirs. This travesty of justice has started in the Shoshone National Forest in the Wind River Range and if not stopped there, will spread to all the other National Forests across our nation. NAPgA has hired an excellent, experienced land use attorney who says this is very winnable and believes in our cause to the point he is doing a lot at no charge or a reduced charge. But still, it is estimated to take around $85,000 to see this through the court system. This is where all of you can help put a stop to this bullying of our goats. NAPgA's Land Use Committee Chair, Charles M. Jennings, has erected a web page to raise funds for NAPgA's court action against the U.S. Forest Service. This page is on the www.gofundme.com web site under NAPgA, the link is www.gofundme.com/packgoat-access-in-forest.

Please go to this site and check out the video if you want to see why goats are the best pack animals on the planet, and just why we must stop this infringement on our rights and our freedom. Then please step up to the plate and help fund this effort to keep our eco friendly packgoats in some of the most pristine wilderness areas of our country. Thank you all very much. – *Dwite & Mary Sharp, Paradise Ranch Packgoats (home of the "All Wether Marching Band")*

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PROFESSIONAL POWER DONE RIGHT

The livestock barn:

New power tool offers new way to trim goat and sheep hooves

By Philippa Main
Florida

The Electric Hoof Knife is the newest and most innovative tool available for trimming goat and sheep hooves. Designed to improve hoof health and make trimming hassle-free, the Electric Hoof Knife is a power tool that buffs instead of cuts to remove hoof material.

After eight years of development, the Electric Hoof Knife now has a disc created specifically for trimming goat and sheep hooves. Unlike a rotary dremel or angle grinder, the Electric Hoof Knife is the perfect size for trimming hooves as it measures only 12 inches long and weighs 1.2 pounds. Fitting comfortably in one hand, this tool is also much safer than other power tools and even hand tools as there is very little chance users will cut too deep or damage the hoof.

"I use this tool on horses, cows, and goats and it definitely makes trimming faster and easier. I like that there's no stress or strain on my hands and that the animals stand for it better than regular trimming," says professional hoof trimmer Glenn Rowland. "I've used this tool for five years now and I would never go back to using regular tools to trim."

Using the Electric Hoof Knife can lead to better hoof health for two reasons. First, users see a significant decrease in the amount of blood during trimming because the tool is precise and accurate when removing hoof material. Second, the disc puts a smooth finish on the hoof, so dirt, muck and bacteria cannot get stuck in the cracks and lead to infection. As the Electric Hoof Knife is so easy to use, people find themselves trimming on a regular five to six week schedule which also helps to promote healthier hooves.

The Electric Hoof Knife has an array of features designed with safety and comfort in mind. A raised switch guard significantly reduces accidental starting of the tool and the cast aluminum safety guard protects fingers during operation. The tool's ergonomic exterior and gritty texture provide comfort and control, so users can trim longer with less hand and wrist fatigue.

"Every time I use this tool my goat's hooves look brand new. The goal is to get them looking like they were when they were born and the Electric Hoof Knife definitely accomplishes that. I also see a lot less bleeding when I use this tool," says Bobbie Golden, owner of Golden Acres Goat and Sheep Ranch.

This lightweight tool is easy to maneuver and can trim tough and overgrown hooves with little effort on the part of the user. There is no physical exertion required, so the Electric Hoof Knife is especially useful for those who suffer from joint and muscular ailments or those who find traditional tools too hard to use.

The Electric Hoof Knife Goat & Sheep set, which retails for $254.95, comes with the Electric Hoof Knife power unit, two Goat & Sheep Trimming discs, a pair of safety glasses, and a carrying case. Additional discs designed for trimming horse and cow hooves can be purchased as well, making the Electric Hoof Knife the most versatile trimming tool available.

The Electric Hoof Knife can be run off of a generator or an automobile's DC/AC power converter.

For more information, or to watch videos of the Electric Hoof Knife in action, visit www.ElectricHoofKnife.com or call 877-320-8203.

Producing high country AmericanVintagebeefcattle

By Opa Fred
Colorado

The Four W Ranch is a small father and son operation that started in 1975. We have raised many different breeds of cattle, but were not happy with the hanging and curing time of the beef. So in 2000, we developed our own breed named American Vintage Beef cattle.

What is Vintage beef cattle? Good question! You have heard of a vintage wine, where they cross certain grapes to come up with a new and better wine. Well, we are doing the same thing with beef cattle. All cattle have good and bad points. Some beef cattle do better in certain parts of the U.S. than in other parts. We were looking for an animal that:

1. Would do well in all climates, rugged environments and elevations. The breed would have two coats of hair, a short coat of hair that they would have all year long, and in colder climates a second longer woolly hair coat that would keep them warm. This maintains low levels of back fat. They would have rock hard hooves for rugged country, and be polled for easy handling.

2. Would be moderate-framed and easy-fleshing, requiring less feed through the winter, possessing fertility, and resistance to disease and sickness. The cows should weigh between 1,200 and 1,400 pounds, and bulls up to 2,000 pounds. Her calves would be born easily, rarely requiring assistance. Produce a sufficient quantity of rich milk to raise husky calves, which would achieve half their adult weight at weaning time.

3. Would be lean with enough marbling in the steaks and also having a very fine marbling throughout the meat to produce great flavor and texture. Also would have a distinctive eating quality, in flavor, in tenderness and in juiciness. It should produce a hanging carcass weight of 60% to 63% of the animal's live weight. Has a carcass that could hang and age for three to four weeks.

To accomplish these requirements, we selected the following three beef cattle breeds, all registered in their own associations. We took the Red Angus from the U.S. and crossed them to Brahma from India and Brazil to form the Red Brangus beef cattle, and crossed them to the Galloway cattle from Scotland to produce the American Vintage Beef cattle. The Vintage beef breed consists of 1/2 to 5/8 Galloway, 3/16 to 5/16 Red Angus and 3/16 to 1/4 Brahma.

Why these three breeds? The Red Angus x Brahma cross produced a very intelligent animal, and the females are excellent mothers. They are very protective, and would babysit all the calves from time to time so that the other mothers could graze in peace. If an intruder like a puma, wild dogs or coyotes would threaten the calves, the mothers would form a circle around the calves and the bull would drive the intruders away. Our experience has been that the Brahma influence keeps medical problems away: the animals produce an oily secretion from the sebaceous glands, which has a distinctive odor and is reported to assist in repelling insects. Also the animals are lean with just enough marbling in the steaks. So what is wrong with them? Nothing really, but you find the Red Brangus in the southern states and as far north as Colorado and Utah. The only problem that we had was that we could only hang and age them for 17 to 21 days, at the maximum, in the packing plants. Crossing them to Galloway cattle gave us a few more important features. Galloway beef has a very fine marbling throughout the meat and they have the double hair coat, which protects this hardy animal in unfriendly climates. That is the reason you see them from Colorado/Wyoming all the way north into Canada. That second layer of long hair gives them a nice air cushion to keep them warm in the winter. They do not have to put a layer of fat under their skin to keep them warm. Crossing them to the Red Brangus gave us calves that were still lean on the outside, but with marbling and very fine marbling throughout. We were able to hang and age the beef for 25–28 days to give us juicy and good tasting beef.

