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COUNTRYSIDE

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Volume 97 • Number 3
May/June 2013

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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:

This is the time of year to visit alternative energy festivals and workshops all over the U.S. (a couple are highlighted in the Coming Events section). From solar panels to solar fencing, a few fellow homesteaders give tips on what works for them.

Solar homes and solar fences—ideas and tips from people who use them.

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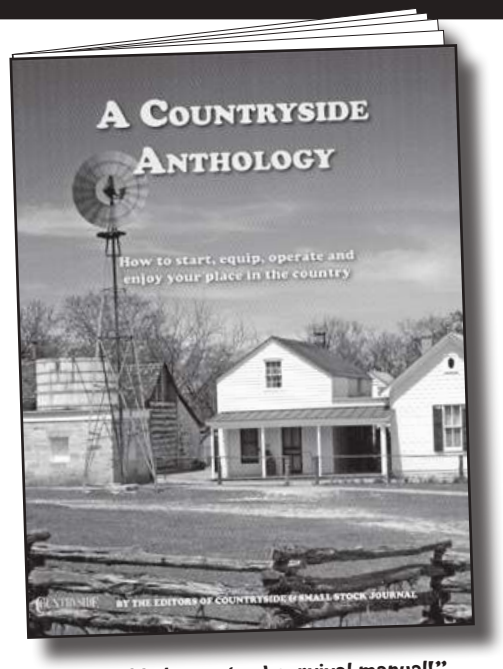

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Tractor safety comes first

COUNTRYSIDE: Ken Johnson presents several excellent recommendations in "Thinking About Buying An Old Tractor For Your Homestead?" in your March/April 2013 issue. He only short-changes two critical consequences for new homesteaders contemplating a tractor purchase: horrible injuries and death.

I maintain two rural properties, one in the process of becoming a homestead, with both antique and modern equipment. Both pieces of land feature hills, gullies, and stream beds. Any of these can equal a roll-over, especially if a row-crop tractor with a narrow front end gets employed improperly. Even a low-slung tractor with a wide front axle, such as my 1952 Ford 8N, can roll sideways when used incorrectly on a hill.

New rural residents without much experience on tractors need an apprenticeship, something I gained in two decades as a city-boy working with my father-in-law. That taught me the rudiments of old equipment and its use.

So while Johnson's article does note how side-mount tractors and PTO systems can save both effort and injury, much of his other advice works best for old hands who already know tractors. I'd recommend the following specs for those who haven't put in too many hours in the tractor seat:

• Roll-over system (roll bar), seat belt, hand brake. Our 1970s and '80s John Deeres all feature them, and I am fairly certain that similar vintage Internationals, New Hollands, and other makes do, too.

• Wide front axle, period. For most hobby farmers and homesteaders, the triangle setups for many row-crops invite disaster unless the property is really flat and level.

• Utility tractor for small properties. Tractor owners, in their red or green caps, will disagree for hours over the merits of a particular setup or make, but a modern utility tractor will be lower to the ground than a row-crop. That center of gravity, plus weights as needed, can save a novice's life.

• 4WD if the tractor will use a loader or work wet ground. Getting stuck in mud is a pain, but flipping the tractor by sliding sideways down a hill is worse.

• Volunteer work and classes. Seek out a local farmer at the farmers market, dial up the community college or extension agent, and just ask.

These have been my methods. I ended up with a new John Deere 4WD utility tractor for $25K, far more than Johnson recommends, though good tractors of the sort, as well as 4WD earth-moving equipment, can be found for $10K.

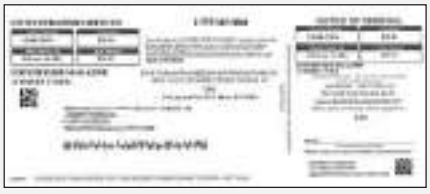
If I were to employ only one tractor, I'd save up to spend the extra money. My antiques now pull wagons or mow grass on the flat spots.

All that said, no tractor, modern or old, is safe if not used safely.

My father-in-law, with all his years of experience, still got pinned under the rear wheel of a 1970s vintage tractor with a seat belt and cab. After he came out of the coma, he explained that he tried to move the tractor a foot or two, engine off, by operating the clutch with his hand and standing beside it. A tire-tread caught his trousers and pulled him under the tractor. Had he climbed into the seat to do the job, he'd not have been hurt. He barely survived the accident, and was never the same man.

Moral to newly rural folk: buy as safe a tractor as you can afford, and use it properly. – *Joe Essid, Goochland County, Virginia*

Continuing magazine renewal alert



Hiding behind several different made-up names including CBS, United Publishers Services, Publishers Billing Exchange and National Magazine Services, they mail notices similar to the one left, trying to sell subscriptions to COUNTRYSIDE & SMALL STOCK JOURNAL—as well as dozens of other magazines—for exhorbitant prices far above the going rate. In the case of COUNTRYSIDE they offer a two-year renewal for $65.95, while the real price is only $30. • The name and address may change—in March it was White City, OR. • This company is not connected with Countryside Publications, Ltd., in any way, and has an "F" rating with the Better Business Bureau. • If you receive a notice like this one please ignore it or ask them to remove your name from their mailing list. If you have renewed through them, call 1-775-345-3664 and ask for a complete refund. (They have been charging some people $20 for the "privilege.") • Genuine renewal notices come from us here at the home office at 145 Industrial Dr., Medford, Wisconsin 54451. If you ever have a question regarding your COUNTRYSIDE subscription, call us at 1-800-551-5691 or email csymag@tds.net.

Go with open-pollinated tomatoes

COUNTRYSIDE: An article by Jean Smith in the March/April issue of COUNTRYSIDE explores the question of heirloom vegetables, hybridization, and open-pollination. Her article, whose discussion of heirlooms appears on Wikipedia, suggests that the question of what constitutes a genuine heirloom vegetable rests not on objective standards but on which of several definitions you choose.

For me, the category "heirloom" is much less important than the distinction between open-pollinated and hybrid cultivars. No matter how the open pollinated varieties have been developed (through some level of commercial enterprise or through generations of a family or community), it is important that those varieties continue to be propagated so that the gene pool is maintained as robustly and as fully as possible. The open-pollinated varieties also offer us home gardeners the chance to save our own seeds. Those of us particularly dedicated may even develop a special strain of a beloved variety.

However, as an avid home gardener myself, saving seeds from the plants I grow is a low priority. With tomatoes in particular, I can't find a practical way to do this. Because I garden intensively, the four or five varieties I usually grow are planted in close proximity to one another. The need to rotate crops requires that they all be in one bed. In this situation, covering the plants with row cover material or something else is impractical. Some of these tomatoes are open pollinated and some hybrid. I rely on the hybrids for canning since they resist the blight that cuts short the life and productivity of my favorite, Brandywine. As a side note, I get the most out of my seed purchases by saving the seeds I don't use from year to year. Kept in plastic bags in the refrigerator, I've kept some seeds viable for 15 or more years.

In any case, supporting seed companies by buying their open pollinated, "heirloom" seeds helps ensure that those varieties continue to be propagated.

Regarding flavor, anyone who has eaten both the open-pollinated varieties and store-bought hybrids can't help but be struck by the difference. However, the difference in taste between open-pollinated varieties and hybrids not found in the grocery store is often more subtle. We use Pink Wonder and Better Boy, both hybrids, for canning with very pleasant results. Brandywine and Wayahead (among others) are for fresh eating and sharing with friends. — *Don Perkins, Missouri*

Baked bean recipe

(Or pork & beans)

COUNTRYSIDE: For Mr. Shearer, "you can glean a lot from old cookbooks," I thought you might like to know that Rumford baking powder still exists! The can on my shelf says "Clabber Girl Corporation, Terre Haute, IN 47808, rumfordworld.com. Made in USA." Even though they appear to have been bought and moved, when I looked for them on the Internet, I found some history of the original factory and town. It looks like they've been around since 1856. The products that now have the Rumford name are aluminum-free baking powder and certified non-GMO corn starch.

I also wanted to tell you that if you can make bread, you can definitely make "pork and beans." In my New England heritage it's called "baked beans," but it's the same thing and here's how:

You need a one pound bag of dried beans—navy, white, great northern—it doesn't really matter. My late ex-mother-in-law preferred yellow eyes, and if you can find them they're a real fine bean. Dried beans will keep in your cupboard literally for years. You can also use half the bag for a half recipe, using a twist tie to close the bag, which (still dry) will continue to keep on the shelf for years. Next you need some salt pork. Your store may call it fat back. Please ask the butcher if they hid it—any

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grocery store should have it. This will keep in your freezer for six months or more. You'll also need molasses, any brand, and prepared mustard (not dry powder). I like a "spicy brown" style, but it's up to your taste. These last two also keep in the refrigerator for a good long time and have lots of other uses, so no waste so far.

Method: Rinse the beans and discard any that don't look good—these days that's usually only a few. Put them in a pot with water to cover, bring them to a good boil and after a few minutes of boiling shut them off and leave them sit for an hour. I like to rinse them again and start with fresh water (helps if you find beans gassy). Put them back in the pot with the fresh water to cover plus around an inch. Add (for one pound of beans) 1/2 cup molasses and a tablespoon of mustard plus a few slices of the salt pork (around a quarter pound, maybe). Give it a stir, bring it back to a boil, and then turn the heat *way* down. At this point you could put it in the crock pot if you have one, leave it on the back of the stove on real low, or put it in the oven on low. The first time you make it you'll want to check it once in a while to see if you need to add some water, but once you've got it down, use the crock pot overnight. Yes, they cook for many hours, but like the bread, most of it's waiting, not working. If they seem done but the juice is too watery, turning them off for an hour and then re-heating will thicken up your sauce. And of course you can "doctor" them with onions or peppers or whatever if you choose.

I'm imagining being shut in by a blizzard and making bread and beans…. — *Suzanne, New York*

Beware of pull-tab lids long-term

COUNTRYSIDE: If you plan to stock up on store-bought canned goods, do not get cans with pull-tab lids. These cans have a very thin area (so you can pull to open) that can be easily broken without you noticing it. This can happen by another can falling on

top of it, even in the grocery bag on the way home, or while in storage. The break may be too small to see until you proceed to open the can, then it's too late. Beware; check your stock and put these cans in a safe location and use first. – *Judy Benevy, West Virginia*

Frequently asked oven canning questions

COUNTRYSIDE: I wanted to add some comments to my artice on oven canning, since I left a few spaces in what can and should be done. Did not think of some of them at the time I wrote the first article, and since have discovered some new ideas. So I will share them with you.

On oven canning: I will run over a few important things when you are first starting. Once I get all my jars filled and ready to oven can, the first thing I make sure of is, the cookie sheet on the oven shelf. Then I turn on the oven at 200°F and start loading the jars. Or you can get all the jars loaded, and then turn on the oven. Just give it an extra five minutes. Turn on the timer for 1 hour. Remember to take the jars out one at a time, and be careful, they are hot. Wipe the tops with a damp paper towel. (I have been wiping the tops as I put them in the oven; this saves handling hot jars, and works great.) Put the dry lids on, and screw down the rings to snug tight just like your regular canning. You do *not* pre soak your lids in water. The heat from those jars out of the oven will soften up the rubber, and you want everything dry for oven canning.

Rex (my husband) and Greg planted three different types of corn last year. One was a new Red Sweet Corn. It was good. Took a little getting used to eating corn that looked like Fall decoration-type corn, but it was something new, so we tried it. I also dried some of it. Another oven canner, Michelle, told me how to dry corn. It is so good and crunchy. (If you dry some corn, taste it when it is dried and discover how crunchy and good it is—it makes a great snack.) I pre-cooked the corn in the microwave, and will share what Sil told me about cooking corn so many years ago. While it is wet, rub just a little sugar on it before you cook it. Wow, it is wonderful. I cook eight ears in the microwave in a plastic bag for 12 minutes on high. Let it cool and either cut it off or pull it off. I did both. Then I dry it in the dehydrator. I also cooked and dried green beans. It surprised me that a whole bowl full of cut green beans, once dried, can fit into a quart jar with room to spare.

I also dried squash, tomatoes, onions, celery, bell peppers, and sliced strawberries. (Rex loves putting the sliced strawberries in his cooked and regular cereals.) I then oven canned them all. I put most of them in the half pint jars. Once you dry the fruits and veggies there is a lot less volume. It is surprising how a big bowl of bell peppers once dried will fit in a pint jar. So when using any of the items, a small jar of dried foods will go a long way. Next year I want to blend up tomatoes and dry them. I may even add some spices to the mix. If any of you have already tried this, please share.

I also went to the Dollar Tree store and got their frozen mixed veggies, and frozen corn. I thawed, drained and dehydrated it. Then I oven canned it. Having food like that canned and ready to use is wonderful. But having it safe, and on hand is really great. I have also been buying different dried beans when I see them on sale. I get a bunch of different kinds, then open and mix them all up in a large container; fill pint jars and oven can them. A pint jar will make a pot of beans to serve two people for two meals. I add ham or bacon to the slow cooker with a little water and flavoring, and let it cook for a few hours while the beans, dried onions, and dried celery are soaking, then add them to the slow cooker. Everything for this meal are items you probably have on hand, and that sure makes it handy.

I have met some fantastic people due to sharing oven canning. They have tried different things and shared

back with me. I will share some of their findings, and you can try them if you are interested.

We have canned cake mixes, brownie mixes, Jiffy mixes, pancake mixes, crackers, breadcrumbs and cubes, and muffin mixes.

As long as you have to add oil to the mix to make it, I feel it is safe to oven can. Some mixes will say there is a small amount of oil in the mix. I have read this, but have found that oven canning did not bother it at all. I have canned cake, brownie, and muffin mixes and used them several months later and there is no difference from opening a box and making a cake.

The one thing I do with all cake, brownie, muffin, and biscuit mixes is add a rounded teaspoon of baking powder to the mix and stir it in before I add the other ingredients. I have always done this. I was never sure how long a cake mix sat in containers before it got bagged, boxed and sold at the store. And there were a few times years ago that a cake would not rise like it should, so I started adding the baking powder. I also add an extra egg. If it calls for three, I put in four. This will insure your cake is moist. (I like a moist cake, not one that crumbles.)

I have not oven canned sugar, but a few people have and shared with me that it turned out great. I have big containers that I put sugar in, and that works for me. As long as ants and critters cannot get to it, I am a happy canner.

One gal told me she canned coffee. I had to try that, and it works great. The smell of the coffee in the oven makes you want to have a cup. All coffee used to come in tin cans, now it comes in paper and plastic containers. If you are going to store coffee and it is in the plastic or paper containers, you may want to oven can it in glass jars. Rodents may not like the coffee once they chew into it, but they can sure ruin it.

A friend of mine who lives in Texas has been oven canning a lot of different foods and then trying them once they are oven canned. She said I could list her email, so if anyone is interested in contacting her, they can. Her name is Sammye, I call her Sam. Her email: hughlettvineyard@nctv.com.

We have been oven canning anything we think will oven can and then testing it. We just did Jell-O, and it oven canned great. Sam opened hers and put it in half pint jars. (She said she put in two packages per jar.) I just left the Jell-O in the packets and stuffed a bunch of them in quart jars. She tried it, and said it did great. She also has oven canned grits, dried mustard greens, bread/rolls, pudding mixes, and popcorn to name a few items.

We discovered boxes of Sweet Potato mix at the Dollar Tree, and there are two packets per box. We have been emptying each packet in a half pint jar. I typed out the directions and made several copies. I cut and fold them, and quickly stick one in each jar as I take them out of the oven, then quickly put the lid and ring on. *(Ed. note: It's probably better to label the outside of the jar, to reduce the chance of contamination.)* Sam made a Sweet Potato pie using two packets, and said it was good. And her bread and rolls are impressive. She will share her ideas and know-how with you also.

I have also been oven canning Hamburger Helper. There are a few that are great as side dishes, and they will fit in a wide mouth pint jar with instructions in the jar also. The larger pasta foods like the lasagna you have to put in quarts, as it will not fit in a pint jar. I take the seasoning pack and push it against the inside of the jar, then slide the directions between the pack and jar, then pour in the pasta.

I am so pleased at how many people have started oven canning, and I am so thankful for COUNTRYSIDE for sharing my letters with everyone. I have learned so much with each issue, and feel blessed that I could add something helpful and interesting too.

I also want to add a dish washing tip for all of you that do not have a dishwasher. (My husband has one—me.) At the fabric stores they have bolts of netting, which comes in all

colors, and is very reasonably priced. I get 10 yards at a time, cut off about two feet, then tear it in half. It is folded and quite wide. Then take one of the pieces and use it to wash dishes. You will be surprised and pleased at how well it cleans. Just wad it up, add some soap and wash away. It sure makes washing up canning jars easier. Even pans with stuck-on foods wash up so much easier. I think I am going to make a list of tips that make work a little easier, and down the line I will send them to Countryside. So if you have a tip that makes life easier, send it to me and I will add it to the list.

Great way to label your jars: I buy contact paper that is plain, and cut it in strips about three of the squares that are on the back, wide. I count how many of each item I have canned and then start writing them on the contact paper. I use an ultra fine Sharpie pen, and once everything is listed I peel back and start cutting each label and put it on the lids of the jars. You can look down at a glance and tell what is in the jars. This makes it easy for me and hubby to find what we need.

Happy oven canning. — *Lil, greengate@jps.net; and Sammye, hughlettvineyard@nctv.com*

Homeschooling facts vs. opinions

Countryside: Marie Smith of California (p. 8, March/April 2013, "Don't Skimp On Your Kids' Education") should be careful when expressing her opinion on homeschooling and stating it as fact. She denigrates homeschooling as being less effective than "regular" school and cites her personal opinion and "quite a bit of data available" without any references or citations. Such assertions can be very damaging. I am also a certified teacher who has taught in public and Christian schools, and I am, in addition, a lawyer and a homeschooling mom. I also coordinate standardized testing for homeschoolers in my county, and thereby get to see the results. The PASS test, one of the tests authorized by New York State, provides two sets of percentiles. One set is the national norm linked to the Metropolitan Achievement Tests. The other set is limited to homeschoolers. A child's ranking on the national percentile will almost always be higher than his ranking among homeschoolers alone. For example, one of my children ranked in the 92nd percentile in mathematics on the national scale, but only 69th percentile on the homeschooler scale. Homeschoolers as a group consistently score above the national average on achievement tests. The publisher of the test makes note of this so parents don't get upset when they see the discrepancy in the two percentiles. But it is informative to know not only how a child is doing compared to public schooled children, but also to homeschooled children, where the competition is steeper. Academic success of homeschooled students has been well documented by Dr. Brian Ray of the National Home Education Research Institute (NHERI). Furthermore, I recently read an article by Dr. Bruce Eagleson (*The Messenger*, Winter 2013) where he states that "…academic communities…are publishing articles without substantial research…." So whatever data Ms. Smith is referring too, if it exists, should be examined for bias and credibility. Of course, one could claim that NHERI is biased. But the standardized testing speaks for its self.

Furthermore, Ms. Smith indicates she formed her opinion working with kids transitioning into "regular" schools. Generally that is a sign that the homeschool had problems. Basing an opinion of homeschooling on such students would be like evaluating the effectiveness of a type of business by only looking at the ones that went bankrupt. She also indicates she oversaw homeschool situations. I do not know what this means—but if she tried in such situations to influence the families to do "regular school at home" that may have led to failure. Homeschools, inherently tutoring based, generally do not operate as successfully with the classroom/factory model that is prevalent in regular schools.

Further, she claims "The most

successful homeschool families do not do their school on the cheap…." In contradiction, an online article by Home School Legal Defense Association (HSLDA) claims:

In *Strengths of Their Own*, Dr. Ray found the average cost per homeschool student is $546 while the average cost per public school student is $5,325. Yet the homeschool children in this study averaged in 85th percentile while the public school students averaged in the 50th percentile on nationally standardized achievement tests.[iv]

Similarly, the 1998 study by Dr. Rudner of 20,760 students, found that eighth grade students whose parents spend $199 or less on their home education score, on the average, in the 80th percentile. Eighth grade students whose parents spend $400 to $599 on their home education also score on the average, in the 80th percentile! Once the parents spend over $600, the students do slightly better, scoring in the 83rd percentile.[Id.]

In my personal experience, I can afford any curriculum I choose, but when I went searching for a more academically rigorous curriculum for my children, I found Ambleside Online, a *free* curriculum. They even have a Lite program and suggestions for how to help children leaving public schools catch up. In fact, most published homeschool curricula either have abbreviated programs for children leaving public schools or recommend dropping back at least one grade level. Of course, there are materials I do purchase for my kids—we use a computer-based math program and purchase science programs that include the lab materials and equipment. We expect to utilize on-line classes for some subjects. But that is only for high school and only our personal preference. In the elementary years these are not necessary, as shown by the studies cited above.

Finally, the increase in homeschooling has had a detrimental effect on private and especially Christian schools. Many Christian schools have closed as a direct result of losing students to homeschooling. I certainly hope this does not even subconsciously influence Ms.

Smith, a teacher and administrator in Christian schools. I am certain she writes out of a genuine concern, but the extreme conflict of interest should be noted.

Resources: *(iii Dr. Brian Ray, Strengths of Their Own: Home Schoolers Across America, National Home Education Research Institute, Salem, OR, 1997; [iv] Id.; [v] Rudner, Home Schooling Works: The Scholastic Achievement and Demographic Characteristics of Home School) (http://www.hslda.org/docs/nche/000010/200410250.asp#sthash.B5u5NFC9.dpuf) — Danta Bolin, New York*

COUNTRYSIDE: I love reading COUNTRYSIDE, thanks for a great magazine.

As a pre-med student who was homeschooled through high school, I was interested to see the short note by Marie Smith in your March/April 2013 issue about home education. Though I am happy that she is an administrator at a private Christian school, I was surprised to read of her view about home education. I would like to ask her one question. Where is all the data she claims is available concerning the matter of homeschooled children not being as academically prepared as others? She says, "With few exceptions, most homeschooled children are not as academically prepared as their schooled counterparts. I realize that this goes contrary to many homeschooled parents' sensibilities, but there is quite a bit of data available." As a side note, her wording is quite humorous when she states, "…not as academically prepared as their *schooled* counterparts." (Emphasis mine). Schooled counterparts? As compared to what—the unschooled homeschooled children?

Anyway, I have attached a link below to the *Washington Times* (I think they are slightly more unbiased than www.home-school.com, which also makes this claim) where we find that homeschooled children actually do significantly better on standardized tests. I don't believe that this study is only referring to the "…few exceptions…." So please, send me your sources, or citations, or whatever you have. I would love to see the data that shows that our schooled counterparts are more academically prepared than us unschooled homeschooled kids.

www.washingtontimes.com/news/2009/aug/30/home-schooling-outstanding-results-national-tests/

Also another source which compares GPAs: www.intellectualtakeout.org/library/chart-graph/homeschool-college-gpa-and-graduation-rates. — *Brian, Illinois*

COUNTRYSIDE: When I read the letter by Marie Smith in the March/April 2013 issue I had to look at the date to see if the letter was from the 1980s. These arguments were attempted back then when homeschooling was in its infancy. The data actually shows that homeschoolers do very well compared to children in public schools and many private schools. The letter begins by exhorting parents not to skimp on their children's education and by the end is a direct attack on homeschooling.

The premise that good schooling is directly related to the amount of money you spend is ridiculous. That is how many public school districts see it—the reason our students are doing poorly is that we need more money. High quality materials are not necessarily the most expensive ones. She implies that unless you have the most recent (and expensive) material it is useless ("poorly written" and "outdated" as she states). This smacks of the arrogance of many today who believe if the material wasn't created within the last few years it can't be very good (presumably because all previous generations were stupid compared to us?). There are cases where new discoveries have been made in science and some newer materials are needed. However, the basics that need to be taught like reading, writing, math, etc. don't change. As I recall, years ago we were taught 2+2=4 and that hasn't changed. Many older writing skill books actually taught a much higher level of comprehension than today's books. COUNTRYSIDE magazine is all about doing more with less money, but Marie Smith implies that is impossible in education. Maybe that is why education budgets keep skyrocketing while the U.S. lags behind other countries in student abilities.

She describes herself as having a lot of experience in public and private education. You have to remember that the education system (especially public) is a large industry in this country.

The homeschooled Bolin children, pictured with some of their curriculum materials.

The reason "many school districts view homeschooling with scorn," as she puts it, is mainly because it is an issue of money. A homeschooled student is not attending a school so they don't get the additional funds (from the state usually). Would we accept as truth something an executive in a large corporation would say about his products just because he has experience in that corporation? No, it would have to be verified because the executive would be seen as having a conflict of interest. Another similar case would be a large farming corporation saying that small farmers can't produce good crops unless they are spending hundreds of thousands every year on pesticides like they are. To summarize, remember that education is a business where people are also trying to keep themselves employed, like any other business. I am not attacking teachers, I personally know many caring, fine teachers. But education is still a business that needs to attract clients (students) to keep going. Therefore keep that in mind when people imply they are somehow unbiased when they are part of the system.

Many people homeschool on tight budgets and their children do very well. Maybe that is galling to people who believe that only they can do the job and only with big bucks?

For the record, our school district has no problem with homeschoolers and is very friendly toward them. – *Stephen Gojevic, New York*

COUNTRYSIDE: This is in response to the letter in the March/April issue, "Don't skimp on your kids' education," by Ms. Marie Smith.

Our homeschooling liberties are surely at stake when the following type of hyperbole gets to be "common knowledge:" "With few exceptions, most homeschooled children are not as academically prepared as their schooled counterparts." The other incorrect presumption in this editorial is that cheap homeschool materials cause an inadequate education. That is also not fact. I cite only one source to save a lot of travel online to prove my points: www.hslda.org/docs/nche/000010/200410250.asp, and I notice that *no* proof/data references were provided by Ms. Smith.

Consider the following finding on higher homeschool percentile scoring. In 1997, a study of 5,402 homeschool students from 1,657 families was released. It was entitled, "Strengths of Their Own: Home Schoolers Across America." The study demonstrated that homeschoolers, on the average, out-performed their counterparts in the public schools by 30 to 37 percentile points in all subjects.

The other incorrect bit in the article is that using inexpensive curriculum is detrimental. Consider this finding: "Similarly, the 1998 study by Dr. Rudner of 20,760 students, found that eighth grade students whose parents spend $199 or less on their home education score, on the average, in the 80th percentile." – *Kristina Floyd, South Carolina*

We're all getting long in the tooth

COUNTRYSIDE: I recently retired after 30 years as a maintenance electronics technician. Mr. Belanger's article, "Growing Old…" was just a wonderful description and outline of what I can expect in the coming years on our homestead. The article came at just the right time and really gave me the enthusiasm to prepare for a more enjoyable future. We have a variety of interests and like to learn new things every day. As a matter of fact, after reading this article I'm definitely going to visit the Countryside Bookstore for more of J.D. Belanger's insightful literature. Thanks for sharing your experience! – *Dennis Zlatkin, Johnstown, Ohio*

COUNTRYSIDE: "Growing Old in the New Normal," what an appropriate title for J. D. Belanger's article. I have found myself pondering the same issues lately. I am in my late 50s and find myself on the downward slide. I am looking at my goat herd wondering how many to keep, whether to try to keep what I have or start downsizing. I love my goats so this is a very difficult subject to contemplate. I think I will always have turkeys and chickens, but I won't need another sheep for spinning the wool when this one is gone. I have plenty of wool that has not been processed yet, so another sheep won't be necessary.

This escape artist was harassing motorists about a mile from his pen.

For the past several years I have

been looking for a horse that will carry me into my later years. I have gone through several horses in my quest. So far all but one has either had health issues or a personality clash. My sister sold me a gelding last year who is just turning seven. He is great fun on the trail and has proven to be a really good trail horse, so my quest has come to an end. He can grow old with me and I know he will keep me safe as I age and become brittle. This process has already begun as evidenced by the recent broken bones. I never had a broken bone growing up. I get them quite easily now.

I know I don't have enough money saved for anything more than to get by during retirement, but my retirement plans include running my own business once again. About two years ago I started a carriage business. From the beginning, it covered the operating expenses. My husband says he has never seen me happier than when I am driving. I am hoping my 13-year-old Halflinger can pull my Victorian and me into a comfortable retirement with me driving him on the weekends.

In the garden, I find myself sitting on a plastic step stool as I work my way down the rows weeding and picking at the same time. My back just won't put up with stooping any longer. I can comfortably get three feet at a time before picking up the basket and stool and moving forward for the next three feet. When my kids were at home I used to can, freeze and dehydrate over 300 quarts in a summer. Now I am happy to get 70 quarts of green beans, 30 of tomatoes and a few dozen peppers and corn on the cob in the freezer. We eat the rest as it comes out of the garden.

This year, for the first time in 20 years, I raised a couple of pigs. Now I remember why it has been 20 years since the last pigs. They are escape artists. I had a grand time hunting the one who escaped and evaded me for six or seven weeks. I finally got a call from a neighbor about a pig terrorizing motorists as they rounded the corner about a mile and a half away. We all know you can't catch a wild 100-plus pound pig, so I hunted him, butchered him and put him in the freezer. The other pig went to the butcher, but not before tearing the floor out of my trailer. I will get my future pigs from my Amish friends.

I don't care much for beef, but I do enjoy venison. My family usually provides me with some venison, but not these last two years. Last year, there wasn't a deer to be found. I don't know what happened this year. The deer must be getting savvy because as I was getting hay loaded onto my rig at the family farm I saw five huge deer running across the field. I asked my uncle why no one was hunting and he said the season was over. These deer had been hiding out waiting for the hunting season to end. Now they were out in the open and doing their deer thing in front of me while my freezer is void of venison.

So here I am, looking at retirement in a few years and trying to decide what I can do and how much of it I can do when I read J. D. Belanger's article where he is contemplating the same things. It was good to get another person's perspective on aging and deciding things. I guess when the arthritis gets bad enough in my hands I will have to give up the goats, but the chickens, turkeys and horses are safe until I just can't go any more. One does need something to look forward to to get out of bed in the morning.

Happy aging all. – *Karen Grosheim, Goshen, Ohio*

Don't lose your land over raw milk

COUNTRYSIDE: "Raw Milk and the 4th Amendment" (Mar/Apr 2013) missed another potential problem: forfeiture. I am a retired legal secretary, and I saw many people lose their property, including homes and cars, to forfeiture. In some cases the charges were dropped and the government still seized the property. Do yourself a favor and get your lawyer to tell you about this law and how you may be at risk.

A better approach to selling raw milk is to 1) educate the public on the

benefits of drinking raw milk, and 2) be relentless in pressuring your state legislators to legalize the sale of raw milk. I say "relentless" because Big Ag and Big Biz will be relentless in their opposition to anything that may pull consumers away from their own products.

In the meantime, stay informed. It's nice to think this is still a democracy, but we have lost far more "rights" than people realize. As our country and our world are increasingly dominated by corporations and the super-rich, the Constitution begins to resemble a shield less than a sieve…. – *Amelia Barrett*

Living with a battery bank

COUNTRYSIDE: I thought I would write and tell you a bit about our experiences living off-grid.

Our family of five has been living off-grid since 1996. The kids are grown up and now there is only my husband and myself.

We have a diesel generator, solar panels and a windmill. Many solar systems are very complicated, but ours is much simpler. As my husband says "the battery bank is the heart of the system." We started off with a large battery bank (24 volt system when all the dealers were saying 12 volt was enough), a diesel generator (second-hand), and a 2500-watt inverter/charger (not true sine wave type—we couldn't afford any better—the dealers told us a 1500 watt inverter/charger was enough). Slowly (as we could afford it) we added the solar panels and the windmill.

We found right from the start that because we had a large battery bank, each 24-hour period we would run our generator for four hours, and then shut it off. We could then run with only battery power for 20 hours. After adding the solar panels, and windmill we could run the generator less.

A diesel generator needs to be warm, so we have it in a separate building on a hillside mostly covered over with soil, so it never gets below zero in the building in the winter.

Batteries also need to be warm. They are in our garage/basement vented to the outside.

We live in Northern Ontario, Canada, where the winters are long and cold -30°C to -40°C (-22 to -40°F) is usual.

We did a lot of research before we went off-grid and one of the best things we did was purchase a VHS tape from a man in Texas who lived off-grid. He used a "power hour" philosophy where you line up everything you want to do that requires lots of power, and you run your generator (e.g., running power tools, doing laundry, vacuuming, blow drying hair, curling irons, etc.) You do all these things while the generator is running. When you turn off the generator you are doing things that don't require a lot of power. (Dusting, reading, gardening, watching tv, using the computer, etc.)

Our biggest power consumer is the deep well water pump. We only run large amounts of water when the generator is running (baths, showers and laundry).

We have used this philosophy all the time we have been off-grid.

We look at the electrical requirements for any piece of equipment we want before purchasing. We do have electric lights, computer, tv and satellite dish, fridge and workshop power tools. We heat with a second-hand out-door wood furnace boiler using one circulating pump. We have a propane stove, water heater, clothes dryer, and freezer. (We don't have a toaster—we use a metal camping toaster over the propane burner.)

Our system is simple but it is not worry free. It works for us, but we know it so well. We know if the generator "sounds different" it might be developing a problem. We monitor our batteries. We perform regular maintenance. In other words, we pay attention to the system.

We turn all lights off when not in use and all electric items are on a power bar so when they are off they are really off. We do nothing that stresses our batteries without the generator running. We are careful never to run the batteries down to less than half their capacity. If you do, this shortens the life of the batteries, and it takes a lot of charging to bring them back to full charge. This system has worked for us for almost 20 years (our first lead acid deep-cell battery bank lasted 15 years.)

We have saved money on this system but you must always have a "slush" fund for emergencies if you require large repairs you are unable to do yourself, or if you must replace your batteries, inverter or generator.

A lot of people tell us they would not like to live like this "having to think before you do anything that requires power around your home," but it definitely has worked for us. It is just a "mind set" and it is second nature to us now. – *Bev Bassett-Peever, Hornepayne, Ontario, Canada*

COUNTRYSIDE: Well, here we are once again, living off the grid. We've spent most of our 30 year marriage living this way. Due to our health issues, we had to return to "on the grid" again, but were just not at peace enough with it. I have to say I missed the good old woodstove fire, the quietness away from traffic passing by, so in 2009 we found 13 wooded acres and set out to build a little two-room house on it. Just two weeks ago, we were able to move into it. Back to wood heat and oil lamps. There's a lot to be done on the land: square-foot garden beds to be made and planted, flowers to plant, cleaning up of the land. I do all the canning that I can do. Once I canned in an old wash tub all the hot summer. You lay an old heavy wool coat in the bottom of the tub, put your jars in, fill it with water over the top of your jars, and for a lid I used the top from an old wringer washer. Naturally you build a fire—I put concrete blocks around my fire and covered it with one of the wire racks from my cookstove oven. You can sure can lots of jars at once and it doesn't heat up your kitchen.

I'm 76 years old. My husband is a 100% disabled veteran. We enjoy gardening and raising enough to help in a food bank for the needy. The past three years we have had drought and hot weather, so we could hardly save a handful of seeds. This year we have very few seeds left to sow, and would sincerely appreciate any that readers would send us, and we'll answer all. I would love to hear from anyone living off the grid; anyone who would just like a good pen pal.

I've been a longtime COUNTRYSIDE reader and I love this magazine as it has helped us through the years.

We just lost our dear little black Peking who was nearly 15-years old. My husband misses his little dog so much. We need a replacement, but don't know where to find a little black male puppy. Any help and info would be appreciated. We don't have my money to pay a lot. – *Lillian Faubus, 5213 Shiloh Rd., Leslie, AR 72645*

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Life is full of uncertainty

COUNTRYSIDE: I especially enjoyed the article "Fools for profit" in the Jan/Feb 2013 issue. Is there a way for anyone to unearth the 10% of the media that is not in control of or owned by the six corporations so I and others can give our support to them? I assume your magazine to be one of them. I guess they feel no threat from down-to-earth people, or they'd try to accumulate your magazine, too.

When *Business Week* predicted the consolidation of the media in 2004, I assume they weren't controlled, but I need to know if they are now. In my opinion, the general public needs to know this stuff… sooner, not later.

Sadly, I feel I had been spoon-fed the wrong information from the conservative side. Now I'm in limbo and feel there is no foundation to stand on any more. Everything seems to be sinking sand. I can't put my faith in churches, because I see nothing but silence from them while, if any morality or standards are left, they are rapidly deteriorating.

My heart breaks for those who want just a few acres of land and have not a chance of getting it, because they can't compete against the unsharing rich, to put it nicely. The rich never ask themselves—do I need to buy every piece of land just because it comes up for sale? Wouldn't it make me feel good to see how happy just a few acres would make someone else? I have wished for the longest time that I could get the rich to count their immense blessings they already have and let someone else have a chance. I doubt it's the land hoarders (maybe someone knows the right connections to get a tv show going on it) that are reading this magazine. Your audience is humble souls, I'm positive of it. People who want to help others, not take advantage of people. The world has a huge deficit of generous people, and sadly, I don't foresee that ever changing.

I give you credit for printing people's articles of varying opinions, for that truly is what freedom of the press is all about. I'd like to say to Jeffery Goss, Jr. that I have called the extension office a couple of times and the first thing they ask me is if I have access to the Internet. Since I don't, they look up what I need to know. I hate to admit it, but I see a lot of job elimination could be done courtesy of the Internet. If you don't go to the library and look up some of the websites listed in this magazine, you are doing yourself a disservice. Knowledge is power someone once claimed; I'm not sure it can be proven.