Vintage beef cattle come in three primary colors—black, red and dun—and in three color patterns—solid, white park and belted. At this time we, at the Four W Ranch, are concentrating on solid red and red belted to get the Vintage breed established.

We are looking for some other breeders who may be interested in this new breed. We are getting older, I'm 76 years old, and we would hate to see this new breed fall by the wayside. For now, I'm keeping all the registrations for each animal under the American Vintage Association name. So if interested please contact us. My email address is opafred@centurylink.net. Fred Weits, 1147 County Road 126, Hesperus, CO 81326-9400; ph. 970-588-3711; or Scott Weits, 1231 County Rd. 126, Hesperus, CO 81326-9400; ph. 970-588-3428.

Our farm girl

By Marshall Nych
Pennsylvania

Comparing the boy I was to the man I have become is like comparing water from a river's rapids to the water from the spigot. This is mostly credited to my boyhood rooted on a farm and my manhood being pulled away from one.

Even as a kid, I thought the farm was simply magical. It was the only place I knew of where a chicken that so graciously shared eggs for breakfast could be swimming in Grandma's pot of soup at lunchtime. And the cow that so generously offered milk for several seasons could end up at auction or, worse yet, on the grill by supper.

One perk of getting big, getting a job, getting married and getting a wicked mortgage…I have been blessed with a lovely daughter, Leah. I am uncontrollably satisfied the same family farm where every square inch was explored during my childhood, will be the one she comes to know. To an adventure-thirsty child, a farm is simply a richness of risks. Anything else just makes it complicated. From overprotective pigs and disgruntled beef to tantalizing fencing and alluring rope swings, undeniable dare haunted every woodlot, water, and pasture.

In the 20 months I have known her, Leah has displayed many qualities of a quality farmer. Every farmer I have known drives a truck. This happens to be my daughter's favorite mode of transportation. My Chevrolet Silverado is much preferred to the Babies 'R Us Pack 'N Play. Good luck trying to stuff her in the latter. However, Leah can merrily pass the hour in the equally sized cab of my truck. Pretending to steer and pressing all of the buttons are merely practice foreshadowing a four-wheel drive stick shift and dusty bench seat.

When going somewhere as the Nych family, Leah's little heart breaks if we head for and load up the car. "Truck, truck!" Leah cries. Never could I have imagined a car seat would be the best possible post-factory addition to my Chevy. It is.

The average farmer, who is anything but average, requires a habitat of wide open spaces. Such vast areas often necessitate being outside. To communicate this ideal, Leah sweetly says, "Side." Once the supervising adult is suckered by this cute ploy

and baby is out-of-doors, the only way to get her back in is by dragging the screaming, wriggling child. You may have guessed what Leah hollers, "No, want side!"

While on the subject of outside… last June, during the peak of hay season, Grandpa was frequently driving his tractor in our backyard. Our backyard happens to be one of his hay fields. Leah, thinking this was the coolest thing since the rubber ducky, began looking for Grandpa and his John Deere tractor first thing in the morning. My wife Laura and I would wake to rumblings from the nursery. Such commotions were quickly followed by an excited, "Papa? Tractor!" She fully expected Grandpa Nych to work our hay field each and every day of the summer.

Even Leah's pretty looks can only be described using vivid imagery planted firmly on the farm. Her hair, indescribable using your everyday colors, is a harmonious balance of gold, brown, and red. Like a late summer wind across a field of golden wheat with brown hints of soil reflecting the red of an August sun. And those big, beautifully full eyes. Amidst wonder and love, Leah's eyes are planted with hues of green and brown, arguably two of the more common colors on the farm.

Through the years, I have had the honor of shaking hands and working with many farmers. Those hands, calloused from honesty, integrity and a work ethic known to few, all have one commonality—dirt. Along with milk (which farmer's also enjoy), Leah has an unquenchable affinity for earth, mud, silt, clay, etc. From soupy paths to mud puddles, my girl marches straight through. As a result, Leah also goes through socks and shoes like most babies go through air. This expensive footwear addiction, quite similar to her mother's, has earned her the endearing name Lil' Mudpuppy.

Perhaps the only thing Leah cares more for than dirt is animals. Atop the list is the horse. Never have I seen a child so fearlessly approach, touch, and in some instances ride the various species of animal commonly found on a farm. If adults lacked fear like a child, especially Leah, this world would have accomplished much more and reached even greater heights.

That said, Leah seems to grasp the delicacy of life's cyclic nature. With my girl, there's no Bambi kissing or tree hugging. When Leah sees a deer, whether at home in the backyard or coloring at a play date, she proudly shouts, "Deeeer! Shoot it Dadd-a… *boom!"*

> Never could I have imagined a car seat would be the best possible post-factory addition to my Chevy. It is.

Although owners of earth's finest gardens, I have met few vegetarian farmers. Leah, my cuddly country carnivore, is no different. While nuggies and honey are her current favorite, everything smacks of poultry. Whether consuming her medicine, snow or candy, Leah smiles her perfectly sweet smile (the one that reminds me of her mother) and squeaks, "Like chicken!"

Under her current work schedule, Leah puts in about four days per week at the farm. Sundays, the Nych family congregates at the farmhouse for lunch and an afternoon visit. Monday and Wednesday she hangs out with Aunt Sue. There, she feeds chickens and assists Uncle Mike with small carpentry jobs. Tuesdays, which have become Leah's favorite day of the week, she gets to go to the farm and spend time with Papa and Great Grandma. Each week holds a new adventure.

Coming home from a stressful, long workday, I revel in hearing what kind of trouble my Leah got into this Tuesday. Grandma shares tales of cats, cows, or straw. As Laura and I embrace our Lil' Farm Girl, she is often covered with a film of Aunt Sue's homemade applesauce, Grandma's famous chicken soup, and Grandpa's dirt. I wouldn't have it any other way.

All this in mind, my wife and I had no trouble deciding what Leah's birthday party theme should be. On the big day, Leah donned the sweetly stereotypical pair of overalls, complete with a John Deere hat and piece of straw to dangle from her mouth. The house was adorned with plush farm animals, children's literature about agriculture, and yellow and green crepe paper. Familiar farm songs plowed through our home. Still, the best decoration was the view of the Nych farm from our picture window. To celebrate our Leah turning two, some of the attendees arrived on their tractors having just finished their chores.

In the pastures of today and the harvest of tomorrow, Leah will likely be a business owner, teacher, or scientist of some sort. But I will always take pride in knowing she could have made it as a farm girl.

Country neighbors:

Homesteading and history

By Bob and Margaret Massey

My husband and I have a rich heritage of homesteading and history. One of my husband's great-grandfathers on his father's side, P.H. Massey, was a gun fighter and lawman in South Bend, Indiana. He moved to Wichita, Kansas in 1869 and became one of the first elected sheriffs in Sedgwick County, Kansas. He was instrumental in the hiring and firing of Wyatt Earp. He and two of his sons, one the first Chief of Police in Wichita and the other a U.S. Marshall, arrested Carry Nation when she and her followers came to Wichita and tore up a saloon there. His great-grandparents on his mother's side migrated to southwest Kansas from Decatur, Illinois, by oxcart where his grandfather, Chester Haskell Houser, was born in a dugout near the town of Santa Fe, which no longer exists. He was given a city block of land in Santa Fe in recognition of his being the first white baby born in newly formed Haskell County. Two of my great-grandfathers fought in the Civil War — one for the Confederacy and the other for the Union. The one fighting for the South, Winfield Scott Hawley, was wounded five times, bayonetted twice, and a prisoner of war for almost a year. He lost all he had in West Virginia as a result of the war. He took his family to Rugby, North Dakota by train thinking to make a new start, but the family lived in a dugout and nearly starved to death. Because they had relatives in Kansas, they left North Dakota with a buggy, two wagons and nine kids, one only a month old and a three-year-old crippled by meningitis suffered while living in the dugout. They were on the trail for 59 days arriving in Cambridge, Kansas in Cowley County. My maternal grandmother and her twin sister — five-years-old — walked most of the way, keeping their milk cow close to the wagons. That great-grandfather vowed to never shave again if the South lost the war and he died with a long, white beard. My paternal great-grandfather fought for the Union and was also wounded. His name was Johnson Boone Daniel. After the war he moved his family from Indiana to Emporia, Kansas by train, then came by covered wagon to Cowley County, Kansas where they homesteaded south of Dexter. In later years he was known as "Uncle Boone" in this area. They were all people who had dreams and persevered to see them fulfilled.

We chose the same path when in 1961 we left Topeka, Kansas where my husband had a quality job as a welder for the Santa Fe Railroad and moved to a poor, worn out 320-acre farm we rented near Dexter. We had lived on an acreage outside of Topeka and had two cows, a calf, 11 baby pigs, and 200 chicks — all of which we and our four small kids (ages nine months to five years) moved. On the farm here there was an old house with three bedrooms and no running water or bathroom. But we did have electricity — one bulb overhead and one plug-in each room! The only improvements were an old barn and a cement block building. We found an old wood-burning stove that didn't produce much heat in the old house, but we were finally farming! No banker would even consider loaning us money to buy a tractor, equipment, cows, etc. But somehow we managed by borrowing equipment from my husband's brother and finally were able to get an old tractor and buzz saw so my husband could go to nearby timber and cut wood for us. He worked odd jobs — penning and sorting cattle at an auction barn, driving a school bus, etc. We sold our extra milk and the chicks grew and gave us lots of eggs. My husband made box traps and taught our boys to catch rabbits. We ate cheese we got from the milk company, wild rabbit, and lots of eggs and milk. The well we had produced almost no water and we had to pump it by hand. But in Dexter farmers could get 250 gallons for 25 cents from the city so we hauled water for laundry, drinking, cooking, bathing, and the livestock, first in barrels then celebrated the day we could afford a 250-gallon tank! We finally found a banker who had enough faith in us to loan us $2,000 to buy dairy cows at an auction. We were able to get 11 cows and have $8-10 left over. My husband was able to go back to work for the railroad in Wichita so we milked early, he drove 60 miles one way to work, we milked when he got home and he farmed at night and on weekends. He learned to AI our cows and improved our

herd. In 1965 we were able to buy the farm from the owner on a contract basis. We laid a water line 1 ½ miles long from Dexter and built a new house and dairy barn. Eventually we not only milked but we processed and bottled our milk and supplied two stores and one school. And we added another baby! My husband was chosen as the Outstanding Young Farmer in our county in 1971 and also listed as one of the Outstanding Young Men of America that same year.

But it all seemed such a futile effort when our oldest son died in a tractor accident at age 16 in 1972. We sold our dairy cows and all of our processing equipment and started a Boys Ranch for troubled teenage boys in our son's memory, taking in about 60 boys in the 15 years we ran it. During those 15 years we had so heavily mortgaged the farm to support the boys that we had to sell all but our home and three acres. We both got jobs and were able to buy it back in 10 years. Since then we have learned to train and drive oxen; my husband drove a team of mules and a genuine covered wagon 60 miles over back roads and pastures to Mulvane, Kansas, a small town near Wichita, to an Old Settlers celebration. I rode beside him in their parade where we won first prize. We were instrumental in starting a facility for male addicts (Teen Challenge) here at the farm. That organization moved on to a larger location and in 2009 we deeded our farm to a Christian camping organization but still live in the home we built. We have purchased 160 acres of my parent's homestead where we are planning to do youth and family camping and training in many homesteading practices. We have a two-story house setting on the homestead for families to come and have a quiet vacation in the country. We still have cattle and goats, but we are in our late 70s and would love to have a retired Christian couple come here to help us with teaching homesteading skills and with daily maintenance. Anyone interested? Contact us by phone 620-876-5700 or 620-415- 7001 or by email mbmassey@sktc.net.

Country neighbors:

A glimpse of Minnesota life in the early 1900s

This may be of interest to people, 100 years later. Our family still owns the original homestead; I'm the third generation with my son, Royal, being the fourth. My wife Susan is busy just keeping us gents in line!

The article was actually written by Mrs. Benjamin Oscar Hamlin, but submitted in her husband's name. She received $10 and a free subscription to the Dispatch by winning the contest sponsored by them. — Dean S. Hamli, Minnesota

Northern Minnesota Life Experience of a Young Farmer on Swamp Lands

Knowledge of cooking and wife's teaching ability tided them over rough spots

By B. O. Hamlin,
America, Minnesota

I left my father's home at the age of 11 years. I was without a trade and had only 55 cents in my pocket. During the first summer months, I worked for farmers and painted, making a fair living. That winter I trapped and it was while engaged in this line of work that I received the inspiration that afterward was of great value to me. I went to a lumber camp, where I learned to cook.

When I was 22-years old, at my brother's request, I came to Northern Minnesota to take up a claim. That was in February of 1903. My brother had filed on a claim 10 miles from a railroad, and felt that he was on the right track. I will never forget my first glimpse of that section. When I reached there it was bitterly cold, the snow was deep and we passed but one shack on our way to my brother's place. That winter I remained with my brother and the two of us took long tramps, trying to locate a suitable tract upon which I could file.

Finds his claim

One day in March, after we had suffered a hard trip, we came upon a tract that looked good to me and upon which I afterward filed. The tract then looked anything but hopeful. Someone had thrown together a log shack on a stingy little rise of ground. The farm as a whole was a floating meadow, so tangled with stumps and fallen trees that it looked as though I never would be able to make a farm of it. Anyway, I filed in March of 1904.

During the two years that followed, I cooked at a number of lumber camps and at intervals worked at the task of clearing my land. I

ventured in the restaurant business, but it panned out badly. Taking what I could conveniently carry away from the place, I went back to my farm. Being well equipped for housekeeping, I got married. That was in 1906. The woman who was to share my fortunes and sorrows was a city born and reared girl and knew very little of the life we were to lead, but she had a strong heart and that was enough. In 1907, with fresh hope and determination, we stared farming in earnest.