If it isn't overpopulation we have, it certainly isn't under-population. As my daughter said, "Just because the earth can hold more people, is it smart to encourage people to have more babies?" Just because something can be done, doesn't necessarily mean it should be done.

I'd like to know if I'm the only one horrified by the easy accessibility to what should be people's private information that parades around as public information! What is the history of who got to say that people's private information should be out there for the whole world to see, thanks to the Internet? Did people ever value privacy? We don't have any control of our private information being put on parade. It greatly disturbs me, if it doesn't disturb anyone else.

I forgot to touch on what if the widespread drought doesn't end by the time it's time to plant this year? I have a sneaky suspicion that government and elevators have sold everything overseas, and there will be nothing left to feed our own people. I wish someone would poll people about whether they believe there will always be food in the grocery store. I believe the majority takes food for granted, just because there is so much of it in the store. Does anyone know how much food is stored in warehouses around the U.S.? I wish someone would find out that answer. I hate to worry unnecessarily. — *Kathy, South Dakota*

Misfits abound!

And they read COUNTRYSIDE

COUNTRYSIDE: Let's hear it for misfits (March/April 2013)! Actually, Lynnette, you're probably less of a misfit than it might seem. You just have to view it from a larger perspective. I'm sure that there are many "fellow misfits" in the COUNTRYSIDE community.

I am quite accustomed to being referred to as "weird," and even shunned by some. Home birth, homeschool, no sugar ("How can you live without sugar?"), "Dr. Mom," herbs or essential oils instead of "meds," eat what we raise ("You eat goat?!? Argh!), no tv, cable or otherwise (can you still get tv without cable? I don't even know—or care). The list goes on and on. I even wear a skirt all the time (I don't see what women think is comfortable about pants!). It's a good life.

I am afraid you are ahead of me in some things. I do have a cell phone. After being stranded on the highway or in remote rural areas too many times with a broken down vehicle, I regard my cell phone as cheap insurance. And my girls get one, too, as soon as they start driving. I guess I'm a little paranoid along with being weird; in our crazy world today you never know who is going to stop to "help" a stranded motorist (especially a beautiful young woman!).

I also have a computer. In fact, I telecommute with a firm that I have worked for for over 20 years. When I left the city I was able to take that part of it with me. My "commute" is about 20 feet. In the last 10 years I have been to the office (which is half way across the country) twice. I set my own hours so I can work around most of my homestead chores and other activities that I consider more important. I think I'm one of the most blessed people on the planet. For me the computer is a tool, and a very valuable tool.

I, too, have a great love and respect for the Amish people. There is much that we "English," as they refer to us non-Amish, can learn from these good people. We live close to the largest Amish community in the state of Missouri (also many Mennonite and German Baptist). Much of my commerce is with them. I also sell what I produce in my (now) three greenhouses at the local Amish-run produce auction (as well as a small farm stand). I enjoy dealing with them and I am constantly learning from them.

You wondered if there was a place where you could live "a life of purpose and generosity." I'm sure that rural Missouri is not the only place left on the planet where you can live such a life, but we do have a good life here. Prices for land, houses, food and clothing (thrift stores abound!) are still reasonable here and many areas are free of zoning restrictions or building codes (our county doesn't even have a building inspector; they thought I was crazy when I asked about it). People are still friendly and, for the most part, conservative in their thinking. Like you, I would like to be able to share the load with someone, another homesteading woman. I am married, but he is in heavy construction so he goes where the work is; we usually only see him a few times a year. The homestead is my responsibility—and I feel the weight (sometimes literally) of that responsibility.

Misfit, weird, non-conformist, radical, whatever they want to call me, it doesn't really matter to me. I love the good life that I have (at least most of the time!), and feel richly blessed. – *Cheryl, Missouri*

COUNTRYSIDE: I just had to write and let Lynnette in California know that she is not alone. There are a lot of us misfits out here and I'm proud to be one of them. There is absolutely nothing wrong with not doing what everyone else does. That's why COUNTRYSIDE is so great—it's about people who follow their own paths. Do what you are comfortable with.

The scary part of all the new technology that descended upon us

so fast is that it is very addictive to a lot of people. I smoked cigarettes for way too many years and it took me seven tries before I was able to finally quit for good. Most people with cell phones are just like I was with my cigarettes. They have to be within reach or at least within sight at all times. I never want anything to control my life like that again.

I prefer real sunsets to the YouTube version. I prefer to hear my friends and family's voices as opposed to their text in email. An hour walk in the woods with my dogs is more preferable than an hour of surfing the web.

My husband and I are debt free, have only one tv, an older computer with dial-up connection (used occasionally) and no cell phone. We went back to a rotary phone, as it doesn't tend to get "fried" during storms. We hunt, fish, have a garden and chickens, and most of my landscaping is edible. We keep it simple and live within our means. We feel out of place around a lot of people and get condescending looks when we say we don't do email.

Technology can be a good thing, but it shouldn't control your life. Stick with what feels right to you Lynnette, and know that the rest of us misfits are behind you. Someday our "hands-on" skills and knowledge may be worth their weight in gold. – *Merrilee DuPlayee, Merrill, Wisconsin*

Questions, questions

COUNTRYSIDE: I can't tell you how much I enjoy this magazine! I look forward to each issue and reread back issues over and over—I learn so much from. This week I'm reading past years' spring issues so I can get ready for the gardening season coming up.

What is the proper way to stack cordwood and what is the best method and material to cover it with? Tarps rip and fly off in the wind (I've used bungee cords to wrap the pile tight and then rocks to hold tarps on but I'm just not doing something right. Snow and rain get trapped in

depressions and pull the tarps down between the rows of wood.

I'm confused about beneficial nematodes. Can you provide more information?

I have a bad back. How do I make compost without turning it? What can I add besides leaves, a little soil to add good bacteria, and flower and vegetable garden waste?

How do I file, trim or cut my roosters spurs? *(Ed. note: See* Backyard Poultry, *Apr/May 2007, pg. 12.)*

Our electric company just raised our rates 30%. We aren't off the grid, but every bit of electricity saved would be so helpful. I'm not ready for a large solar system but I would like to try it on a small level. How do I hook up a small panel to run one light at night? Do I need a special lamp or bulb, etc.?

Squash bugs here in New Hampshire are like a plague. I hand pick and use masking tape to get the eggs (they are too hard to squish) but it's a losing battle. People have suggested a row cover but I don't have money for that. Is there an organic insecticide I can use? I have mixed Sevin in water and sprayed it on huge clusters of baby squash bugs and have had some success but I don't like to use Sevin except to dust the edges of the floor and laying boxes of my chicken coop after cleaning out the old bedding and adding fresh bedding.

Should I grow or not grow comfrey? What is it used for? Where can I obtain plants?

Tell me more about ginseng. How to grow and what it is used for. I've also heard that goldenseal is good to grow.

Just some ideas. I'm a new homesteader, hopeful and have a lot to learn. Thank you for helping me save money by growing my own food. I have limited success starting seeds for the garden but I'm still trying, saving money by oven canning and regular canning. – *Justine*

Keep reading Justine! You'll find many of your questions answered in this journal and in the Bookstore. You can also ask the knowledgeable readers on our Facebook page.

Our country life

COUNTRYSIDE: I had been an avid reader of *Mother Earth News* back in the 1970s. It was not until I was in my 50s that I finally had the financial resources to make the move to the country. Since my wife and I married later in life, our children are still in their teens today. However, we are thankful that we have been able to raise them in a rural life for the last nine years.

When we moved out to rural South Dakota we were advised that we shouldn't be too disappointed if people did not welcome us with open arms. In fact, we found the same general disinterest that we encountered in urban life. However, we were not looking for a new social environment.

We were told at the lumber store that a couple of people a year move out to this part of the country, only to go back to the city in a year or two. That made me reflect on the various types of people who intentionally seek out a country life. There are whole-earth people, survivalists, romanticists, environmentalists, and even collective communes. If I had to come up with a category to describe us, I would have to say religious refugees with a preference for the traditional and even old-fashioned.

For us there is nothing more important than our children. When we lived in the city I worked with a man who was a non-custodial parent. He told me that his 13-year-old son was the laziest person he knew. He said that the only time his son would get up from a video game was to go to the refrigerator. It was one of the saddest things I had ever heard. I can see a real challenge for urban parents to find things for their children to do. While our children play an occasional video game, they have plenty to do with taking care of animals, and with garden and hay chores in summer. We wanted to homeschool our children and have been very pleased with the results. We wanted them to have a natural enthusiasm for learning and the staff at the local library looks forward to their monthly visit. Our Christian faith is very important to us and we wanted to make sure our children were not indoctrinated with what we feel might be called the new state "religion" of secularism (the worship of man in general and self in particular).

We have lived the country life and would not return to the city for anything. We are a little remote and if anyone would like to correspond

What is it?

Well, we still don't know for certain (planter? harvester?). But here are some educated guesses:

* * *

COUNTRYSIDE: It looks to me like a piece of cultivating equipment with a bevel and pinion gear from an early 1900 automobile, perhaps to hill potatoes, corn, etc. Also, perhaps it could be used to windrow hay.

I wouldn't think it would work very well; the wheels would slide. If they made it heavier so they would not slide, my wife would never be able to push or pull it. The man had some mechanical mind, didn't he! — *Mr. Dupuis*

Don't you love a guy with a sense of humor?! Next!

* * *

COUNTRYSIDE: It looks like Phil Roth

owns himself a potato harvester. It lifts the taters out of the ground as you push along. – *Heather McFarland, Pennsylvania*

* * *

COUNTRYSIDE: I have an answer for Phil, via my father-in-law. It's a planter — it makes a furrow for you to plant in. You can use it to ready the plot for plants or potatoes. This is from my 81-year-old father-in-law who has been farming all his life. – *Chuck Bickert, Williamstownship, Pennsylvania*

or ask us any questions, please feel free to write. – *Tim Froehlke, timf@emssensors.com*

Where's *my* beef?

Labeling may be in order

COUNTRYSIDE: We enjoy your magazine and are glad to receive it, however I thought I would offer a different solution to the greasy beef dilemma. For more than a few years we have been raising our own beef. We raise a few dairy cows and keep offspring or get bulls to raise—mostly Jersey, Guernsey and Holstein. Sometimes we do get around to making them steers and sometimes we don't.

The first beef we got back from the butcher we really liked. The second beef was a steer and we raised it only on grass, so it wasn't a fat thing. We also wanted to keep all the bones so we could make broth. The meat we got back from the butcher was very fatty and did not taste like the other one. Several people in our area also shared similar happenings. Our conclusion is that the locker switched the meat, knowing it was a good piece. Beware that this may very well be the case; integrity is no longer there. Our solution was to do our own butchering. – *Illinois reader*

Smells like a predator

COUNTRYSIDE: This is in response to Carol Cody's question (COUNTRYSIDE Jan/Feb 2013, pg. 22) about mouse problems in the heating/ventilation system of her vehicles. I've lived in the woods for about 40 years, and experienced this problem with every vehicle I ever owned (about eight of them). The culprits have been white-footed mice *(Peromyscus leucopus),* the common woodland mouse in this area. The problem is discouraging, smelly, dirty and sometimes costly. When it happens, I have a concern about hantavirus when the fan is turned on, and debris from nests, droppings, etc., is blown around in the passenger compartment.

A couple of years ago, it occurred to me that some kind of predator

scent might deter the mice. I dipped one end of a Q-tip into some ferret scent (obtained at a store selling trapping gear and supplies), and placed it in the firewall compartment, where the fresh air intake for the ventilation/heating system is located. There was no recurrence of the problem in that vehicle, or in another that we've owned since.

I won't swear that this works, but the reasoning seems sound, and the coincidence is compelling. If anyone is wondering, there is no noticeable ferret scent in the passenger compartment. (Ferret scent seems to be a little hard to find. I imagine that bobcat, fox, mink, or even house cat urine, might work as well.) – *Denis Case, Laurelville, Ohio*

Coming events:

Sustainable festivals

August 10, 2013

Wisconsin: Eau Claire County Expo Center is hosting Chippewa Valley Sustainable Future Festival. Exhibits, workshops, and Master Gardener Plant Sale. For more info, visit: www.sustainablefuturefest.com.

June 21-23, 2013

Wisconsin: Each year the MREA Energy Fair transforms rural Central Wisconsin into the global hot spot for renewable energy education. The Energy Fair brings over 20,000 people from nearly every state in the U.S. and several countries around the world to learn, connect with others and ready them for action at home. The Energy Fair is the nation's longest running energy education event of its kind. Over 275 exhibitors, 200 workshops: Alternative Transportation Show, Green Home Pavilion, Green Building Demos, Sustainable Tables, Live Auctions. Inspirational keynotes, lively entertainment, great food, and local beer. Visit: www.midwestrenew.org/energyfair.

July 26-28, 2013

Oregon: Balance traditional skills with new technology in your quest for sustainable living at the 14th annual SolWest Renewable Energy Fair in John Day. Self-reliance, sustainability, and "do-it-yourself" renewable energy are the focus of this three-day event. Learn how to craft a bountiful life requiring fewer resources. Rendezvous with Electric Car clubs as they vow to again make "John Day or Bust." Admission includes over 50 free workshops, and 30-plus exhibitors will show you tools for energy independence and lifestyle self-reliance, including solar, wind and agricultural resources. For more information contact: Jennifer Barker SolWest/EORenew PO Box 485, Canyon City, OR 97820; phone 541-575-3633; info@solwest.org; www.solwest.org

August 17–18, 2013

Illinois: Join us for the 12th annual Illinois Renewable Energy and Sustainable Lifestyle Fair at the Ogle County Fairgrounds in Oregon. The Illinois Renewable Energy Association (IREA) provides hands-on opportunities for the Illinois public to learn about the benefits, potentials, and uses of renewable energy and energy-efficiency for our homes and businesses. IREA c/o Sonia Vogl, Treasurer, 1230 E. Honey Creek Rd., Oregon, IL 61061,sonia@essex1.com 1-815-732-7332; www.illinoisrenew.org/

Goat School

June 22-23, 2013

Minnesota: Ken and Janice Spaulding's Famous Goat School® will be coming to the North Country Farm in Littlefork, on Saturday and Sunday with an optional Soap and Cheese Making Class on Monday, June 24th. For more information, contact Elizabeth Pendergast at 218-278 - 8888, or e-mail mependergast@yahoo.com, or visit www.northcountryfarm.net/

Goat show

May 25, 2013

Georgia: GA DGBA Spring Show, Monroe. Two ring show. Judges: Jane Robinett & Scott Horner. Rules, entry forms and info are available at: www.gdgba.org/articles.html or contact John Latimer, ph: 706-769-9460.

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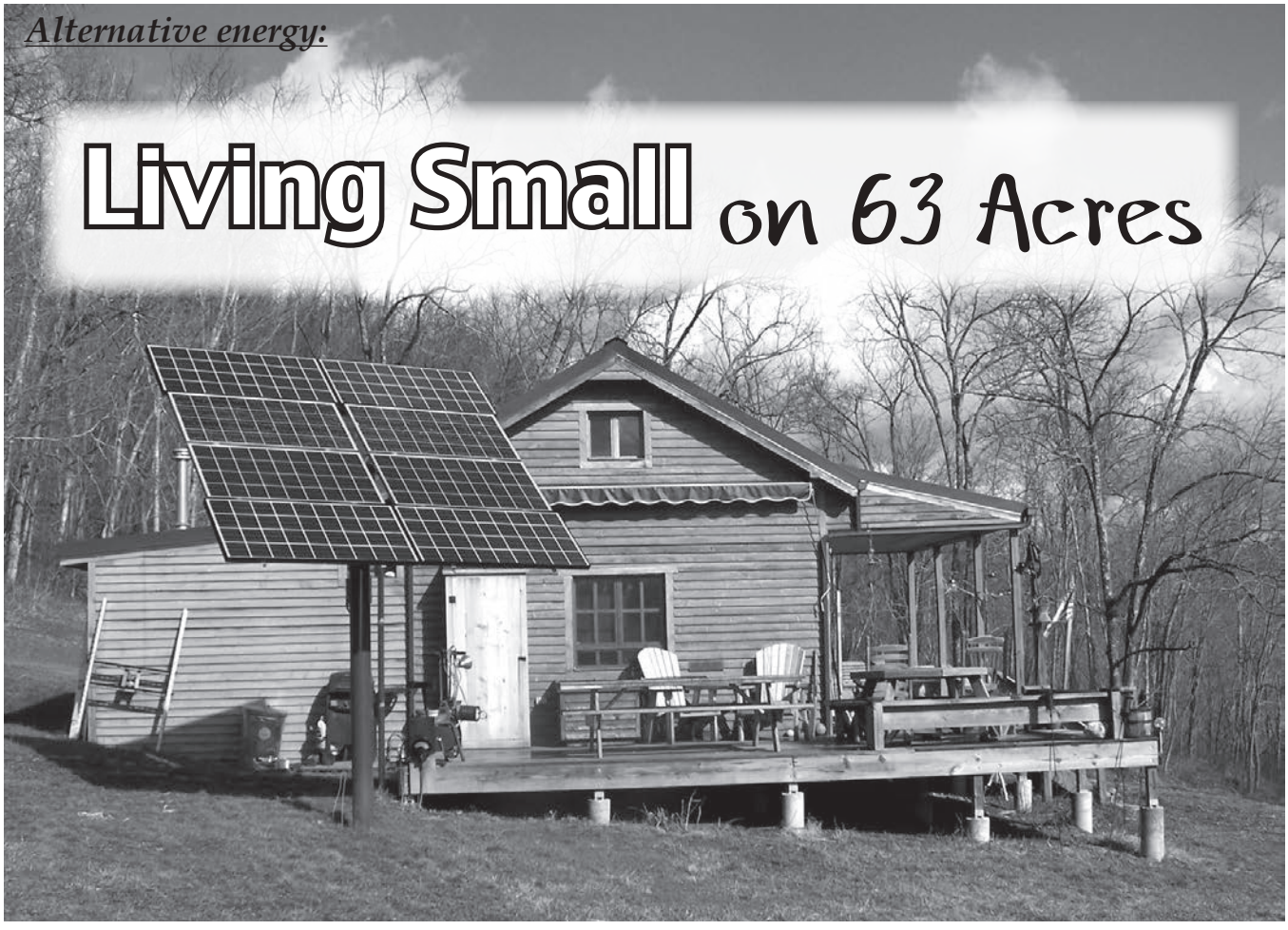
Alternative energy:

Living Small on 63 Acres



By Christine Tailer
Straight Creek Valley Farm

I was born and raised in the city. I married and divorced, raised four children in the city, and then married again, still in the city. But now my husband, Greg, and I live in the country, and by country, I mean over two miles down a gravel road, in a small 388-square-foot house that we built ourselves and heat with wood, four miles southeast of Georgetown, Ohio. We generate all of our electricity with eight solar panels and a wind turbine. In the summer, I hang my clothes out to dry on a line that runs from the cabin to our windmill tower and in the winter I hang them by the fire. Our neighbors are the deer, rabbit, squirrel, red tail hawk, and coyote, whose howls lull us to sleep at night, but I have found that there are more folks I count as friends in this new life than I ever knew in the city.