Had four acres cleared

At this time, I had four acres cleared, a fair house, a calf and $17.20 in my pocket. Not much of a start it is true, but we were willing! Thus we had to live from June to September. I spent $7 for lath, but afterward found that the studdings of my house were so set that the lath was useless. I also spent $5 for freight. You can figure what we had left.

I must confess that I envied one of my neighbors, who had a flock of chickens. Once I even confessed to my wife that I was going to "borrow" a few of those chickens until I got a flock started for myself. I thought of Pat, who first borrowed a hen until she had deposited a dozen eggs in his yard. Then he borrowed another hen that wanted to set. In a time, he was able to return all the borrowed poultry and still had a flock for himself. My wife objected to my "borrowing," but I told her that I would pay the neighbor when I could. The task of "borrowing" was not difficult, as the neighbor was not home at the time.

Our money ran out, so I was obliged to appeal to a neighbor, who loaned me 200 pounds of flour. I tried to get money from my brother to use in getting them to harvest fields that fall, but he kindly sent me a picture of some coins, saying that he had a picture of a man who knew a fellow who had a friend that had seen a dollar three weeks prior. That was the best I got from my brother. I at last succeeded in borrowing $5 from a neighbor and started for Dakota where I was going to get a job as a cook. *(Ed. note: Roughly, the Dakota Territory included parts of western Minnesota, Nebraska, Wyoming and Montana.)*

That fall I made $187.50 and my wife earned $60 teaching. She was given orders for her pay.

Fixes up his house

The biggest share of my fall's money went toward fixing up the house. In February my funds ran low and I went into the woods to cut (rail) ties. That was some job. If you don't believe it, take a broadax and try it.

In the spring I cleared three more acres and hired a neighbor to put in my crop on shares. First of September again found me on my way to Dakota to cook.

In my farming experience I have had many ups and downs. I once bought a mower that afterward proved worse than useless. I had sickness in my family and had to pay a doctor bill of $500. I farmed with oxen for a time, but my cleared acreage began to get so large that I needed horses. That investment cost me $375. I bought an interest in a creamery and that proved a total failure.

In the spring of 1913, I threshed 1,000 bushels of grain from 45 acres. I considered this very good when I realized that the ground was only plowed that spring. A small patch of barley yielded 50 bushels to the acre.

In the first years of my farming experience, I planted, but either the early frosts would kill the plants or late frosts would ruin the soft ears. Now we do not have the early frosts and the seed is becoming acclimated.

In 1910 I experimented with alfalfa. The season was dry so I could not expect that it would do very well. I have had reasonably good success with all varieties of potatoes, but find that there is a better market for the late whites. Rutabagas should not be forgotten. Sown broadcast on burned-over land, they did remarkably well.

In the early stages of my farm experiences, I "plunged" into hogs, though I only had two, considering my working capital, it was indeed a plunge. I was able to raise but little grain, and so had to sell one pig to get enough feed to keep the other alive. Now I am able to raise enough feed so that I can keep my hogs profitably.

Wife interested in poultry

My wife had been greatly interested in the poultry yard. This year I built a long hen house and we are keeping a large flock. From 50 laying hens, late winter we were getting about three dozen eggs a day. These were selling at 40 cents a dozen. Rest assured there was profit in that kind of business.

At present I have 11 head of cattle. Three years ago I bought a cream separator and it has paid for itself many times.

In 1910 I built a hip-roofed barn that provides ample space for all my stock, three stalls for the horses and a fourth stall, which is used as an oat bin.

At present I am on what I consider the road to prosperity, though I have nothing for which I have not worked hard. I am in debt $800, but have an improved farm. One of the things that I consider has entered into whatever success I have had here is my determination. I have "stuck it out," and have been reasonably content with slow progress. I have taken the *Farmer's Dispatch* for two years and it has been of untold interest to us.

Title: Farmers' Dispatch.*: (St. Paul, Minn.) 1913-1926.Notes: Available on microfilm from the Minnesota Historical Society.*

LCCN: sn 90059534; OCLC: 21616190. Preceding Titles: Farmers' twice a week dispatch. *(St. Paul, Minn.) 1913*

Country neighbors... A mixed bag

By Sue Dick
Canada

When we first bought the land that would one day become Ivy Hill Farm it was a desolate February day, complete with gray skies and small pelleted snow. As we pulled away from the property we craned our necks to see what could be seen of the neighbors and their yards. Long winding drives disappearing behind thick stands of trees, and snow covered humps hinting vaguely at derelict vehicles or farm machinery were the only clues to be gleaned from two of the three properties closest to ours, the third being an obviously large and efficiently run dairy.

Coming from the city, as we were, we had a preconceived romantic notion of the country and the presumably salt-of-the-earth people that made their homes there. Country folk helped one another out. You could always count on your neighbor. You didn't lock your doors. All these, and other homilies, were the sum total of our experience with country neighbors.

Ours was a landlocked property and as the construction began on the road, we soon met many neighbors. The term "neighbor" in the country is used much more loosely than that same term in the city. In the city it describes the four houses surrounding you, and perhaps if you're feeling expansive, the houses next to them. In a sea of people, the neighbors form very small islands beyond which the knowledge of the other people living are as blank as Terra Incognita on an old seafaring map. In the country, we've come to find, it describes everyone on the mile road you're living on (up to five miles or so) and an approximately five-mile square around you. The construction process is always an interesting one, and in the first week of our being there we had met neighbors from the surrounding miles as they pulled up to greet us pleasantly and look around in frank curiosity.

The people who owned the quarter section to our west were an old, childless couple. Living in a tiny house with no running water and a 20 ft. deep, 30-year-old hand dug well, they seemed pleasant if not a bit quaint. We imagined they must possess cast-iron stomachs after having drunk such shallow water for years from a well so close to their sheep fold and runoff. When we stopped in to introduce ourselves and were offered tea we happily accepted yet hoped the water would be boiled for longer than it was. We joked later that if we visited in the future we'd have to slip some iodine pills into the teapot. The time was spent pleasantly and we left feeling happy to have decent neighbors across the way.

To the north of us lay a large dairy farm. With large green fields, a sea of black and white backs, red barns and neat rows of stacked round bales, it was a joy to pass. Having unfortunately just been burned in trusting a stranger in a livestock deal, I was jaded when I first met this neighbor. He was selling donkeys and we needed one, so consequently I was polite but not friendly. We struck a deal to purchase a yearling jennet (whom we would name Clara) to be picked up in a month's time when the fencing was complete. When time came for the exchange of money, because neither of us had thought to bring a receipt book (or indeed any paper as we were in a field), I got cold feet. Not wanting to trust a stranger (although neighbor) with a large sum of money for an animal I wasn't taking home for a month, I expressed my concerns. He laughed, not insulted in the least, and said he'd keep the little jennet for me and I could pay when I picked her up. Coming from the city I was surprised at his trust of a "stranger" and then spent the rest of said month worrying that he would sell her out from under me as I'd left him no deposit to guarantee I would return for her. A fear which turned out to be completely unfounded, and I cringe mentally when I think of how I initially mistrusted my finest neighbor, a Paraguayan Mennonite named Ernesto.