I wondered, when we left our city life behind, if I would be lonely in our little house on our 63-acre farm. I was so wrong. People call or just stop by on a drive along the creek. One summer Sunday afternoon we had three sets of folks stop by to sit on our porch at the same time. I happily made fresh mint tea for all. Whenever I go up town to the store or post office, I always see someone I know, and I stop to talk about the weather, the corn still standing in the fields, or the new restaurant that just opened up in town.

Some of our neighbors only know us well enough to have heard that we live in a small cabin. These folks will smile and inquire as to how we are surviving the drab, chilly days of winter. They wonder how we are coping with cabin fever. I could tell them that there is no such thing as cabin fever, at least not that I know of, but instead I only smile back and let them know that winter is really just not quite long enough to catch up on all the chores on our list.

We can wake up early and put on our coveralls and head down to the shop to work on farm machinery. Or we can continue to organize all of the harvesting equipment that we left somewhat scattered about inside the pole barn. We can head out into the woods, fell a standing dead tree, cut it into firewood lengths, and load it into the back of the old farm Jeep and drive it up to the wood shed behind the cabin. If we feel like it we can split the wood, either by hand with an old maul we found in the barn, or, if the ground is not too wet, we can hitch up the hydraulic log splitter to the back of the old Ford 800 tractor and make the splitting a bit easier.

We have already cleared the woods for a cattle pasture, but the posts all need to be set. We still need to build a permanent shed to house the maple syrup evaporator, and there are several more raised garden beds that I would like to build. There is always maintenance to do for the upcoming honey season, frames to clean, new wax foundation to add,

old bee boxes to paint. In short, it is hard to stay inside the warm winter cabin.

In the spring and fall there is always a fresh crop of rocks waiting to be hauled out of the six acres of field that we farm. The old tobacco barn roof leaks and desperately needs attention. And in the summer, there are weeds to pull, crop rows to cultivate, and then, no matter what the time of year, the dogs are always waiting to take a walk along the creek.

Yes, our house is small, very small, and does measure only 388-square-feet, but it does not seem that we stay inside that often. The main room serves as kitchen, dining room, living room, family room, and office. Our loft bedroom covers not quite half of the main room's ceiling. The other half extends all the way up to the vaulted roof, imparting an airy feeling to the 16' x 16' floor space below. Our back room houses the bathroom and washing machine, and serves as a walk-in closet for our clothes. Everything has its place. There is literally no room for anything to be left out of its intended spot after use. I call it our "transformer house," as we transition from one activity to the next.

After every meal, I wash the dishes and place them to dry on a rack that sits over my three burner stove on a board, turning my stove top into kitchen counter space. I hang my pots and pans from the exposed rafters above our 12 volt refrigerator. I used to think that hanging pots and pans was a fashion statement, but now I know that my hanging pots and pans are a necessity. I have no room for kitchen cabinets.

Our glasses and plates are stored on shelves that run along the wall and are attached to the bottoms of the rafters. Our food pantry consists of a six-tiered set of built-in shelving that sits next to the fridge. The spices are tucked neatly into ever so shallow shelves made out of the space left by purposely exposed wall studs.

Greg built the tall, but small footprinted, end tables that sit beside our wooden, leather cushioned, rocking chairs, one placed either side of the wood stove. The furniture sold in furniture stores is simply too big. And our wood stove is the smallest one we could find. It will burn for 12 hours, when packed tightly full, but holds no more than six, split, 18-inch long logs. A bigger stove would have cooked us right out of our home. As it is, I often keep the top half of the cabin's Dutch door wide open, so that we do not get too hot. Greg built the door. He also built the cabin's windows, putting in four panes of beautiful colored glass, just for fun.

Interior view of Christine and Greg's 388-square-foot home.

The cabin's small table, also built by Greg, is our dining room table, craft bench, and now, as I write on my laptop, it serves as my office. Greg sits in his chair by the stove, gently snoring, for you see, we were up late last night. Two of our grown city bred children arrived for a visit. I saw the headlights of their rental car shine across the cabin windows shortly after midnight. I climbed down from the loft to greet them. Greg soon followed.

Christine and family on her Ohio homestead.

Of course we hugged and sat and talked for a while before I lead them out back to the unheated sugar shed, that also functions as our guest house. I keep all of my beekeeping and maple syrup supplies stored out of the way, up in the shed's loft. In guesthouse mode, the shed reminds me of an old fashioned motel, where each room was a small free-standing cabin. I tucked our grown young'uns into bed, covered them with piles of down blankets, and kissed them on their foreheads.

Morning brought the warm smells of coffee and cinnamon rolls, and we took turns showering in the small bathroom. We continued talking through the closed pocket door, also built by Greg. A hinged door would simply take up too much wall space. After breakfast and showers, the young'uns followed us about as we did the animal chores, taking photographs with their high-tech smart phones, and then they left for the city, to visit with high school friends.

So how was it that Greg and I decided to live in a 388-square-foot cabin that was two miles down a dead end, one lane, country road, with solar generated electricity? This was not something that we had planned from the outset. It was rather an idea that formed over time as we lived in the city and fell more and more in love with the land that we had bought to simply be a weekend getaway. I worked as a trial attorney and Greg as a mechanical designer, and we lived in a large, three story home where we had raised our seven children, but as the children moved off into their own lives, it occurred to us that we could also move off into ours. Once we made the decision to retire from our city jobs and sell the big house, having waited until our youngest child moved off on her own, we had the choice to either go solar, or forgo the land. We decided to go solar and go small.

There were no utility lines leading to the 63-acre property, which had helped to keep the price within our range, and the only water on the property was the water that flowed down the creek. We did have access, however, to the county water line that ran along the road (put in by virtue of a federal grant several years before), but in order to tap into the water line we needed to have an address, and in order to have an address we needed to have a driveway. So we spent our first few weekend visits camping on the back of our 16-foot

The wind turbine helps them live utility bill-free.

drag, parked behind the only structure on the property, an old tobacco barn. We immediately set to clearing the wildly overgrown fencerows that bordered the road. We bush hogged the 15 acres of fields that the woods had been reclaiming for the past 10 years, and in the evening we would bathe in the creek and wave at the neighbor farmers who occasionally drove by on their tractors.

The first few years passed quickly. The fields began to look like fields again and that first fall we called in a gravel truck to lay down about 100 feet of driveway just in front of the tobacco barn. At that point it was a driveway to nowhere, but we could then apply for our address and once armed with an address, we were able to get our water tap. Greg set a frost-free spigot by the corner of the barn and we began to feel quite civilized, drinking tap water and showering under a garden hose that Greg hooked up to the side of the barn. The sun even warmed our 200 feet of water-filled garden hose, so that at the end of a long day's work we could have warm water, barn side showers.

The closest electric line to the barn was almost one mile up the road, back towards civilization. I called the utility company, and after a cursory, no cost to us survey, was advised that underground cables could not be laid due to the rocky geology of the creek valley. It would also cost close to $30,000 to run the above ground lines. We thought that even if we won the lottery, or had the $30,000, that utility poles would look ugly running along beside the fields, so Greg began to research solar power and to design a small off-the-grid cabin.

The first step was to choose a house site, with good access to sunlight. The upper field seemed perfect. It sits at an elevation of about 40 feet over the creek, which local folk had advised us flooded several feet deep in the tobacco barn during the 1997 flood. A house in the upper field would thus be safe from creek flooding. The upper five-acre field runs parallel to the creek, and with the edges cleared of deadfall and new saplings, it has ample southern exposure. We staked out our cabin site and began to build.

We initially thought that the cabin would eventually serve as our guest house, and that we would build a larger house for ourselves, but after living in the cabin for several years we now know that we have no need for a larger home. We have come to believe that small and simple are very good ways to live indeed. So visiting friends and family now stay either in warm weather tents or the sugar shed!

Greg designed the cabin, with an 8' x 16' front porch, and a large 24' x 10' side deck, that can be covered with a crank down awning. During the summer we spend a lot of time outside, eating all of our meals and relaxing (if there is such a thing) on the porch or deck.

The cabin's walls stand 10-feet tall, before the roof starts its pitch, so that the floor of the sleeping loft sits two feet down inside the walls, giving us more head room and allowing us to stand upright in the center of the loft. And so, with our city hands never having done it before, we built our cabin from scratch. Our collection of buildings now includes the cabin, the sugar shed, the outhouse now turned into feed shed, a wood shed, the pole barn, a cement floored shop, several goat houses, a chicken coop, and rabbit hutches. All are

roofed with green steel.

The cabin is wired with both 12 volt and 110 systems. We live with the 12 volt all of the time. This includes our lights, refrigerator and deep freeze, our cell phones, and the ceiling fan. We switch on our inverter to run the 110 appliances, including the washing machine, our computers and wireless printer, the Internet, and satellite television, as well as all of our power tools.

Our entire energy system, including batteries, solar panels, appliances, wire, and outlets, cost approximately $10,000. We have been living small for the past six years, and have not paid a single utility bill. The system has certainly paid for itself and we are now living entirely utility free! I know that what I have written is only a very basic account of our first steps into life in a small off grid cabin, but perhaps the most important message that I would like to share, which I have also saved for last, is that living in a small home with alternative energy is not only effective, and need not cost that much to get started, but it is really very doable! I have such a feeling of pride as I put on my lawyer clothes after doing the animal chores, to head up town to go to court. I might look like any other country lawyer, but I know that my virtual office is not only virtual, but off grid as well.

At the outset, I nervously feared that we were heading off on an extremely complicated adventure that I would never fully understand. My fears were unfounded. I now know that if Greg were called out of town for a few weeks on a design project (he now undertakes several design contracts a year), I would be just fine managing the cabin and our off grid world. So, as we continue on our adventure (hopefully living well into our 80s) we will certainly be very comfortable, living in our small home, with all of life's modern conveniences, not paying any utility bills, and completely enjoying our 388-square-foot, 63-acre, dream.

Visit us on the web at straightcreekvalleyfarm.com; christine@straightcreekvalleyfarm.com.

Alternative energy:

12 YEARS OFF-THE-GRID

Marilou and Jack Dody
Colorado, Zone 5b

For the last 12 years my wife and I have been living off-the-grid on the high plains of Colorado. We want to share what we've learned, both positive and negative.

First, let me describe our location. We are 50 miles from the nearest Wal-Mart, 50 miles from medical care, 50 miles from all but the most primitive services. The only thread of civilization that runs onto our property is our telephone line, which provides an Internet connection. Our altitude is approximately 6,000 feet; our soil is sandy and worn out. Our growing season is short and unpredictable—too hot or too cold. People who have wells in our area must drill at least 400 feet, by state law. It is not uncommon to go down 800 feet, and there is still the possibility that local wells may go dry because we have been in a historic drought considered worse than the drought of the 1930s. We do not have a well. We use the water that falls on our property from the sky. Last year we had 9.7 inches of rain. Our cisterns hold 6,700 gallons.

This is the prairie. It has few trees and the wind blows almost constantly, often at speeds that are destructive. This land is suitable for raising cattle, sheep or goats and little else. The current drought has made raising any livestock a great challenge.

Your first question may be, "Why would anybody homestead in such a place?" Good question! First, let me say that we believe God has a sense of humor. When we came to this place I knew exactly what it was like. We came because the job I was offered paid better than anything we could find where the surroundings were less harsh. We didn't plan to stay; we just wanted to make some money and then move on. We built up our homestead from nothing, thinking that we could sell it at a profit when our work ended. Then came the housing crash. We couldn't give our place away now. But we find ourselves in an excellent location to ride out the uncertain times that have fallen on our nation. God may have a sense of humor, but He also knows exactly what He is doing and cares for our well-being.

Even with a relatively expensive initial investment in solar, the Dody's electrical use averages less than $70 per month.

Now for some specific information about our homestead. I will describe what we have, how and why we built the way we did, and how we would do it again if we had the opportunity. I won't try to make us look good. Our hope is to share the good things that we have done and the blunders that we have made in hopes that the reader may not make the same mistakes. I encourage the reader to check out our website: www.christianhomesteaders.org. You can download our training manual, *Abundaculture,* at no charge. It is referenced below. You'll also find many photos of our homestead.

One of the positives of our location was the fact that there were no zoning regulations or building codes in place when we began building. This gave us great freedom. Two months after we began our house, the county instituted building codes. We could not legally build our home in most locations in the U.S. today. However, we were grandfathered in and not hindered by the new rules. You should check out all the rules and regulations that will determine what you can build, how you can build, and what it will be like to live in after it's completed. Can you put up with your neighbors? Better to consider these questions before the first nail is driven.

I had been building off-the-grid structures for decades—cabins and the like. I developed the skills to do most of the construction myself. Alternative building methods always attracted me: earthships (building with tires), straw bales, rammed earth, etc. Our home was built with huge weed bales—4' x 4' x 8'. Our walls on the north, east, and west are five

feet thick. The south wall is framed with 30 feet of windows. Our home is fairly cool in the summer and warm in the winter. However, if I had to do it over again, I would build a more standard frame building with super insulation. Five foot thick walls take a lot of materials!

Heating Our Home

Our home uses passive solar heat. The sun comes through the windows on the south and heats a concrete floor covered with tile. We get about 75% of our heat from the sun, and use a wood stove for the other 25%. Because our home is super-insulated, we use only two or three cords of firewood per year to heat 1,150 square feet. To provide a point of reference for readers who don't use firewood, a typical home of this size would use 10-12 cords per year. What that means is that you spend a huge portion of your time cutting, stacking, gathering and cleaning up after burning firewood. I like gathering firewood, but I don't want it to consume my life. Passive solar works! It's simple and inexpensive, and easier to build into the home from the beginning of construction. Trying to retro-fit an existing building is much more difficult. The whole process is covered in *Abundaculture*.

Electricity

I had experimented with solar electricity since the late 1960s. We thought we might want to make our own electricity when we built our homestead. When we found it was going to cost $13,000 just to buy a transformer and set poles provided by our rural electric company, our final decision to go completely off-the-grid was easy. Our solar/wind system cost less than $8,000, and I installed the system with the guidance of an excellent solar provider. They walked me through it. Our set-up is very simple. We have about 450 watts of solar panels and a 400 watt wind generator. We use a 1500 watt inverter to create 115 volt AC power. Our storage system consists of 10 golf cart batteries. Because our system is so small, we use a simple gas-powered generator to make electricity for heavy needs or when the sun and wind are absent. That happens about four or five times a year. Our generator provides 6500 peak watts and 5000 continuous watts. It's a Coleman and cost about $600. Also, we use a propane refrigerator. A standard refrigerator runs about eight hours per day, making it one of the hungriest electric appliances in the home. More about refrigeration later.

The Dody's use about three cords of wood to heat their super-insulated 1,150-square-foot home, with most of the heat coming from the sun.

Our system has worked almost flawlessly for the last 12 years. I just replaced our second set of batteries, so considering the cost of all the components, including batteries, our expense for electricity has been $68.87 per month for 12 years. (See figures at end of section.) However, solar power has real limitations. You do not have an almost limitless supply of electricity as you do when you are connected to the grid. Solar is not for everybody, but it's great for those who live beyond the reach of the grid and who are willing to live within reasonable limits. If you need a huge refrigerator and two freezers in the garage, add about $15,000 to the cost of your solar system, and get some professional help for the installation. Your monthly expense will increase by 30 to 40%.

We use a propane refrigerator, which is great, but propane is expensive and the cost is constantly rising. We chose propane because we couldn't afford a greater initial investment in our solar system. If I had to do it over, I would spend the extra money and build a solar system that would support a solar fridge or freezer. As it is, we use propane for the fridge, a six-gallon RV hot water heater, and our cookstove. In the future, we hope to have solar-heated water. With our cold winters, solar hot water can be an expensive, complicated challenge. Today we spend about $50-60 per month for propane. Any way you add it up, our utilities are a bargain.

Yes, we save money on utilities, but we also work to heat our home by gathering, cutting, and stacking firewood. There is no thermostat! If the electricity quits working, we fix it. There is no one to call. But we like to rely on ourselves. If you don't have the skills, or you simply don't want to do things yourself, you may want to stay on the grid. But if you have the skills and patience to use solar power, I recommend it. The new solar equipment is better and cheaper than ever. You *can* make your own electricity.

Solar Installation Costs

Initial investment in 2000: $8,000

1st battery bank replacement, 2006: $738

2nd battery bank replacement, 2012: $1,180

Total: $9,918 divided by 144 months = $68.87 per month.

Water

My first advice to any serious homesteader is to find a place with

The composting toilet helps conserve water, and with less than 10 inches of rain per year, this is essential.

Tomatoes and peppers are planted in 30- or 55-gallon barrels, which also helps conserve water and reduce pests.

plenty of water, where growing food is reasonably easy. Choose your site carefully. All the work that you do won't amount to much if you run out of water. That being said, we have been forced to develop strategies that allow us to succeed with very little water.

Our primary source of water is rain. We gather 1,100 gallons of water for every inch of water that falls on our buildings. We have a 4,000-gallon cistern that provides the water we need for the house—bathing, drinking, washing dishes, etc. That cistern overflows into a cistern that is used for our garden. Before 2012, which was the hottest, driest year on record, we were able to live comfortably without any other source of water. During 2012, we purchased water for our garden from a neighbor. It's always good to have a back-up source, even if you have a well.

Rainwater is usually the cleanest source of water. We filter only our drinking water in a Berkey-type Katadyn filter. It has no moving parts and has worked perfectly for 12 years. The water right off the roof is clean enough for cooking, cleaning, bathing, etc.

How We Conserve Water

Everything on the homestead is designed to get the most from every drop of water. We use a sawdust, composting toilet which uses no water. Our grey-water system allows us to use every drop of water twice. Bath or dishwater is used to water our trees, flowers, and bushes. We do not have a lawn. Unfortunately, we don't have enough water for a washing machine. We clean our clothes in town, but when we add more buildings, we will have enough water from those roofs for a washing machine.

We plant our garden in sub-irrigated planters—SIPs. These use 50-75% less water than standard gardening methods. (See *Abundaculture*) We also use strategies developed by Brad Lancaster and explained in his books, *Rainwater Havesting for Drylands and Beyond, Vols. I and II*. Brad's methods reduce erosion, directing all rainwater to cisterns or directly to trees, grasses or other plants. If you want to get the most from every drop of water, get Brad Lancaster's books and use his simple, inexpensive, but highly effective ideas.