Fast forward a month and with fencing completed we had brought most of our animals home (including the jennet whom Ernesto had kept for me, true to his word). We were waiting on one small group of cows with calves at foot. The day dawned on which these last few were to be delivered. I spoke with the man delivering them and he promised he'd be there before lunch. At 2:00 p.m. I phoned him again. He said he was on his way. At 4:00 p.m. I phoned again and the man, now sounding annoyed, said he'd be here shortly. I reminded him that we had no lights out in the pasture as yet, and no corral (our own fault, but being new we didn't realize how important an oversight this would prove to be) and I had wanted the animals delivered during daylight so they could see the fence line. At 7:00 p.m. and dusk I phoned him again to tell him not to bother delivering them as I didn't want them delivered in the dark, but there was no answer. At 9:00 p.m. he showed up, trailer in tow. At that point, not feeling I could refuse delivery, we turned them out and watched as they jogged off into the darkness in a tight group. I said a silent prayer they wouldn't go through the fence and went back to the house and an uneasy sleep.

The next morning I went on a walk-about in the pasture in search of the new cows. I saw our initial group of cows and Clara grazing calmly, but no sign of the others. As the pasture was almost 20 acres in size and I walked around searching for the newbies, it was perfectly conceivable that they too were circling at the opposite end and we would

miss each other almost indefinitely. I went out three more times that day (cursing the fact I was on foot) and saw no signs of the new ones. By that time I had a bad feeling in the pit of my stomach and started to walk the fence line. Clara, having lost interest in grazing with her new herd, followed me and threatened to kick every now and then, just for added fun. At the very farthest corner I saw where they had gone through. Of five strands of barbed wire only one lower one was broken, but the rest had been stretched out with staples having popped from the adjoining posts. The whole group had hit it running and barely slowed, and now there was no sign of them. With Clara trying to bite me and then showing me her rump every time I waved her away I managed to splice the broken wire back together and tie up the loose wires so it looked like the fence was intact. The last thing I needed was for the remaining herd to escape.

Fuming at my own stupidity for not having a corral and at the farmer who delivered them in the dark (to this day I'm convinced they wouldn't have gone through in the daylight), I began making phone calls to all the neighbors, putting out an APB. Most of my neighbors had cattle and I expected my wayward bunch would turn up at someone's place. As well, it was October and most of the vegetation in the woods and ditches had died off already, so they'd be hungry and sure to follow their noses to food and their ears to someone's herd.

Two days later I was ecstatic when the old neighbor across the way showed up in his car to tell me he thought my cows were in his field. Adam (my husband) and I followed immediately after pausing to grab a bucket of grain. As we walked out to his field I saw my cows in the distance and was relieved (and surprised) none appeared to be injured and all were accounted for. Calling happily and shaking the bucket, I approached. These cows, having only seen me for a total of four seconds when coming off the trailer days before, in the dark, obviously didn't know me or The Pail. They lifted their tails straight in the air and ran off bawling. Every time I neared, they ran in a wide circle to escape me. As it was a 40 acre field, there was no way I was going to lead them back and no way I could capture them myself on foot.

Walking back to where my neighbor and his wife awaited with scowls on their faces, I asked them if I could set up a few panels to bait them. This being October and the grasses dead, some nice green hay and a bit of grain would bring them into the makeshift corral in no time, from which we could load them. Imagine my surprise when the man's face and voice turned ugly and he spat out a sharp "No!"

"Pardon...?" I asked, bewildered

"You're not putting any panels up on my field, and you aren't putting any hay down; you'll bring in weeds."

"But, how am I supposed to get them?" I asked incredulously.

"Call them."

"They don't know me! You saw, they don't know the bucket and they won't follow me, they aren't dogs! What if I brought some horses and a few ropers, or…" Here he cut me off.

"You aren't bringing any people onto my land, you can't take a quad out there, I don't want horses and you can't bait."

"So how am I supposed to get them?!" I asked, getting angry.

"I don't know, but if they aren't off of my land in two days I'm shooting them all," he scowled and grabbing his wife (who I imagined looked at me sheepishly from her

downcast eyes) stomped back to their shack.

I couldn't believe this was happening! The first thing I did when I got home was to phone the RCMP (in Canada, the rural police) and ask if he could do as he threatened. While the officer sympathized with me for my plight and said he would speak to the man and try and reason with him, he did confirm he was within his rights to shoot them all. Despite the fact I wasn't being allowed to retrieve them in any realistic way?! To add insult to injury, I would have no access to MY beef lying dead in his field. I couldn't believe this was happening.

The next evening the old man pulled up and stood on our steps arguing with my husband. I could hear snippets of abuse floating through the window. "You're no farmer," the old man jeered. He was right of course, but we were trying to be, and what had we ever done to him that he should behave so unreasonably? Again he said he was shooting them tomorrow if we didn't get them off his property, but he wouldn't allow us anything but one person on foot to try. As he stood on our steps facing up, one of our cats came along and began to climb his leg. Jumping and swearing an oath he pushed the cat off. Not to be deterred, the kitty tried again. As I watched through the window (I didn't trust myself to speak) I saw the determined cat jump up and grab the sagging seat of his pants. He turned and stalked away apparently unaware he had a cat swinging from his behind. The cat realized in his feline brain he'd be sat upon and dropped down, just before the man plopped into his car scratching his butt absently.

The execution day dawned bright and with red eyes and a sense of burning injustice I went out to try to reason with him one last time. By Divine Intervention, before I left the driveway, Ernesto, my dairyman neighbor pulled in, coming to see how Clara was working out and how we were settling in. Unable to help myself I burst into tears and explained what had happened and that the old man was going to kill half of my herd and there was nothing I could do about it. Ernesto's face hardened as I spilled out my story and after offering me a clean-looking bandana (gotta love those farmers) he said he was going over to talk to the old man.

"I tried, thank you, but he won't listen to any reason! I can't believe it!" I sobbed.

"Twenty years ago there was a fire that would've run through his land and I helped him plow a firebreak. He owes me a favor," Ernesto said with his jaw set.

"No, thank you, no, don't use up a favor on my account," I said sincerely, but a glimmer of hope began to burn.

"Sue," he said, looking me square in the eyes with his honest gaze, "I'm gonna get your cows back," and off he drove.

I waited, pacing around the farmyard until he pulled back in an hour later.

"He saw reason," Ernesto said, smugly.

I was astounded and gaped like a fish out of water. I asked what the plan was. Ernesto explained that they would set up some panels, make a temporary corral and bait with good hay and grain!

"That's what I wanted to do and he wouldn't hear of it! How did you convince him?" I asked in amazement, wishing I had been a fly on the wall for that conversation.

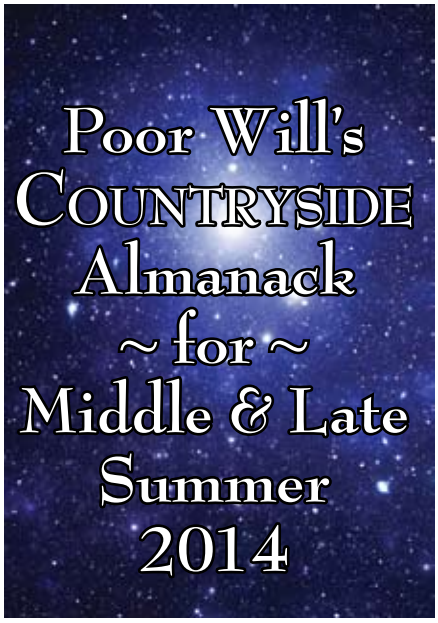
"It took some doing, but I shamed him. A new neighbor comes in and this is how we welcome them?! Everybody needs help sometimes. This time it's your turn, next time it could be his. Shame on him for doing this to you," he said straightforwardly.

"Ernesto, I just don't even know how I can thank you…." I said astounded, remembering with uneasy shame how this had been the man I hadn't been the friendliest to when I'd first met him, and hadn't trusted him with a deposit without a receipt.

In the end, Ernesto took his own panels, feed, trailer, and a couple of his employees and caught my cows for me (it took about 20 minutes, they were *that* hungry). He brought them back home to the new corral we had built in the few days since their escape, and there the "Jailbreak Crew" as that bunch were ever-after called, stayed for a month until they knew me and The Pail.

In the years since, his family has helped mine more times than I care to admit, but always with a willing smile. In return, we do whatever we can to help them (which isn't much since they're a "big fish" in the farming world and we're a little homestead). Mostly they profit by their association with us in the form of baking, barbecues, and good company, during which we always have the best time. In them we have the true country neighbor we envisioned when we were still city jakes.

It takes all kinds, and most of them can be found out in the back roads of rural North America. What kind do you have, and what kind are you?



By W. L. Felker

The cicada's dry monotony breaks
Over me. The days are bright
And free, bright and free.
—Jane Kenyon

The Ephemeris for July & August

The Sun's Progress

The Earth reaches aphelion, its distance farthest from the sun, on July 4. The sun traditionally enters the sign of Leo on July 22. August 22 is Cross-Quarter Day and marks the halfway point between summer solstice and autumn equinox. The sun enters Virgo on the same day.

The Phases of the Cicada Moon, the Katydid and Cricket Moon, and the Puffball Mushroom Moon

July 5: The Cicada moon enters its second quarter at 6:59 a.m.

12: The Cicada Moon is full at 6:25 a.m.

13: Today is lunar perigee, the moon's position closest to Earth

18: The moon enters its final phase at 9:08 p.m.

26: The Katydid and Cricket Moon is new at 5:42 p.m.

28: Today the moon reaches apogee, its position farthest from Earth.

August

3: The Katydid and Cricket Moon enters its second quarter at 7:50 p.m.

10: The moon is full at 1:09 p.m. It reaches also perigee today.

17: The moon enters its last quarter at 7:26 a.m.

24: Lunar apogee occurs today

25: The Puffball Mushroom Moon is new at 9:13 a.m.

The Planets

Venus moves retrograde during August, continuing to be the morning star, and it is joined in Cancer by Jupiter, setting the stage for the conjunction of those two planets before dawn on August 28. Mars draws close to Saturn in Libra during in the evening and those two planets are in conjunction on August 27, a day before Venus and Jupiter lie together in the morning sky.

The Stars

The Dog Days of middle and late summer are named after Sirius, the Dog Star, which moves to the center of the sky at midday. Sometimes you can even see it shining through the sunlight. In 2014, Venus enhance the power of Sirius as it moves close to Aldebaran, and Jupiter will be close by near Procyon, a lesser Dog Star. Does that mean heat? It does.

The Shooting Stars

The Southern Delta Aquarid meteor shower begins on July 18, peaks on the 28th and 29th, and continues through August 19. The Perseid meteors reach their best on the nights of August 12 and 13.

Meteorology

Tornadoes, hurricanes, floods or prolonged periods of soggy pasture are most likely to occur within the weather windows of July 3 through 7, July 18 through 23, between August 8 and 13 and between August 27 and 31.

Full moon on July 12 and August 10, and new moon on July 26 and August 25 may increase the chance of tornadoes in the South and Midwest and the landing of a hurricane in the Gulf region near those dates.

Fish, game, livestock and people tend to feed more and are more active as the barometer is falling one to three days before the weather systems that arrive near the following dates on which cold fronts normally cross the Mississippi River: July 6, 14, 21 and 28, and August 4, 10, 17, 21, and 29.

The Almanack Daybook for Gardeners Ranchers & Homesteaders

July

1: Double-crop beans are being planted after wheat harvest, and the waxing moon is superb for that activity.

2: Count the frost-free days remaining in your region, and calculate the estimated harvest and fall garden schedule.

3: Greenhouse tomatoes seeded today should be producing by October.

4: United States Independence Day & Puerto Rican Independence Day: Consider marketing lambs and kids for cookouts, especially if your county fair is over. Have your garden produce at your roadside stand!

5: The Cicada moon enters its weak second quarter. This change of phase is usually benign, and so today is a good day to work with your livestock and family.

6: Like the final front of June, the July weather system is associated with the Corn Tassel Rains.

7: Ramadan began on June 29. Advertise your farm to the Halal market in preparation for the close of Ramadan on July 28.

8: Detasseling operations in seed corn fields begin as webworms appear on locust trees.

9: The peak period of heat stress has usually begun for summer crops.

10: Rose hips (healthy for people and beasts) are forming on the wild roses that grow throughout much of the country.

11: If your animals keep getting worms, their grazing, feed and sleeping areas may be saturated with creatures that have a six-week life cycle.

12: The Cicada Moon, full all day,

increases summer seasonal affective disorders for those without air conditioning.

13: Lunar perigee today makes the stress of full moon even worse!

14: Mid-July rains can cause soybean root rot and leaf yellowing.

15: Thistles which your goats did not devour unravel in the Dog Day afternoons.

16: Lots of fruit to eat and sell this month, depending on your location: late black raspberries, the last mulberries, early elderberries, the first wave of summer apples, the first wave of peaches, blackberries and wild grapes.

17: As the July Dog Days intensify, they bring more Japanese beetles to the roses, leafhoppers to the potatoes, and aphids everywhere.

18: Keep carrots, oats, bran, iodized salt and greens on hand to invigorate bucks as the breeding season opens.

19: Cicada song reaches its summer peak as milkweed pods form on the milkweed.

20: All things being equal, livestock (like people) may be more susceptible to disease after a traumatic trip to the fair than during their regular day-to-day life.

21: Ragweed blooms throughout the southern states, and the yellowing locust leaves and dry garlic mustard foliage give a sense of fall to the woods.

22: Remove sprouts and suckers from fruit trees.

23: Can and freeze during the dark of the moon—the next 10 days.

24: Late July, when the day's length has lost an average of 30 to 45 minutes from its longest span, is the average time for ewes and does to show first signs of estrus cycling.