Food Production

We grow a portion of what we eat. We have worked hard for 12 years, yet we still have to buy food. Most homesteaders will never reach complete self-sufficiency. Almost all of us will do some other kind of work, often in town, to make money. Nevertheless, we grow more food each year as we learn more and invest more work in our garden. We use basic organic methods because we have found them to be productive and affordable. We concentrate on building good soil, and the plants become hardy and productive. We have to protect our plants from the wind, which is another reason we plant in containers. Many of our plants, like tomatoes and peppers, are planted in 30- or 55-gallon translucent barrels that we purchase for about $20 each. Sometimes we get them for free. They have contained food products or soap that rinses out easily. We avoid barrels that have contained harsh chemicals. We fill the barrel about half way with pure compost. (We'll talk about compost later.) By putting one plant in each barrel the young plant is protected from the wind until it is large and hardy. The barrels also protect plants from crawling insects, pets, and wild animals.

The barrels also act as miniature greenhouses. We need a real greenhouse for starting plants. We often cannot plant cold-sensitive plants like tomatoes until June 1. Our first freeze is usually in mid-October. Because of the wind, a lightweight, arch-type design would be destroyed. A stronger, more permanent design can be seen in *Abundaculture*. It's a buried greenhouse that would extend our growing season dramatically. Until we can build our greenhouse, we start our plants inside our home and harden the plants in an old freezer that is lying on its back with the door open during the day. We slide a moveable piece of glass over

the opening during the day and close the door at night. It works well.

Compost

Our soil is so poor that we don't use it for our garden. We create compost and use it exclusively. Our sawdust toilet provides plenty of material which is placed in a properly functioning compost pile for at least *one year*. Don't cut corners and try to speed up the composting process or you will make yourself sick, even if you don't use human waste. By the time I actually use our compost it has been "curing" outside for more than one year. And, keep it simple. You don't have to buy special containers or tools for composting. Put your potential compost in a 4' x 4' x 4' pile and let Nature do all the work. Don't worry about turning the pile. Just give it plenty of time.

General Ideas About Homesteading

For decades I have been fascinated by the idea of homesteading, having my own place where I can work and enjoy the fruits of my labor. We have succeeded for 12 years in our present home, but it's not my first attempt. I failed several times. For 10 years I have been sharing what I've learned with other homesteaders. As I listen to their stories, certain patterns become apparent. Here are some general principles that can make or break your homesteading experience.

First, small is beautiful! Start small and give yourself time to develop your homestead. Spend more time planning and less time correcting mistakes. Keep your debt small. It's easy to destroy your homesteading dream with debt. Keep your first garden small. You can add to the garden after you've learned about your soil and insects and weather patterns and weeds. Plan to have a smaller house and smaller outbuildings that will need less maintenance and upkeep. Careful planning can make smaller buildings very functional. You can always add space as time and finances allow.

Second, take time to enjoy life. I'm speaking to the guys here. It's easy to get so wrapped up in the work of

Making good compost doesn't require fancy (i.e., expensive) equipment.

building and operating your homestead that you neglect your wife and kids. (Or you work them so hard that they begin to hate life.) Everybody needs time to develop friendships. One of the reasons to homestead is to have more time for family and friends. Having the perfect homestead can wait. Having time with your family cannot wait. A note to the wise: If your wife and teenage kids hate the idea of homesteading, you'll probably never change their minds. Better to reach a compromise that allows you to have some of your dreams while allowing your family to follow theirs.

Third, be a positive part of your community. Avoid being the newbie who tells all the old-timers how things should be done. If you live in a rural area, you'll need good friends. Never say anything negative about the locals. You're probably talking to someone's cousin! Negative talk travels fast and will make positive relationships impossible.

Fourth, don't be a homesteading "purist." There are a million ways and a million places to homestead. Homesteading in the suburbs or even in the city is becoming very popular. Do what you can do to become more self-reliant and don't worry about what you can't do. With a little creativity, you'll find that your "can-do" list is very long.

Finally, don't be afraid to try. If you have a passion to be more self-reliant, to grow some of your own food, to build things the way you want to build, to stand on your own two feet—go for it! After years of homesteading, my wife and I still enjoy watching the sun set at the end of a busy day. I enjoy the challenge of each season and the knowledge that there is always something to do—and perhaps a better way to do it! Happy homesteading!

Jack and Marilou Dody offer a free training manual to homesteaders. Go to www.christianhomesteaders.org On the left side of the home page you'll see Articles. Go to Abundaculture *and download. It's a 178 page PDF document covering all the subjects he's talked about in this article.*

My experience during Japan's 2011 disaster

By James Dochtermann
Sendai City, Japan

Bicycles may be one of humankind's most useful and timeless inventions. Cruising along on my "Mamma Cherry," I felt liberated though anxious as I set forth to my apartment building a few miles from my in-laws' house. The sidewalk was buckled and wavy from the 9.0 magnitude earthquake that struck two days earlier, which left most of the city without basic needs like electricity and water. I was mobile again and on my way back to our apartment in the city center to try to contact family in the U.S. and gather food and supplies from our apartment. Mobile phone service had still been unavailable. I climbed the stairs to our 9th story apartment, which was completely disheveled. All household items had been thrown to the floor. The building still shook and swayed every few minutes as I scurried to gather pasta and canned goods from the mess, and use the Internet to finally contact my panicked family abroad. I remember thinking that another large earthquake could hit and bring the building down. I couldn't spare a second in what felt like a rickety, haunted castle spire. All our personal belongings, once so important, lay scattered on the floor. I walked over papers, books, pictures, a stereo system, and kitchenware. As everything crushed under my feet, I didn't give it a second thought. Those items were worthless for the time being. I just needed to get out of the evil castle apartment building and back to my family with supplies.

I'm from the northeastern U.S., particularly New York and Connecticut. When I saw the news footage of the Hurricane Sandy disaster in late October 2012, I was instantly reminded of those harrowing times in northeastern Japan. Complete wreckage, houses left in ruins, entire communities destroyed, and people sent back to a time when there was no electricity, running water, little to no heat and next meals uncertain.

The 9.0 earthquake hit on March 11, 2011 at 2:46 p.m. while my family was in our 9th story apartment in downtown Sendai. It started with a light, gradual shaking not unlike common, smaller earthquakes that we've grown pretty used to from living in Japan. We were alarmed though, due to having experienced a strong earthquake three days earlier. The gradual shaking grew to a crescendo we never felt before. Everything rattled out of control and began falling. Kitchen cabinets and refrigerator doors flew open and everything was thrown to the floor. My wife held our one-year-old daughter, Julia, safely on the sofa. Julia began to cry loudly as the three-minute earthquake carried on and more things crashed to the floor. I caught a glimpse out of our living room window. The neighboring 10-story building was swaying like a tree in the breeze. Trees on the city street were vibrating. When it

ended, a man on the street below let out a blood-curdling scream.

After the earthquake ended we didn't know what to do. Electricity, water, Internet, and phone lines were out. The apartment was an utter mess. My first instinct was to gather food and water and leave the city, to head to my in-laws' home a few miles south. We walked down nine floors to street level to see what was happening. It was a surprisingly calm scene without much visible damage in our vicinity. People were checking on each other and many had gathered in a local park. An elderly couple advised us to stay put, but we made the decision to pack food and walk south. Blizzard-like conditions hit us on that journey as well as a myriad of aftershocks. We steered clear of tall objects and ran across bridges. Water mains blew out, large windows shattered, and lampposts jiggled like

The Dochtermann's daughter got a bath in a bucket at Grandma's house after the earthquake. The family was thankful to have running water, as many residents had to use river water to flush toilets.

some sort of children's toys. It all felt surreal.

We arrived at my wife's parents' house before dark. Everyone was relieved to see us but we were all in a state of shock. Everyone slept in the little living room that night, with our clothes and winter coats on. About every 15-30 minutes strong aftershocks made the house feel like a boat on rough waters. We didn't know if we'd have to flee the house at any moment. Sleep, if and when it came, was filled with twisted nightmares. At about midnight, our battery-operated radio reported that a tsunami hit part of Sendai and several hundred were killed. We'd have no idea of the extent of the disasters until the next few days.

As the story unfolded, we realized how bad of a situation we were in. The earthquake was over and remarkably, its initial quake did not cause the type of wreckage found around other parts of the world in the past. But the resulting tsunami cleared away entire coastal towns in a matter of minutes. Over 10,000 people disappeared and many more were homeless in winter-like conditions with little or no food and water. One-hundred kilometers away from us, a triple meltdown at a nuclear power plant was unfolding its terror. Emergency vehicle sirens were constant and giant military helicopters were constantly moving overhead, back and forth from the coast.

My family was fortunate compared to others. My in-laws' house suffered little damage and had running water. Most people did not have running water and needed to haul buckets from local rivers to flush toilets. We had quite a bit of food

Above: **A fire breaks out at a nearby refinery after the quake.** *Below:* **Snow blankets residents as they evacuate. Hardhats protect them from falling debris.**

supplies including plenty of root vegetables from the previous year's garden harvest. Following a long-term power outage, we discovered that there's likely a need to feast the first few days, before food spoiled in the refrigerator. It also gets you to eat the strange meat items that were gifted to you and just haven't gotten around to eating. We ate a strong-tasting fish called *gengyo,* which is unique to Niigata prefecture.

We had no idea when we'd next be able to buy food. Most supermarkets and convenience stores closed; some opened, but erratically. A three-hour wait in line to buy only a limited number of select items was common. I can remember waiting about that long to have the opportunity to buy only five items from a selection of tissues, canned fish, dried ramen noodles and cleaning products. Our families pooled our resources. My brother-in-law made a midnight run to a neighboring prefecture and loaded his car with food. Neighbors showed up in the evening to share what they were given from a restaurant. I happened upon a small vegetable market that opened and bought potatoes and squashes.

The situation became bleaker as the days progressed. Gasoline and

Above: Gengyo **(a strong-smelling fish) finally got pulled from the refrigerator.**
Below: **A fissure on the riverbed.**

heating fuel was also becoming very scarce. How badly did the earthquake damage the highways and railways? When would supplies return to the area? The natural disasters were over but the human/nuclear disaster was just beginning. As electricity and basic communications were being restored, word was spreading about the growing threat of the nuclear reactors in Fukushima, just 100 km away from us. The White House warned U.S. citizens to evacuate the area within a 90 km radius of the reactors. Many country's embassies were sending busses to evacuate their citizens from the area, but there were no guaranteed seats. Panic set in. We were pinned between snowy mountains to the northwest, the Pacific Ocean to the east, and the nuclear catastrophe to the south. Fortunately, we found a bus service donated through the city of Niigata, an area that suffered a severe earthquake nearly seven years before. We temporarily left the prefecture for the sake of our daughter.

Epilogue

Do we really understand how dependent we are on distant sources of food and energy? In the aftermath of the earthquake, we were right in the middle of a situation where those lifelines were cut off. It's a very humbling experience. My father-in-law started a large garden the previous year after inspiration from what he observed of my gardening in Maine. The harvest from his garden supplemented our food during those trying times and gave us much

comfort in the idea that we were completely dependent on imported food. Since then, we've been inspired to grow more root vegetables that can last a long time after harvest. I realize that this isn't an option for everyone, but I think whatever one can do, no matter how small, a plot to cultivate or raised-bed garden can make a tremendous difference, especially if everyone does it. Community gardens are wonderful ventures that can make a difference if a food shortage were to occur. I'm not advocating stockpiling, just the knowledge of where your food comes from and how you might be able to supplement that if you find yourself in the middle of a disaster area. Knowing basic skills of gathering wild nuts and plants, as well as fishing and hunting, certainly came to my mind in the wake of the disasters.

Most families have a few bags of rice and potatoes that can last a while, but clean water was an immediate issue for most people. Most homes here are heated by electric or kerosene heaters with electric starters. No electricity meant frigid homes for many. My in-laws fortunately had an "old-fashioned" kerosene heater that can be lit with a match. We cooked on it and used it to heat water for washing. Battery-powered radios and light sources were a huge comfort.

The need for and value of basic homesteading skills and self-reliance became even clearer during the aftermath of Japan's Great Tohoku Earthquake. We should be prepared to go back in time at any moment. Where can you find water if your kitchen tap stops running? Do you know how to purify it? Do you have enough food to survive on and locate more if stores close? Can you keep yourself warm enough without a heater? Do you know what foods will last without refrigeration?

With ever-increasing disasters appearing in all corners of the world, we should keep our skills sharp and share this knowledge with our youth. My homes on both sides of the world have suffered tremendously in the span of two years. We can prepare ourselves.

The New West Collides with Open-Range Laws

By Shirley Kelly
Glade Park, Colorado

Today there are more private homes than ever located in our rural areas. Residents here share a love for the open spaces they live in, open spaces often made up of intermingled public lands and 100-year-old family farms or ranches. These areas provide wildlife habitat, access for recreation, scenic views and economic stability. But they also present a variety of challenges, often much different than those experienced by city-dwellers.

There are still 13 Western states that have some kind of open-range law, according to The Associated Press. This principle dates back to the 1800s, when cattle barons let their herds roam over public land and any private land that wasn't fenced off. Yet as the West fills in, and more people move to rural neighborhoods, many are bothered by livestock straying onto their property, and increased traffic means more accidents involving livestock that stray on roads. Every year, about a thousand motorists hit livestock on roads in Oregon, Idaho, Montana, Wyoming, and Utah, and there are several deaths—including the animals, whether domestic or wild.

For new residents and ranchers alike, one of these challenges is to understand and accommodate each other's needs with regard to livestock. Colorado has traditionally been an "Open Range" or "fence out" state. This means the landowners who prefer not to have livestock on their property are responsible for fencing them out. But with this responsibility also comes certain rights and many questions. These issues are addressed here in terms of questions most often asked by homeowners and ranchers. Westerners have always relied on each other, working together to make their way of life in these remote areas possible. In the spirit of tradition, the existing federal and state laws regarding fences and open range described here can form the foundation for neighbors to find solutions to living with each other and livestock.

My property isn't fenced and livestock are wandering onto it. What can I do?

Because Colorado is an Open Range state, livestock operators face no criminal penalties when their livestock (including horses) wander onto unfenced private property. Without a "lawful fence," you have no civil recourse either. Fencing your property, either as good neighbors or in cooperation with your neighbors, you and the livestock owner can avoid future problems.

Try to contact the livestock owner first. Most ranchers don't intend their livestock to stray and will respond quickly. Once notified of the problem, the rancher may be able to do something to prevent a recurrence. If you do not know the owner, contact the State Board Of Stock Inspection or the Brand Inspector. Based on a description of the animals, their brands and location, they can provide you with the appropriate information.

It is legal to take custody of livestock found trespassing on your property. Keep in mind that when you do so, you become legally responsible for their care and feeding. Within five days of taking the animal into custody, you are required to call the brand inspector and give a complete description. The Brand Inspector can give you more information on this.

I have a fence, but livestock are still wandering onto my property. What can I do?

Again, contacting the owner should be the first step. As noted, you may also take custody of the animal. Livestock invading fenced property is still not a criminal offense. However, if your property is protected by a "lawful fence," civil recourse is available to you. Colorado law defines a "lawful fence" as: "a well-constructed three barbed wire fence with substantial posts set approximately 20 feet apart and sufficient to turn ordinary horses and cattle with all gates equally as good as the fence or any other fence of like efficiency. If your fence meets this definition, you may recover damages for trespass and injury to grass, garden or vegetable products or other crops… from the owner of the livestock that breaks through the fence."

I have a fence, but it is old and needs repair. Who is responsible for this?

Responsibility for repairing and maintaining fences depends on the location and ownership of the fence. If the fence is built entirely on your property, it is your responsibility to maintain it. If the fence is the boundary between two private pieces of agricultural or grazing property, both landowners share the responsibility for the maintenance. Should the neighbor refuse to participate in its upkeep, you may, after the proper written notice, repair the fence and recover half the cost through civil action. If the fence is the boundary between public and private property, the private landowner is responsible for maintaining it to fence out livestock.

I really don't like fences because they are not natural and impede wildlife migration. Are there other options?

Fences can be constructed with wildlife needs in mind. Your local Division of Wildlife office can provide you with specifications for wildlife friendly fences.

Livestock are wandering off public land and onto county roads. Who should I call?

If livestock are an immediate danger to the public safety, call the sheriff. You may also notify the livestock owner who may not be aware they are escaping and would prefer to protect them. Again, the local Brand Inspector can usually give you the owners name with the description of the animal.

Why doesn't the Bureau of Land Management fence off public lands?

It is the policy of the BLM not to fence public lands from privately owned land. It fences public lands only when land use planning determines that it is in the public interest to do so. In most instances the BLM determines that it is not in the public interest to construct fences largely because it would be virtually impossible to do so from a practical and economic standpoint. As an example, due to the mixture of public and private land, the Glenwood Springs Resource Area would require about 1,700 miles of boundary fence. At an average of $2/foot, the fence would cost taxpayers $18 million.

Why isn't the Bureau of Land Management responsible for keeping livestock off of private lands or for making private landowners fence off their own property?

Livestock grazing on public lands are not government property. The permit holder leases the privilege to use the area, but remains responsible for the livestock he places there. State and local laws govern trespass onto private lands. The BLM has no authority to enforce state laws on private or state land. There is no federal statute that requires private landowners to fence their property.

Unfortunately, at the present time the laws are causing extensive problems for the wild mustang herds in the United States. When the 1971 Wild Free-Roaming Horse and Burro Act was passed, it was to protect, manage and control wild horses and burros on public lands (BLM). But with the onset the past few years of droughts and wildfires, the mustangs have moved onto private lands and rural areas, which have become a big problem, as is seen in Carson City, Nevada where the mustangs have wandered off Herd Management areas such as the Pine Nut Herd Management Area in Nevada and moved into rural areas around Carson City. They are then labeled as "strays" rather than BLM Mustangs, and are sold at auction. There are around 50,000 Mustangs being held in holding pens around the country and the outcome for them is pretty dim. Also, in Yellowstone National Park, when the bison wander out of the park onto private land, the ranchers kill them for fear that they might infect their cattle with the disease brucellosis. And yet, there is not a single confirmed case of brucellosis transmission from wild buffalo to cattle.

So what are the solutions going to be for ranchers, property owners and livestock? For your thoughts on this, e-mail me at Gladewoman1@juno.com.

I would like to thank the Bureau of Land Management and the State Board of Stock Inspection for all the information given for this article.

(Editor's note: While livestock owners are neither civilly or criminally liable for the damage their free-roaming animals cause to crops and fields, they can be held responsible for damage caused to other types of property as well as personal injuries caused by the animals. Feeding, watering, restraining, or otherwise controlling an animal while locating its owner is not sufficient under Colorado law to establish custody. If you have questions about your property rights, contact your local land management office or an experienced real property attorney.)

The man who is a pessimist before 48 knows too much; if he is an optimist after it, he knows too little. — Mark Twain

Remote Simplifies Electric Fence Maintenance

Keeping bucks in their own pasture is much easier now that fence maintenance has been simplified by a remote-control energizer.

By Gail Damerow

One morning when my husband and I went out to feed and milk our Nubian dairy goats, we were horrified to discover the bucks paying an unscheduled visit to the does. By the time chores were done and all the goats were back in their right places, and we got around to examining our electric fence to see what had gone wrong, the temperature was already in the mid 90s and the humidity was brutal. Even though we have cut-out switches to disconnect sections of the fence, trotting up and down the fenceline to flip the switches left us exhausted.

What we really need, I thought, *is a remote control for the fence energizer, like one that turns the tv on and off.*

Well, guess what! Someone was way ahead of me with that thought. Shortly after this incident occurred, we received a notice from Kencove Farm Fence Supplies (www.kencove.com) about their new remote fence controller. Well, let me tell you, we beat a path to their door to get one.

Or rather, two. We have two goat barns, each with its own system of fencing and cross fencing on separate energizers. Not knowing at the time how the remote works, we wondered if one remote might get confused (and confuse us) by turning both energizers on or off at the same time. But it turns out the remote manages only whatever energizer is attached to the fence you need to work on. Nifty, huh?

Selecting the Right Energizer

Energizer, fence charger, fencer, fence controller, power unit—all these terms refer to that little box responsible for the big jolt you get if you touch an electric fence. It works by converting household electricity or battery generated power into higher voltage, then sending the current through fence wires in steady, short bursts. You can hear the energizer's slow click-click-click as it sends out the pulses.

Switching our system to remote control meant we needed compatible remote-ready energizers, which we deemed worth the expense if it would save us hours of frustration and exhaustion whenever the fence needs work. The first step was to make sure we got the right-size energizers for the job. An energizer that's of the correct size for a particular fence creates an effective sphere of intimidation around each pulsed wire, discourages weed growth, and overcomes minor flaws in the fence's construction. Trying to save money by getting an energizer that's too small can render an entire fence useless.

To determine the right energizer size we had to know how much fence wire needed to be energized. For that we paced off each fence line and multiplied the fence length by the number of electrically charged (hot) wires to determine how many miles of fence wire are involved.

"Miles of fence" is one way to measure an energizer's output. The term doesn't refer to the length of the fence itself but to the total length of all the individual hot wires. As an industry term, "miles of fence" is measured in a single continuous strand, three feet off the ground and free of weeds. In other words, it's determined under ideal laboratory conditions. In actual field conditions, the distance a pulse can travel along a wire is considerably less due to climate, weed load, fence construction, wire gauge, and the electromagnetic resistance arising when two or more wires are strung parallel to each other. Still, it's a starting place for determining the appropriate size for an energizer.

Energizer output is also rated in volts and joules. Volts measure electrical pressure, or the amount of force behind each pulse. The higher the voltage, the greater the chance that a pulse will penetrate an animal's coat. Joules furnish the energy that pushes the voltage along the wires; most energizers are rated according to their joule output.

Going back to "miles of fence," according to guidelines on the Kencove

website, an effective energizer needs at least one joule for each six miles of energized wire. Their remote-ready energizers are rated in 3, 6, 9, 13, and 24 joules. According to the guideline, then, the 9-joule energizer can handle up to 54 miles of hot wire—the right size for our goat facilities.

The Grounding System

Along with installing new energizers, we decided to re-evaluate our grounding system. Under normal circumstances, a fence's hot wires are insulated from the earth and the circuit is open. To generate a shock, current must flow from the energizer through the hot wires and back to the energizer through the soil. A person or animal standing on the ground and coming into contact with a hot wire closes the circuit and feels the consequences.

To get a complete circuit, the energizer must have good contact with moist soil. Contact is provided by means of a galvanized steel 1/2-inch or 5/8-inch diameter ground rod driven into the soil and connected by galvanized fence wire to the energizer's ground terminal.

Since moist soil is more conductive than dry soil, a ground rod must be driven deep enough to make good contact with always-damp earth. In our dry area of Tennessee, that means at least six feet deep. Further, to ensure good contact with moist soil, at least three ground rods are needed per energizer.

The first rod is driven into the soil as close as possible to the energizer, but outside the barn to minimize the chance of starting a fire or electrocuting livestock in the event lightning should strike. The rod is pounded into the soil with a post driver until four to six inches of rod remain above ground. Because our area is dry for at least half the year, we help improve soil moisture by forming a depression around each rod to better hold runoff, as well as water dumped there while cleaning livestock water buckets.

The two additional rods are spaced 10 feet apart, and the three rods are connected in series with ground wire and ground rod clamps. Since the rods stick

Cut-out switches placed strategically along an electric fence let you turn off the juice without having to walk all the way to the energizer. *Photos by Gail Damerow*

out of the soil and have wires running between them, we put them on the side opposite livestock to prevent injury, and keep them close to the fence line to prevent mower damage.

Ground Return versus Wire Return

When a fence's circuit is completed by current flowing through the feet of an animal standing on the ground, the system is called a *ground-return* or *earth-return* system. This type of system works fine for a relatively short fence in an area of even rainfall, where the soil is conductive and predators such as the wily coyote are not a problem.

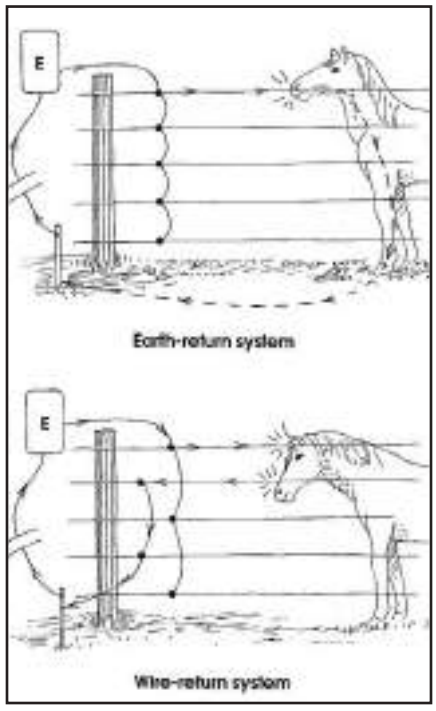
Under certain circumstances, though, the earth-return system doesn't work well. Extremely dry soil like ours, for example, is not very conductive. In winter, the earth may be insulated with a layer of packed snow. Sandy, rocky, or frozen soils are self-insulating.

The problem is compounded where hoofed animals are involved, especially small ones. Hooves have more insulation value than soft pads. Animals with tiny hooves, like lambs and kids, are not only insulated from the ground by their hooves, but don't have much soil contact to start with. In addition, young stock and some predators get through a fence by leaping between the wires. They don't get a shock because their feet are off the ground.

In such situations, an earth-return system isn't nearly as effective as a *wire-return* system. A wire-return system is less dependent on soil conditions. It deters animals having built-in insulation and those performing tricky maneuvers like jumping through a fence instead of crawling under it or trying to climb over it. Unlike the earth-return system, it works well even for long fences.

The usual wire-return system involves connecting every other wire to the soil by means of ground rods. An animal that touches both a hot wire and a grounded wire completes the circuit and feels a jolt. Even if the animal hits the fence with all fours off the ground, it just has to touch two wires to close the circuit.

Exactly which wires should be grounded is debated among fence owners. Some ground the bottom wire to reduce energy loss due to encroaching weeds. Others ground the second wire up as a better way to deter young stock and small dogs. With the bottom wire hot, an animal pushing under the fence has two ways to complete the circuit—by touching the earth and the bottom



In an earth-return system, the circuit closes when current flows back to the energizer through the soil. In a wire-return system, the circuit closes when current flows back to the energizer through a ground wire. Artwork from: ***Fences for Pasture and Garden***

wire or by touching the two lowest wires.

Our six-wire goat fence, working from the bottom up, is hot-hot-ground-hot-ground-hot. In deciding exactly which wires to energize and which to ground, the following guidelines must be kept in mind:

• Energize the wire nearest the nose height of the animals to be controlled.

• Keep the hot and ground systems separate from each other.

• String hot wires and grounded wires at least **four** inches apart so they won't spark or inadvertently touch.

For a wire-return fence that's more than 1,000 feet long, extra grounding rods are needed, each connected to all the fence's ground wires. For a long fence where the soil is reasonably moist, the rods may be spaced every 3,000 to 5,000 feet. For a short fence and/or where soil conditions are dry, rods should be spaced every 1,000 to 1,500 feet. Evenly spacing the rods isn't as important as putting them in low spots where the soil stays moist

(where the grass is greenest).

Shorts and Leaks

Just as important as establishing an adequate grounding system is making sure the hot wires have no contact with the ground. A direct connection would, of course, result in a dead short. Lesser contacts, called shorts or leaks, drain energy from the fence, making a plug-in system less effective and drawing down a battery-operated system more rapidly.

Energy leaks have any number of causes: grass or weeds growing against hot wires or windblown twigs or branches lying across them; cracked insulators; bugs, leaves, or dust lodged in insulators; salty sea air; a broken wire. Most of these situations cause arcing—pulses of current that, instead of flowing smoothly from one place to another—jump across a narrow gap by means of a spark.

When arcing occurs, you can usually hear the snap of the jumping spark, which can help you find and correct the source of leakage. Whenever you check your electric fence, listen for problems as well as look for them. If the source of snapping sounds eludes you, go back at night and you'll actually see sparks fly.

As an additional indicator that something is amiss, we use strategically placed battery-operated fence alert monitors that flash when they detect low or intermittent voltage on the fence. It's hard to ignore a bright red flashing light that's so clearly visible at night from as much as 100 yards away.

Shorts are also detected by the new energizer's unique built-in diagnostic indicator. A ground condition indicator light warns when the ground terminals exceed 1,000 volts—time to water the ground rods. A voltage indicator light warns when the voltage drops below 3,500 volts—time to look for (and fix!) whatever is causing the short.

Finding Faults

When a fence demands attention,

Lightning Diversion

We live in an area that gets frequent and powerful lightning storms, which over the years have cost us the loss of way too many expensive energizers to think about. The standard recommendation is to disconnect the energizer when a storm is approaching. But our storms pop up unexpectedly in the middle of the night, or sometimes come in rolling waves that last for days on end. Running out on a dark and stormy night to turn off the fence is not our idea of fun.

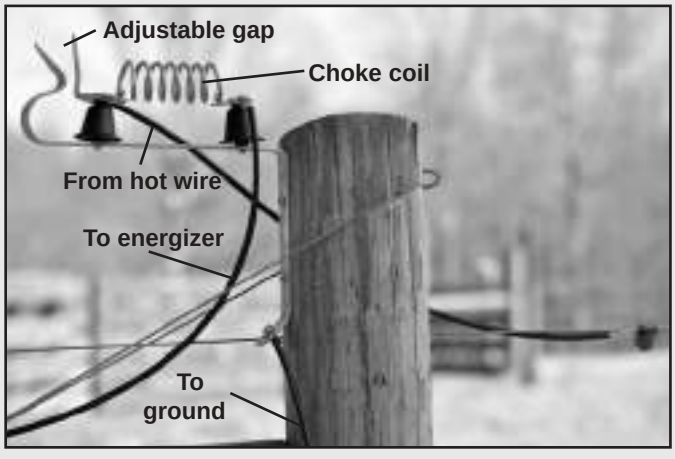
In the past we've used ceramic lightning diverters, which are high-maintenance items: Once one has diverted a strike, it must be replaced, meaning after every storm someone has to walk around the fence looking for diverters needing replacement. (They click when the fence is hot).

This ceramic lightning diverter needs to be replaced if it clicks while the fence is hot, indicating it has been damaged by a lightning strike.

A lightning diverter protects an energizer by giving the current generated by lightning a fast track to the ground. For a diverter to do its job, lightning must have a good incentive to jump the gap between the diverter's hot side and its ground side. Such incentive is provided when a diverter's ground system is better than the energizer's ground system. The diverter should have at least one more grounding rod than the energizer has, and the two sets of rods should be at least 40 feet apart.

Lightning generates such powerful force that some of its energy could possibly continue down a line wire after only a portion is diverted to ground. As a failsafe against a surge that may exceed the capacity of one diverter, some people use two diverters side by side. Another possibility is to install a lightning brake, also called a choke or resistor coil. Residual lightning energy that jumps the diverter's gap will be "choked" by the coil.

Along with installing remote-control electric fence energizers, we wanted to beef up lightning protection, so we opted for the simplicity of Kencove's reusable combination lightning diverter and choke coil. Whether you need a brake, or any other precaution against lightning, depends on the frequency and severity of lightning storms in your area.



A reusable combination lightning diverter and choke coil helps protect an electric fence energizer from being damaged by lightning.

A ground rod is pounded into the soil with a fence post driver until only about four to six inches remains above ground.

a hand-held fence tester is indispensable for finding the problem. The fence testers we've used in the past had two terminals, one on the unit itself and another connected to the unit by a length of wire. The first terminal is attached to a hot wire, the other to some part of the ground system. With both terminals in place, the unit indicates how much voltage is getting through.

I can't recall how many fence testers we've gone through. Some had delicate terminals that broke easily and needed constant repair. Others got tossed in the trash because they had such a poor display you couldn't read it on a sunny day. Using any of them involved walking down the fenceline looking for problems, then walking back to the energizer or nearest cut-out to turn off the juice, walking back to fix the problem, walking back to turn on the fence, walking back to check the repair, and on and on.

Sometimes, especially after a big storm blew debris all over our fences, we'd use two-way radios with one of us waiting at the cut-out while the other walked the fence. There was always the chance of a misunderstanding as to whether the fence was hot or not, until the fence walker found out the hard way. That's really not good for a marriage.

Kencove's combination remote control and fence tester that comes with the remote-ready energizer is sturdier and easier to read than any

Battery-operated fence alert monitors flash a bright red light as a warning when the voltage is low or intermittent.

This energizer has the unique feature of a built-in diagnostic indicator; if either the "Fence" voltage light or the "Ground" light flashes red, the fence needs attention.

I've seen so far. The top of the remote has a metal hook that, when pressed against a hot wire, reads information about the voltage, amount of current flow, and direction of current flow on a nice big display. My minor complaint is that the fence hook is a tad short, causing it to slide off the wire unless you're careful to hold it steady. And I believe the remote should be kept in a pouch to prevent the display from getting scratched when the unit is tossed in a glove compartment or tool box. Luckily we happen to have an unused amp meter pouch with a belt loop that perfectly fits the remote.

Now we come to the truly excit-

ing part of our new system: using the remote control to turn off the juice without walking anywhere or relying on a partner. And it works on any kind of electric fence—metal, poly wire, ribbon, braid, or net. When you find a problem and want to turn off the current to fix it, you hook the controller over a hot wire and press the "off" button; you know the fence is off because the display tells you so. After making a repair, you hook the controller over any hot wire and press the "on" button; you know the fence is on because the display reads the voltage and current. It's that simple!

Since installing the new system, maintaining the effectiveness of our electric fences has become much easier. And we haven't had a single unscheduled goat visit, even when a doe in heat persisted in teasing the bucks directly on the other side of the fence.

But I have to make a tiny confession, if you promise not to laugh. After decades of walking back and forth troubleshooting fences, I'm almost embarrassed to mention how many times we walked to the energizer to turn it off while carrying the remote control. But it has finally sunk in: No longer do we have to walk our legs off while troubleshooting electric fences!

The easy-to-read display on this fence tester says the hot wire voltage is 7,200 volts, plenty enough to deter most animals. When the display says "OFF," you can safely make your fence repair without having to walk back to the energizer or nearest cut-out switch.

Gail Damerow is the author of Fences for Pasture & Garden, *available from the Countryside Bookstore (see page 41).*

Solar Fence Me In

By Keith Loria

In today's 21st Century farming world, if you're not using solar energy with your fencing products, you're going to get left behind. Harnessing free energy from the sun, a solar powered electric fence requires no grid connection and offers an economical choice for fencing small areas. It's also an ideal solution for remote locations.

"It can be used in a variety of situations from containing livestock to keeping wildlife out of garden areas and preventing pets from wandering," says Lacy Weimer, a rep for Kencove Farm Fence Supplies, Blairsville, Pennsylvaina. "Sometimes you have a remote location or pasture that isn't accessible to main power. Or maybe you have an electric net that you move on a daily basis and don't want to have a unit with underground cable or wire. Solar is portable and easy to move around and is ideal for these situations."

Steve Buffalo, vice president of account development for Woodstream Corporation, Lititz, Pennsylvania, believes solar chargers are a great way for a farmer to save money on their electric bills and at the same time, keep livestock in control.

"It will train domesticated livestock to stay inside the fence. Half of your circuit is the earth and half is hot wire, and when the animal strays on the ground and touches the hot wire, it closes the circuit and gives him a correction," Buffalo says. "It's a great training mechanism and there's no real drain on the battery because it only activates when it is touched."

Solar charging options can be used on as little as two-mile fencing to as many as 40, and the solar will keep the fence charged for 14 days without light—although a farmer without light for 14 days will have more to worry about than fencing!

When you talk about solar fencing, the biggest buzz for that last couple of years has been that the price of the solar panels have dropped dramatically. However, just like people waiting for the price of computers to get cheaper, there is a point of diminishing returns.

The solar incentives given by your local electric utility company is set up so that it rewards what are called "early adopters," which are the people that are willing to take a step and purchase solar.

"What the general public isn't always aware of is that if you are bargain shopping and waiting for the prices to drop even more, the solar incentives are set up so that they are always ahead of the panel price curve, so that the sooner people adopt solar on their farms, the more they save," says Seth Pepper, director of communications of Agriculture Solar, Tucson, Arizona. "And every day that you wait, you are wasting money, if you are ever thinking of putting in solar."

Agriculture Solar has been working with farmers and ranchers to take not only their electric fencing, but their entire operation into the next generation of "independent energy."

"We provide a lot of packaging, where we offer not only solar pv to remove your electricity usage, but we also include solar thermal for eliminating gas consumption for water heating, LED lighting for barns and general lighting efficiency upgrades, and energy storage so that people can run their entire farm/ranch off-grid," Pepper says. "When we work with a business, we start with their bills and work backwards. Our goal is to eliminate your energy consumption on the utility end so that you become self-sufficient and no longer at the mercy of anyone else."

Solar 101

The key consideration in choosing a battery for a solar fence is the battery type and capacity (amp hours), as there must be sufficient capacity to reliably power the energizer during winter or reduced light conditions.

According to Weimer, the best battery type is a deep cycle battery (also called leisure or marine) battery, which provides better recharge than a car battery.

"When your battery drops below 11.3 on a 12 volt system, it automatically shuts the system off so you don't ruin the life of the battery," she says. "When it dissipated, you take away longevity and you want more life expectancy."

The solar panel should be set to face the Equator so in the U.S., that means turning it due south. A minimum of 15 degrees tilt angle is recommended to minimize the build-up of dust and dirt and to allow rain to wash the surface clean.