25: July can bring parasite infestations and foot rot. Summer fecal samples can give warning of a variety of diseases.

26: Spring and early summer culling should be complete by now, and you will probably be planning a breeding schedule to improve your herd or flock.

27: Late summer fogs appear at dawn, forecasting autumn to come.

28: Today is **Id al Fitr** (The Festival of the breaking of the Ramadan Fast): Lambs and kids for this market should not be older than a year. If you missed this market this year, plan for it next year.

29: The advance of winter is seen first in lower night-time temperatures, and then, not long afterward, in lower daytime highs.

30: Summer is the time to purchase calves to fatten on surplus milk.

31: Frost season is only three weeks away along the Canadian border, six weeks away in the lower Midwest, and eight to ten weeks away in the northern parts of the South.

August

1: Depending on your location, the night's length gains up to three minutes every 24 hours by the end of August.

2: Even though the length of the day shortens this month, the percentage of possible sunshine per day increases to near 80 percent, the highest of the year.

3: On a scale of 0–700 grains per cubic meter, the pollen count ordinarily rises from approximately 30 grains up to 200 grains. Most of the pollen comes from ragweed.

4: The weather in advance of August 4th weather system is often the hottest of the summer.

5: Plan ahead to explore the Rash Hashanah (Jewish New Year) market for ram horns and the heads of sheep. That feast takes place between September 24 and 26 this year.

6: Jamaican Independence Day: Demand may increase for older lambs and kids at this time.

7: Many ethnic holidays occur in the autumn. Think about selling to the Halal market on: October 4: Eid Al-Adha; October 25–November 22: Al Hijira; November 3: Ashura. And November 7 is Ecuadorian Independence Day, a good excuse for roasting a whole lamb or goat or pig.

8: Today is late summer's cross-quarter day (half-way between summer solstice and equinox) when average temperatures start to drop between one and two degrees per week until September 10th, when they decline about a degree every three days into January. Although declines are more rapid in the North, almost every region of the country experiences a temperature shift this month.

9: Along the 40th Parallel, lows reach into the 40s ten times more often than they do during the first week of August.

10: The moon is full today. Perigee also occurs on this date, greatly increasing the chances for a major weather event. Perigee and full moon are linked in lore, as well as in research, to an increase in accidents, crime and stress.

11: Fertility is a year-round project: aromatic plants such as thyme, mint and clover are especially conducive to fecundity in mammals.

12: Test soil after harvest is complete; fertilize as needed.

13: Grazing sheep and cattle together may result in fewer losses of sheep to predators since cattle are larger and tend to be more aggressive.

14: Heat and moisture stress may contribute to much lower production of your cool-weather forage. Rotation of pastures or allowing the grazing of hayfields can help.

15: Wild cherries ripen, and hickory nuts and black walnuts drop into the undergrowth.

16: Elderberries and wild grapes should be perfect for juice and wine.

17: Mum selling time is approaching for the mum growers. Pansy time is here for the autumn pansy market. Garlic planting time opens along the Canadian border from Washington to Maine.

18: Divide and transplant perennials as the moon darkens.

19: Acorns are falling when robins are clucking their migration signals.

20: Wild plums are ready for jelly when starlings gather on the high wires.

21: Elms, sumac and sycamore start to turn.

22: Most cardinals stop singing until late January.

23: The high-pressure system that

occurs at the beginning of August's fourth week erodes summer a little more, often bringing an end to the Dog Days.

24: Today's lunar apogee (the moon's position farthest from Earth) is likely to moderate the cooler temperatures that often arrive during the last week of the August.

25: The new Puffball Mushroom Moon and the cooling temperatures of late summer will encourage round soccer-ball-like puffball mushrooms to swell up on damp nights.

26: Make corrective lime and fertilizer applications for autumn plantings.

27: Peonies and other perennials may be fertilized this month to encourage improved flowering next spring and summer.

28: Get ready to seed or re-seed in September or October for spring pasture.

29: Nights in the 40s or 50s occur more often as August comes to a close, and the morning of the 29th brings the possibility of light frost to northern states for first time since the beginning of early summer.

30: Be especially careful with your pregnant animals during cold snaps, as environmental stress can induce abortion..

31: The major months of seasonal change are excellent times to set up a vaccination timetable for your livestock.

Lunar feeding patterns for people and beasts

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

Date: Above; Below
July 1–5: Afternoons; Midnight to Dawn
6–12 : Evenings; Mornings
13–17: Midnight to Dawn; Afternoons
18–26: Mornings; Evenings
27–August 3: Afternoons; Midnight to Dawn
4 –10: Evenings; Mornings
11–17: Midnight to Dawn; Afternoons
18–25: Mornings; Evenings
26–31: Afternoons; Midnight to Dawn

Winners of the May–June Sckrambler

As of my deadline to Countryside, 51 correct responses had been received to the May-June Sckrambler. A prize of $5 was promised to the 3rd, the 9th, the 43rd, the 68th, the 99th or the 142nd person to return their correct Sckrambler solutions by my deadline. Owen Miller from Rossiter, Pennsylvania was the 3rd; John Volungus of Rexford, New York was the 9th, and Betty Williams of Bennington, Oklahoma was the 43rd.

Answers to the May–June Sckrambler
ROCW: CROW
BORNI: ROBIN
WHETIBBO: BOBWHITE
EOHPBE: PHOEBE
LERTSEK: KESTREL
LANCARDI: CARDINAL
IEFLCKR: FLICKER
BBLRDUEI: BLUEBIRD
FISHKINGER: KINGFISHER
OWCIBDR: COWBIRD
TARLINGS: STARLING
RGKCLEA: GRACKLE
ARROWPS: SPARROW
VEOD: DOVE
ALKR: LARK
KWHATHGIN: NIGHTHAWK
LOLWASS: SWALLOW
IEEKLLDR: KILLDEER
EAAHPSTN: PHEASANT
EKIRSH: SHRIKE

The July–August Sckrambler

If you are the 1st, the 10th, the 25th or the 66th person to return your correct Sckrambler solutions by my deadline 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. Send your entries by regular mail (postcards preferred) to Poor Will at P.O. Box 431, Yellow Springs, Ohio 45387. The names of any winners whose correct responses are received after my deadline to Countryside will appear in a later issue.

TAN
GBU
TCENSI
DIPSRE
QUITOSOM
LYF
EBE
NMTSAI
LOYR-PLYO
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AIDDYTK
DACCIA
EEELTB
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TIME

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- History of the giant pumpkin
- Eliminating weasels
- Blackbelly sheep
- Useful alpacas
- Countryside survey results

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Send your contributions & photos to:
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145 Industrial Dr.,
Medford, WI 54451
or
csyeditorial@tds.net

Capture Your Countryside... and share it with us!

Countryside is proud to present an on-going photo contest. Send us photos from your homestead—livestock, grandchildren, garden, barn, etc.—and we may share it with Countryside readers! Each issue's "Featured Photo" participant will receive a FREE Countryside t-shirt!

E-mail your photo(s) as 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.

Any photos received will become the property of Countryside Publications and can be used at anytime. Countryside Publications retains the right to publish and/or reproduce any and all photos submitted in future issues or publicity, with or without mention of source.

Featured Photo

A honeybee stops off for a quick snack from some Redbud flowers. — *Kevin Batchelor, Arkansas*

This is my daughter Taylor hanging out with her pet chicken Shakira, that she raised from a chick. I call this picture "Besties." Taylor gets so much enjoyment from our flock. We call Taylor our chicken whisperer. When she goes outside our hens follow her everywhere she goes, even if it is into a comfy wicker chair to sit a spell. — *Alison Hallock, New York*

Here is a picture of our two grandsons, Miles and Noah, as they look down into the dock on our pond. They are hoping to see if there are any fish to catch! — *Les and Nancy Anderson, Minnesota*

The first hanging of the year. — *Jeanne Kemper, West Virginia*

Patty Jo, a border collie, taking Bear, a Lab, for a walk. — *Kimberly Mills, Virgina*

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69052/69111

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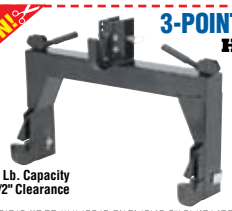

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LOT NO. 46163 61878/69649 61837/68442

SAVE 50%

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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.

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Cattle

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

Nebraska

BOHATY'S BRITISH WHITES, Walter & Nancy Bohaty, 1371 42nd Rd., Bellwood, NE 68624. 402-367-4741. <nbohaty@gmail.com> <www.britishcattle.com> Registered British White cattle.

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Dogs

Illinois

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Tennessee

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West Virginia

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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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Goats

California

AMBER WAVES Pygmy Goats. Shipping worldwide since 1982. 951-736-1076. <debbie@amberwaves.info><http://amberwaves.info> A small family, friendly farm located in beautiful southern California. We specialize in rare color's kids. Deposits accepted year-round. Customers include Hollywood Elite and International Dignitaries. All major credit cards welcome and special interest free financing available through PayPal.

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Minnesota

WHISPERING WILDWOOD FARM, Patricia Schramm, Embarrass, Minnesota. 218-410-4358. <schramm1937@gmail.com> Nubians.

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Heritage Swine

California

The USA Herd–American Kunekune Pigs, Jim & Lori Enright, PO Box 16, Jurupa Valley, CA 91752. 951-505-5230 <theusaherd@gmail.com>

Hogs

Arizona

THE ROCKING ROBIN RANCH, Prescott, Arizona. 928-925-6886. <www.kunekunepig.com> Registered: Heritage KuneKune pigs, mini Jersey cattle, Nubian goats & Bulldogges.

Arkansas

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

Missouri

CROWLEY'S RIDGE MINIATURE FARM, David Stoltzfus, 32169 Co. Rd. 337, Advance, MO 63730.

573-421-2365. KuneKune pigs. Quality breeding stock available.

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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.

Pennsylvania

WHITE BISON FARM, Dave & Jodi Cronauer, 394 Russet Rd., Patton, PA 16668. 814-674-2330. <apache_jc@yahoo.com> <www.whitebisonfarm.com> Idaho Pasture Pigs, KuneKune Pigs, American Bison, Gypsy Vanner Horses.

Large Black Pigs

Kansas

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

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

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THE ROCKING ROBIN RANCH, Prescott, Arizona. 928-925-6886. <www.minijersey.org> Registered: mini Jersey cattle, Nubian goats, Heritage Kunekune pigs & Bulldogges.

Colorado

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Miniature Pigs

Arizona

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Arkansas

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After chores:

The dreaded MGD has struck my wife!

Dr. Dean Abbott
Assistant Professor of Communication
Mount Vernon Nazarene University

The recent change of season has caused a flare-up in my wife's condition. She showed symptoms in previous years but this time, it's getting dire. I don't know what made the difference. Maybe it was moving to a different state a while ago. Maybe it's having a bigger yard. Whatever the cause, this thing is serious.

My wife has caught the gardening bug. Perhaps it is appropriate then that one of the most obvious symptoms is an increased interest in, well, bugs. She's quickly becoming an expert on the hidden world of aphids and the reproductive habits of ladybugs. Ladybugs, as you know, have a reputation as cute, adorable critters. If you want to continue believing that, do not marry a gardener.

The symptoms of Mad Gardener Disease (MGD) go far beyond a simple obsession with the insect world. Other signs include a sudden swelling in the amount of reading material showing up in the mail. Much of this will be festooned with images of livestock. If you spy a loved one reading magazines whose middles unfold to reveal glossy pictures of chickens, it's time to be concerned.

The reading is part of a larger problem. The condition invariably involves a compulsion to study topics many would prefer to remain ignorant about. For example, animal poop. I can say with confidence that in pretty much every arena of human endeavor, a sudden passionate interest in manure is always an ominous sign. Should someone close to you feel compelled to subject you to more than two conversations about animal waste, including detailed descriptions of its consistency and uses, seek help.

Talk about manure is just the tip of the iceberg. Monitoring conversational topics will go a long way toward determining the severity of the illness. For example, should you and your spouse be sitting out back on the porch listening to the stillness of the night while surrounded by the neighbors' homes just a few steps in any direction, and should you begin to whisper sweet words of love, only to have her whisper back, "Do you think we can fit a chicken coop behind the garage?" it may be too late.

As with any debilitating illness, MGD also affects the family and friends of the victim. It's not uncommon for those in the family to have to yield living space to seedlings. The top of the dining room table, a corner of the entertainment center, a dearly needed drawer can all easily be lost to pots of sprouts yet too tender for the outdoors.

We healthy people can see this is an example of how MGD distorts the thinking process. To those of us free of this dreadful condition, plants too weak to grow outdoors, if we consider them at all, are considered not worth having. To the mind perverted by MGD, the obvious solution is to bring the outdoors inside. For this reason, conversations in MGD households sometimes run like this:

He: "Honey, have you seen my new tie?"

She: "I'm pretty sure it's hanging in the closet between the beets and the summer squash."

At the same time, it is not above the MGD sufferer to ask family members to enable his or her disease. It's not unusual for victims to seek help with the tasks large-scale gardening requires. For example, a hypothetical wife might say to her hypothetical husband, "Honey, would you mind turning over some dirt in the back yard so I can plant a few things?"

In an effort to accommodate her, he might reply, "Okay, where?"

To which the victim of MGD would say, "Oh, just everywhere. Everywhere's good."

Like most illnesses of this type, the severity of symptoms waxes and wanes. MGD, in particular, seems to follow a seasonal pattern. Spring tends to be the worst. At that time, MGD victims can be most distressing to those they live with, constantly demanding help with their compulsions, rattling on endlessly about the details of sowing and reaping.

Fall tends to be the best time of year for MGD victims and their families. The rest of the year, MGD sufferers can seem odd, out of touch with reality. Their relationships can get strained. But in fall, when the tables are heaped with the bounty the earth, under their care, has yielded, when the provisions are piled high and bellies are satisfied, well, at those times, the MGD sufferer hardly seems ill at all.

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