Pros and Cons

In an everyday urban business, people are usually interested in knowing about the return on investment for the next few years, however in agriculture and farming, customers want to go deeper—they want to know what the next few decades will be like.

"Farmers and ranchers want to increase the likelihood that their farm is going to be passed from one genera-

tion to the next," Pepper says. "And by taking over control of your volatile expenses such as energy costs, it creates stability in your operation, and lowers the risks and creates a greater opportunity for your next generations to come."

Solar fencing will provide independent energy solutions so that once they are in place and paid for, this energy is performance guaranteed for 25 years with a life expectancy for over 50 years.

This is a new way of thinking for a lot of farmers. For instance, a common power generator is a good comparable farm equipment purchase, but when you talk about a generator, you have to make cost allowances for maintenance of oil changes and overhaul and workers and downtime, with a life expectancy as low as 10 years.

"With solar, you have a consistent self-sufficient performance that is silent, has no moving parts to break down, and other than running a hose over the panels once a year or when it's convenient for you, there is no maintenance," Pepper says. "Power that pays for itself, and then just quietly sits there providing consistent free power."

Farmers of the Future

A number of farmers are old school and take their time to do due-diligence on anything new that comes along. This traditional approach hasn't kept them from implementing solar fencing on their lands.

"Once we get past the first conversation of being a steward of the land and the environment, and we jump right into the economics, most farmers are right onboard and they get it," Pepper says. "Farmers want something that works and they can depend on. Solar is an old technology, even though it may be new to farmers/ranchers."

Solar panels were first sold commercially by Western Electric in 1955 and solar fencing really took off in the 1970s and '80s. Still, it's still coming into its own on many farms throughout the country.

"Just like the entire renewable energy industry, it is still in it's infancy, we can see more farmers/ranchers wanting to completely power their entire operation with solar and our energy storage systems," Pepper says. "Once you start to feel the independence and get a sense of how you can get out from the control of your utility companies, you will want to do the entire operation and literally take back the power."

With that in mind, companies aim to take the most reliable step into the next phase of farming power as possible, selling the independent power equipment and not having to return for any unnecessary follow-up.

"People use solar when they have no other options. If you have animals out on the back 40, you're not going to have power out there," Buffalo says. "You don't need to convince the American farmer to use it. They know it's self-contained and great for taking down and moving and it's a great way to conserve energy."

Set-Up and Instillation

One of the first steps when a farmer wants to switch over to solar fencing is to go over their electric bills for the last year with the fence company and provide a map of all electrical meters. They should discuss tax rates and business details and work with the electric utility company to learn of any incentive money available.

"We try to give the customer a few options on the purchase with financial models that make cost comparisons of what the next 25 years will be if they do nothing and then we show them what our system will save them with a payback period for outright purchase, or if they qualify for our Agriculture Solar financing then we also provide those optional financing models and paperwork," Pepper says. "Once we have a commitment from the farmer/rancher with a letter of intent, we can start to engineer out the land for construction, procurement, and any other mechanical consideration. Installation is an involved process, and throughout this process we will share with our customers what to expect."

Small Wastewater Facility or Septic System?

Whatever you call it, still beats an outhouse!

By Skip Eshelman

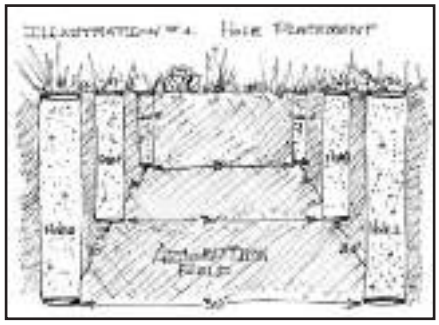
Note: This is a continuation of an article called "Future Well Being," that covered what to do after the water well had been drilled and cased on the high plain east of Cheyenne, Wyoming in the June/July, 2011 issue of Countryside and Small Stock Journal. The modern day Thoreaus continue to be self-reliant; investigating, planning, and installing a septic system at Arrowmaker Ranch.

We thought about doing a grey water system incorporating a couple composting toilets, but the cost nearly doubled, as Laramie County still insisted on a septic tank. Our hope was that the grey water would augment the 13 inches of average moisture we get here on the high plains, to keep the 54 ash trees planted three springs ago, not to mention the lilacs and baby pines viable. This essay is a report of our experience that led to the completion of a small wastewater facility. With Agenda 21 considerations, and local UDC codes now coming into play, you could expect a much different result, if, in fact, you're allowed to proceed at all.

In order to obtain a septic permit, a building permit requirement had to be satisfied. Even though the building was started prior to the building code enactment, I could not get the effort grandfathered in. A building permit did appear after paying a nominal amount.

Percolation Test:

The diameter of the holes could be four, six, or 12 inches. A do-it-yourselfer might go with a four- inch hole, as they could be completed by hand with clamshell diggers. We had access to a three point hitch/power take-off posthole auger with a 12-inch auger attachment, and tractor to do the job. Before I forget, call diggers hotline to make sure no utilities have been buried in the area. The holes for the percolation test were spaced accordingly, and located within the absorption field. *(See Ill. #1)*



Six wooden yardsticks were nailed to chunks of 2 x 4 and placed down in the holes for ease of reading measurements. The county required the holes to be filled with water 12–24 hours prior to the test. This would cause the soil particles around the hole to swell, simulating a wetter condition.

The area chosen for the leach field in this scenario is mostly sand and gravel, with a little over a foot of topsoil. Needless to say, the water didn't stick around long. There are USDA reports out regarding soil types, but the county makes you go through the exercise anyway. I filled the holes with water, and waited the 30 minutes, then started taking readings. As I recorded a reading, I topped the holes off with water, and moved to the next hole. By the time I reached hole #6, I'd go back to hole #1, and repeat the process, as it took about 10 minutes per cycle. Of course, the county had to come out to the ranch and see the holes, before filling them; apparently to make sure no endangered species or other undesired behaviors were not carried out. Besides the government, no other persons are trusted in the 21st century I guess. I figure we saved nearly $500 performing the task ourselves.

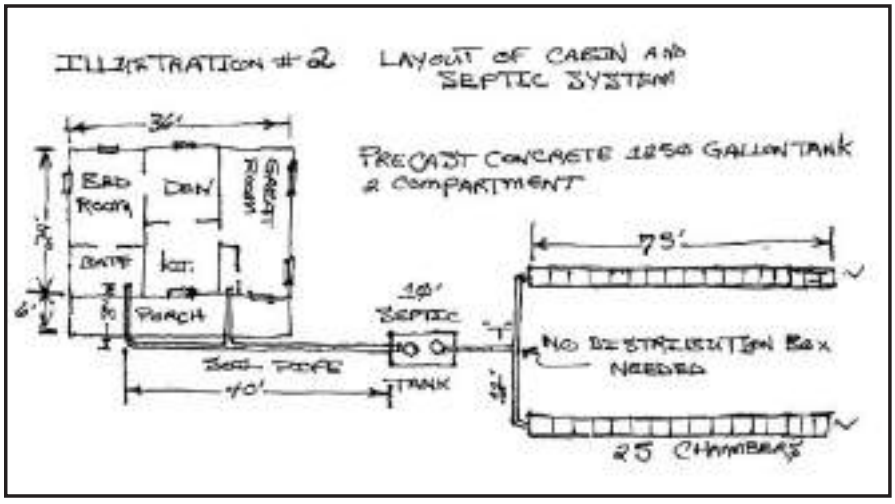
The county took those measurements I provided, and used an algorithm to produce the estimated length of the leach field. Consideration as to the size of the structure, number of bathrooms, etc., are also factored into the determination, I'm sure.

The computer recommended a 1,000-gallon septic tank (plastic not allowed), and 150 running feet of drain line. Apparently, you can use any configuration as long as it adds up to the desired distance from the tank. We determined that two legs 75 feet in length would be incorporated into the scheme.

There are minimums in the permit instructions. The well to septic tank couldn't be closer than 50 feet, and the well to final disposal needed a distance of 100 feet or greater. The site is 40 acres total, so none of the parameters developed any concerns. I am a little perplexed why water gradient is not considered. Seems like ground water movement would dictate the placement of the absorption field, as much as the other factors.

The Excavator

I mentioned the 54 ash trees we planted a couple years ago. They had four- to six-inch diameter trunks, and stood 15- to 20-feet high. The balls were enormous, and it was all the little John Deere 30 horsepower tractor could do to lift them off of the flatbed trailer, and maneuver the trees into position. Once placed in their holes, the tractor could not lift



Above: **The two 75' drainage ditches, and continuing on out to the prairie (below).**

them back up again. We had used a small Caterpillar Excavator to dig the waterline trenches and holes for the trees with a 16-inch bucket, and realized the smaller excavator would not be adequate for the task at hand.

The septic tank and leach field called for something much bigger. The trenches required a three-foot width to accommodate the infiltrators, or chambers, depending on whom you talked to. Plus, the tank needed to be placed in a fairly deep hole over 10-feet long and probably eight-feet deep. The logic went, that a big excavator would be preferred to expedite the job. The operator didn't have to fool around with adjusting the machine's footing that a backhoe demands, after a stretch of ditch had been completed, and it is actually somewhat easier to operate. Turns out, the bigger Cat is much easier to maneuver than the smaller versions.

A Cat 315 Excavator with the 110 horsepower diesel engine, and 36-inch bucket (one-yard capacity)

Trench coming from the cabin

worked just fine. Barely burned any fuel it seemed. At $575/day, the price could be considered steep, but the digging concluded in less than seven hours of use, whereas the smaller excavator would have taken so much longer, and besides, it wouldn't have been able to handle the tank hole, as deep as we needed. *(See Ill. #2)*

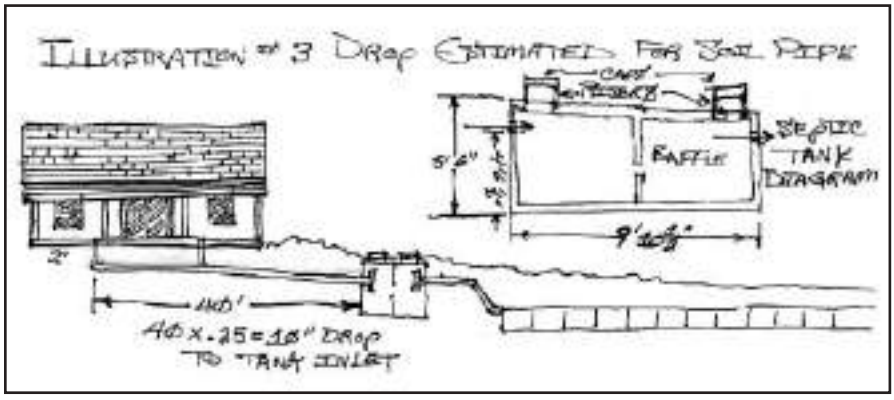
Running Soil Pipe from the Structure to the Septic Tank

Figuring out the drop from the structure exit to the tank is pretty straightforward. Remember, for every foot in length of soil pipe, there should be a quarter-inch in drop. The soil pipe leaves the structure at two feet in depth. No gain yet, but the initial depth is set. It travels seven feet to the south (pick up 1-3/4-inch), then heads east for 40 feet (a 10-inch gain). So, at the tank, it drops a total of 35-1/2 inches below the surface. This figure is helpful in knowing how far down to dig the trench for the soil line. I watched a contractor put in soil line at another location on the ranch 20 years earlier. He told me the rule of thumb was a half bubble off center at the end of each stick of soil pipe, using a four-foot level.

Length x .25 = Drop at the end, be it a tank, turn, "T", etc. If the soil pipe continues, the drop must be factored in. *(See Ill. #3)*

The Septic Tank

The manufacturer of the septic tank will give you some important figures to get the hole ready for delivery of the tank. This tank is 9' 10-1/2" in length, I believe six feet wide, and 5' 6" tall. The important number is the



distance from the bottom of the input pipe to the bottom of the tank. That determines how deep you have to dig. In this case it was 4' 6" inches.

The bottom of the hole must be perfectly level, and tamped down to prevent shifting or any kind of tilt. Once the tank is lowered into the hole, adjustments are impossible. The soil pipe can now be run through the tank entrance for in-flow, and the final "T" glued on inside. This can be done from the cleanout hole at the top of the tank. The manufacturer provided a clamp to seal the rubber collar around the pipe on the outside.

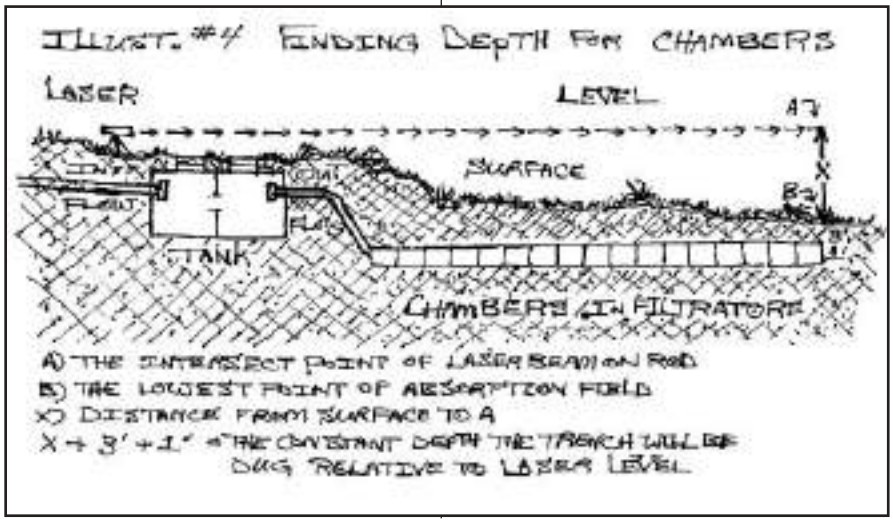
I ordered both 12-inch risers and 24-inch risers. As it turned out, the tank lay pretty close to the surface, and the 12-inch risers were kept for the job. We chalked around the inside where the riser rested on the tank top to keep out runoff. Since the caps had wire handles, a steel bar could be used to pick up the four-inch thick cap to complete the tank installation for the entrance side.

Trenching the Absorption Field for the Infiltrators/Chambers

The infiltrator trenching was done the same time the soil line from the structure to the tank, and the tank hole were dug. The grade was fairly slight, but required consideration. The county wanted the chambers at least three feet below the surface. The trenches needed to be straight and the floors level. This dictated that the lowest point along the lines laid out for the trenches, needed to be found. An industrial laser level had been rented, along with a calibrated telescopic truth stick, for the work. The contraption sat on a tripod positioned next to the septic tank hole.

With the laser on and spinning, the truth stick was packed along the intended trenches until everyone was satisfied that the lowest spot had been located by the highest number reached on the truth stick. The trenches would run along the hillside, so the northern trench would be appreciably deeper than its counterpart 24 feet further down the incline. The point where the laser came in higher is value "X" and noted. The three feet the county wanted is added to "X," and an additional foot added for the height of the chambers, to arrive at the floor of the trenches. *(See Ill. #4.)*

The value "X" came in at around six feet, plus the three feet, plus the one-foot, for a total of 10 feet. The laser never moves. One of us would follow the excavator to monitor the progress. The trench is dug out to the 10-foot mark on the truth stick. If the laser lights up more than the 10-foot mark, the trench is too deep, which is kind of okay. Pulling dirt in to level the floor would be easier than trying to dig it out. If the laser lit up the stick less than the 10-foot mark, the operator would be flagged, and another pass made at cleaning the



trench out. In this way, the trench was pretty close to level length and width wise.

The next day, the bottom of the trenches were leveled, and the chambers snapped together. There is no gluing involved. As a side note, the company manufacturing the chambers claims the chambers can withstand loads of 16,000 pounds/axle with 12 inches of cover. That alleviates concerns about driving over the absorption field and crushing or caving in a chamber. There are end caps that terminate the chamber run, as well as act as entrances, when the desired four-inch plug is removed.

The exit hole (out-flow) received attention. A 10-foot stick of soil pipe was inserted back into the tank where another "T" has attached inside, same as the entrance exercise. A 45-degree PVC angle would direct a short piece of soil pipe to the lateral line that feed both chamber trenches. I found out a "T" would be accepted in place of a cement distribution box, which did the same thing, only cost a bunch more.

Inspection Day

The inspection was scheduled for the next day. We wanted to make any corrections deemed necessary while my friend, Sherwood, had his Skid Steer on site. I arrived early to pull tools together and generally redd up the area. The whole system looked gorgeous to me, but considering this had been my first time installing a septic system, I admit to being more than a little nervous. A county SUV showed up at the appointed hour, and greetings were exchanged.

The inspector didn't say anything else. Just walked around taking measurements. I recall the day being pleasant as most are in this part of the country. The hawks were patrolling for the 13 stripped ground squirrels that are so prevalent in these parts. The bull snakes grow large eating the buggers, but don't harvest near enough of them. By the time Sherwood and Ethan showed up, the inspector nearly finished his work and came over to review the results I assumed. All he said was that the certification would arrive by mail, and we could cover things up.

It took most of the day to bury the chambers, tank, and soil pipe. Sherwood used his Skid Steer to backfill. Looked more like he was wrangling the machine, with his expert maneuvering of that stout little workhorse.

The chambers may not replace the perforated PVC and gravel method for hillsides, as they require a level bed to work properly, but they do save on having extra material hauled in, and additional inspections are avoided. I figure we saved three maybe $4,000 doing this project ourselves. I even tried to get bids that included our help, but no one seemed interested in shooting me a bid with that in mind. The bids were all over the map, similar to the drywall quotes I received.

See Materials List, above.

Epilog

The cap to the septic tank riser lay 25, maybe 30 yards away. It's only been a week since the system was installed, and I couldn't believe vandals had struck. We've never had any trouble to speak of at the ranch before.

Size 12 or 13 shoe prints among all the horse tracks is all I could discern. The Tennessee Walkers had stood around the tank to investigate the new addition. They had the mound of topsoil, left over from the backfilling of the trenches, spread and flattened into the pasture.

My certified man-tracking and training experience just couldn't make sense of the impressions in the dirt before me. "Why would they drive up to the septic tank, and not throw the lid in the bed of the truck? Maybe they wanted a crippled-up old guy to haul the 100-plus pound lid back to the tank!" I thought. "Why go to all the effort and trouble of carrying it off, when they could have just rolled it down the slight hill?"

The only other thing out of place, was a horseshoe a few feet away from the wayward lid. My horses haven't been shawed in a couple years. Every 10 weeks the farrier comes by and trims their hooves. One small cutting horse a friend keeps on the ranch, does have shoes, but I couldn't see any missing, and the owner hadn't mentioned it.

Turns out Rocket, the cutting horse, was the culprit. I just can't imagine a horse hooking a shoe on the wire handle of that massive lid, and packing it off as far as he did. The farrier confirmed the little horse had a couple unexplained scrapes that would match a spooked horse running off with the lid swinging from his elevated right rear leg. Mystery solved, except there is no good reason why a horse does what he does, except because he's a horse.

Materials List:

Septic Tank 1250 gallon capacity	**$796.35**
Risers 12 inch 24.28 x2	**48.56**
Riser Caps w/handles 18.55 x2	**37.10**
Chambers/Infiltrators 4'x3'x12" 23.42 x38	**889.96**
Delivery of Septic System	**275.00**
CAT 315 Excavator 36"/1 yard bucket	**575.00**
Delivery of CAT 315	**100.00**
Total Cost:	**$2,721.97**

The woodlot:

So Who Needs a Forester?

Panoramic view of the recently cut forest across the road.

By Ben Hoffman

The photos above show the view out my front picture window of my neighbor's 30 acres of forest that has been "selectively" cut. To me, having studied, practiced, taught, read about and written about forestry for 64 years, the words "selective cutting" mean "select the best and leave the rest." True, there is a silvicultural system for regenerating some tree species, called the selection system, but it is suitable for a relatively few species. In this instance, it will be 40 years before the forest out front will produce another crop. Its present condition offers plenty of diversity for wildlife, for a while, but it is not conducive to recreational use. Fortunately, being relatively flat land, the soil erosion potential is low.

Most of my professional concern has been about logging contractors and private forest land owners. Loggers have made significant progress because the ratio of foresters to loggers is pretty high, maybe 1 to 12. But the ratio of foresters to forest owners may be 1 to 200,000, so forest owners have had little input and have made little change. Owners who live in the country are apt to say, "I grew up in the woods, so why ask a forester? Everybody knows about the woods and trees." Urban dwellers probably hold forested land to enjoy nature and are likely not interested in, or aware of, the many other uses of the forest. Add to that the tree huggers—so-called environmentalists—who object to trees being cut.

Cutting trees is the way to manage a forest for many uses, much like weeding a garden

Trees are a renewable natural resource. They germinate, grow and die. An acre of abandoned farmland, and there were many in the past, might start out with 3,000 seedlings. At maturity, there may be 120 trees. What happened to the rest? If none were cut, 2,880 died. What killed them? Not a chainsaw, but insects, disease and competition for light, water and nutrients. What a waste. If some of those trees had been harvested, the rest would have grown larger and faster. Granted, the dead trees added nutrients and organic matter to the soil, but nutrient recharge from rainfall, atmospheric dust and rock decomposition constantly feeds the soil.

Cutting trees is the way to manage a forest for many uses, much like weeding a garden. Logging can favor desirable species, improve forest health by removing diseased and damaged trees, create openings for wildlife and, if properly laid out, provide recreational trails for walking, skiing, horseback riding or off-road vehicles. In addition, the products of logging generate income to pay land taxes and make improvements to the property. If you burn wood, as I do, it eliminates the transfer of funds to foreign countries that don't like us and the greed mongers that manipulate fossil fuel markets, while at the same time reducing man's carbon footprint.

When forest owners do sell timber for income, few, including all but one

of my neighbors, employ a forester. Many succumb to the first logger who comes down the pike and offers to "selectively cut" their woods, effectively taking it out of production for 20 to 40 years. Add to that the present IRS requirement that timber buyers must give you a Form 1099 reporting the price they paid for the standing timber—and you end up paying taxes on that amount—the full amount—without deducting the value of the timber when you bought the land. One of my last field activities before age slowed me down was cruising a friend's woodlot to compute the amount of timber, and its value, before cutting. When he filed his 1040, he reported the income paid by the logger but deducted the cost value of the timber. Saved him almost $500 in federal and state income taxes. Do I see a light bulb turning on?

But that's just the tip of the iceberg. Look at the two ash trees in the photos. The small one, 14 inches in diameter at breast height (DBH to the forester), has two 16-foot logs. That's 0.29 cords or 140 board feet. On the stump, as firewood at $25 per cord, that's $7.25. As a sawlog for the mill down the road, at $100 per thousand board feet, that's $14. The large tree, 19 inches in DBH, with two logs plus some firewood in the top, has 240 board feet, worth $24 to the mill down the road. But another mill, nine miles away, will pay $200 per thousand, or $48.

Why the difference in value? Both trees are ash, straight, with no branches for 32 feet, so there will be clear lumber in both. For starters, it costs about the same to cut, skid and load each tree on a truck and handle it at the mill. But the larger tree has almost twice as much wood, so the logging and milling cost per board foot is almost half. Both trees probably have clear wood outside of a knotty, eight-inch core. The smaller tree will yield about 60 board feet of clear wood, the larger one 160. The larger tree has over 2-1/2 times as much clear wood, and the boards will be wider! In terms of "grade," the larger tree is much more valuable.

The smaller tree is probably 50 years old, averaging two inches of diameter growth every seven years. At about the same rate of growth, the larger tree may be 65 years old. Would you cut a 14-inch tree at 50 years, netting $24, or wait 15 more years for $48? Some owners and loggers would cut both. A forester can visualize the effects of an extra 10–20 years of growth in a stand of trees and sell the ones that are ailing, slow growing or mature, leaving the rest to double in value. But many forest owners would cut the 14-inch tree now, for firewood, worth $7.25.

Left: **A 14-inch ash tree in a hedgerow that has been thinned.**
Right: **A 19-inch ash tree in a hedgerow that has been thinned.**

Cutting trees in a forest is the key to maximizing benefits and income. Removing the poorer, diseased and insect damaged trees only improves a woodlot. Timber is only one of the benefits of the forest—wildlife, aesthetics and recreation are also important to some owners. And the most important product of a forest is clean water, for everybody. A professional forester can see that the owner gets all of the benefits he or she desires, not just today, but increasing in the future. It's a win-win opportunity.

So who needs a forester? If you own forest land, you do. Consider having it evaluated and managed by a professional. No, he won't work for nothing, but his fees are more than offset by the added income, lower taxes and increased benefits, and you can leave a heritage to your children. For starters, get in touch with your state forestry service and get as much free advice as you can from one of their service foresters.

Nancy trellises their peas on poultry netting. *Photos by Don Farris*

SOME LIKE IT Hot

Nancy Pierson Farris
South Carolina, Zone 8

When I was a child in Chenango Bridge, New York, we always grew peas. We planted them in mid-March and looked forward to a May-June harvest of bright green, round peas.

After moving south, my family met a different pea. This was a one-eyed oval, which might be green, white, or brown. Gardeners in Low-country South Carolina plant peas only after frost danger has passed. In fact, we can plant peas as late as July. The Southern pea continues to produce through the summer.

Because Southern peas like hot weather, they can grow in rows vacated by earlier crops, such as cabbage or beets, cauliflower or potatoes. These peas don't need much fertilizer: about two pounds of 4-12-12, or 20 pounds of compost will suffice for a 50-foot row. Too much nitrogen will result in bushy plants with fewer pods.

The USDA says, "Southern peas are highly nutritious, tasty, and easily grown. They deserve to be much more widely grown by home gardeners." At a time when we all want to eat healthy and cut grocery bills, an easy-to-grow legume makes sense.

Like other legumes, Southern peas fix nitrogen in soil, and are sometimes grown to improve soil. It has been traditional for southern farmers to plant cowpeas (also called field peas) as a late summer field crop. As the pods mature, local folk are invited to help themselves to the peas, which are small and brown and have a unique flavor. Some declare that for genuine "Hoppin' John" (a rice dish traditionally served on New Year's Day) the cook must use cowpeas. The premise behind the good luck gained by eating this on New Year's Day: a supply of dried cowpeas ensures a food supply until spring harvest begins.

In the fall, when cowpeas begin to dry, the farmer opens the field for cows and other livestock to graze the nutritious plants; or, the "pea hay" is cut and dried for later use. Finally, the remains of the plants are plowed under to enrich the soil.

These peas, variously called crowders, field peas, cowpeas, or Southern peas, bear long, slender pods held above the shrubby foliage. Colors vary from green, ivory or tan, to purple. The peas likewise vary in size and color. The term "crowders" may come from the fact that a dozen or more one-eyed oval peas are crowded into each pod.

If your growing season lasts 60 to 90 days, you can grow some type of crowder peas. Doing so can extend your harvest of legumes into late summer/early fall.

A few seed catalogs offer California Black Eye peas, which mature in 65 days. Peas are fairly large, relatively easy to shell, ivory with a black eye. Shumway Seed Co. (Randolph, Wisconsin) offers several varieties of Southern peas. Zipper Cream

(75 days) is a small, pale green pea that does not stand heat as well as others, but has a wonderful flavor. Colossus (60 days) produces large, buff colored peas with a brown eye; these are super easy to shell. We have grown Mississippi Silver (60 days) and Big Boy (75 days). Both tolerate heat well. Purple Hull (75 days) stand up to heat and seem to not attract insects.

After you select your seeds, choose a location which will receive several hours of sunlight daily. Allow three feet between rows for these bushy plants. Sow seeds about four inches apart in the furrow. Keep moist for a few days until germination occurs.

During periods of high humidity, powdery mildew may infest crowder peas. The USDA says, "Diseases can rarely be cured, they must be prevented." Resistant varieties widely spaced in healthy soil are less vulnerable to disease and insects.

Cornworms and pea weevils are stopped by weekly applications of Bacillus thurengiensis. Stink bugs and shield bugs present a challenge. These walk down the length of the pod, stinging each seed. Insecticide drives them away, but they will return. Since populations of these flying insects peak in mid-summer, planting early or late may foil them. Purple hull types may perform well for late plantings; they will bear until frost.

We try to plant enough to share with pests; when I shell the peas, I discard damaged peas.

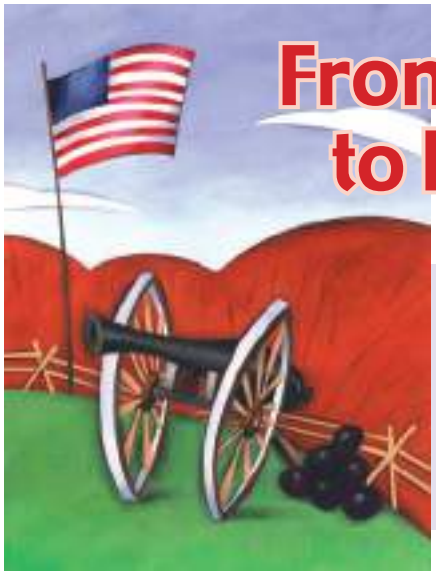
Shelling Southern peas is either boring or relaxing, depending on your attitude. A shady porch with a comfortable rocking chair and a pleasant view can make the task agreeable. Put the pods in a large bowl or dishpan (whatever feels comfortable on your lap); place a bucket by your left knee, and a tall glass full of iced tea nearby. Take a deep breath and begin. Pick up a pod with your left hand; use the right hand to break off the "nose" and pull the "string" off the side of the pod. You may have to coax the pod to open enough so you can use your right thumb to push the peas into the pan on your lap. Drop the empty pod into the bucket at your knee. As you remove pods from the pan, shelled peas will drop to the bottom. When you have no more full pods in the pan, you are finished. (If you are left-handed, adjust the instructions accordingly.)

Southern peas resemble a bean; cook them accordingly.

I can, freeze, and also dry some of my crowder peas. Follow canning instructions for lima beans.

If you've never tried Southern peas in your garden, perhaps you should consider growing them this year. They will grow anywhere lima beans will grow.

Southern pea pods are held above the foliage, making them easy to pick.



From Battlefield to Farmland

Wounded Warriors Seek Rural Farming

By Anita B. Stone

From war zone to organic produce, a meaningful work opportunity has reared up as a "harvest of hope" for soldiers returning to civilian life, offering positive learning, healing and work opportunities. With funding from the U.S. Dept. of Agriculture and other sources, several projects are surfacing for wounded warriors in the fields of homesteading, agritourism, eco-tourism, horticulture and agriculture.

This growing movement offers veterans an opportunity to start a life-changing career as farmers and sustainable people. Job training has come full circle for our brave soldiers, regardless of their injuries, using a therapeutic method by working with nature.

The Center for Veterans' Issues (CVI) has developed a project in Milwaukee, Wisconsin known as the Veterans' Food Project. The program brings a novel approach to the area, attempting to renovate foreclosed, inner-city properties by rebuilding and restoring them as safe, energy-efficient and affordable. The work environment creates a green space for farming and gardening. With CVI initiating the organic therapy program, it also assists vets with development skills in group-centered leadership and provides a social network of information and camaraderie between vets and professional leadership. Re-entering the non-combat zones is an adjustment. With the support of rural farmers and returning vets who farmed prior to enlistment, wounded warriors are being drawn in by the magnetism of these opportunities.

Rural communities are home to 45 percent of armed service members and a chain of new ideas is growing like a string of franchises, popping up across the United States. The Veterans Farm, located in Jacksonville, Florida, helps disabled vets by offering them a chance to learn gardening and farming. The health benefits of growing and eating organic food is a main learning skill. The idea of homesteading is the brainstorm of Adam Burke, a Purple Heart recipient and CEO Founder of Veterans Farm. "The goal is to enable veterans to acquire job skills in the field of farming while they recover from traumatic experiences," he offered. A vet of Afghanistan and Iraq, Burke believes, "Many of these soldiers can enjoy new opportunities in a field that offers farming skills."

After airing the story about the Veterans Farm on public television, Burke writes, "I know it means a lot to our guys and gals working on the farm to see others' appreciation for the hard work they do to bring fresh food to our communities."

Additionally, Archi's Acres, an organic farm in San Diego, California offers to train vets in the fields of hydroponics and sustainable farming techniques, growing mainly vegetables and herbs. Founded by Colin Archipley, an Iraq war vet and his wife, Karen, the couple has opened up several possibilities for returning vets. The Veterans Sustainable Agricultural Training Program (VSAT) recreates an environment for vets while they learn new farming skills and techniques, so one day they can start their own farms.

Another notable agricultural program created by Garrett Dwyer, a marine deployed in Iraq, is "Combat Boots to Cowboy Boots." This program is based at the University of Nebraska and assists wounded warriors in becoming future farmers and ranchers. The Nebraska College of Technical Agriculture (NCTA) uses a variety of programs funded by the U.S. Dept. of Agriculture, the Veterans Administration, the Dept. of Defense and other state and local agencies to get these programs off

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the ground. The NCTA also works closely with the United States Dept. of Agriculture to help vets decide what type of farming they want to pursue and in which field they wish to become proficient. The Combat Boots program hopes to partner with other agricultural institutions and eventually offer farming skills and techniques classes at military bases across the country.

Farmer-Veteran Coalition (FVC) was founded in 2009 by Michael O'Gorman, a specialist in organic vegetable farming for more than 40 years. O'Gorman currently works as an advisor in an attempt to "… connect the two largest departments in the U.S. government, the military and the Dept. of Agriculture." According to Gorman nearly every day he hears from veterans interested in farming. As a result, many groups are forming to involve vets in farm and garden industries. There appears to be a diversity of vets who want to focus on a farming career, but at the same time, vets also require steps to build skills for transitioning from military life to contribute to the future of local and sustainable foods. With the passage of the 2008 Farm Bill, new farmers and ranchers are being drawn into programs to help rebuild rural America. During educational retreats vets talk to farmers about farming topics, including plant rotation, pest management practices, grass-fed beef, organic certification and cover crops. FVC hopes to reach more than 10,000 vets over a three to five-year period. The long arm of FVC has reached urban farmers, several vets experimenting with crops, plant types, aquaponics, wind power and new technological farming innovations.

The USDA is creating programs to help servicemen and women entertain the future of agricultural jobs, up and down the food chain.

"To go from knocking down peoples' doors and arresting them as a soldier to growing food and helping feed communities was a powerful experience for me," says Mathew R. McCue, co-owner of Shooting Star CSA, a 10-acre farm in California. McCue remembers vegetable gardens, "carts brimming with watermelons and local Iraqi farmers that inspired his love of agriculture." McCue has become instrumental in hooking up vets with farmers to form partnerships. When he returned to the United States, he began an organic farm and became an active member of FVC in an effort to help wounded warriors struggling with Post Traumatic Stress Disorder (PTSD) through farming. "Watching people stare down the barrel of a gun with a cart full of produce because they are trying to get to the market to sell it…got me thinking about agriculture in a way I hadn't before." McCue reports. "It can be hard to function after existing in the context of a war. Working on a farm eases that transition."

"Farmers and veterans working together is a perfect union because the veterans benefit from the training and the work, and the farmers benefit from the support and help on their farms," says Nadia McCaffrey, founder of the McCaffrey Foundation and a board member of FVC. "The McCaffrey Foundation plans to create a large training farm in Minnesota, where veterans and their families will receive around-the-clock support in addition to training in farm skills."

The movement appears to be catching on, whether through government programs or individual hearsay. Numerous groups are springing up to support vets returning home from Iraq and Afghanistan. A Fellowship Fund offers assistance to post 9/11 disabled vets to begin a food and farm career. Curtis Barrett, an Afghanistan army vet diagnosed with PTSD, recently returned home to the farm in Farmville, North Carolina, "to get back to the earth and make something out of my life." He smiles. "There is hope, excitement and joy," says Barrett. "And this is a great way to begin my new future."

For further information contact any of the following links.

- *Adam Burke with questions or a time to visit at Veterans Farm.7749 Normandy Blvd. #145, Jacksonville, FL 32221 904-214-5720*
- *info@farmvetco.org or call 530-756-1395*
- *Matthew R. McCue at www.shootingstar.com*
- *www.combatbootstocowboyboots.*
- *www.thecenterforveteransissues.com*
- *www.ncta.com*
- *www.archis'acres.com*

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HONEYBERRIES

a great addition to home or market garden

By Bernis Ingvaldson
Minnesota, Zone 3

The honeyberry, a new super fruit higher in antioxidants than blueberries, is breaking upon the gardening and edible landscaping scene with a splash of color. With pretty yellow blossoms that are resilient to late frosts, it is known as the first fruit of spring, bearing delicious dark purple berries just prior to strawberry season.

Honeyberries, or haskap as they are also known, are actually a species of honeysuckle identified as *Lonicera caerulia* L. The bush is pest resistant with an expected longevity of more than 50 years. Honeyberries seem to easily recover from whatever is thrown at them, shooting out more branches the next year. During the winter of 2010 we had problems with mice girdling the stems of our young plants, but new shoots came up from the roots. Grazing deer may munch on the fresh new growth, but don't seem overly attracted to older bushes. The rabbits have not bothered much either, not to say they wouldn't in other places. We noticed a few forest tent caterpillars this summer with no lasting harm to the bush.

Birds prove to be the biggest challenge of all. Cedar waxwings love the berries, so 1/2-inch netting needs to be secured around and away from the plant down to the ground. Most other birds would probably devour the berries as well. Foxes have been known to clean off the crop just before it was ripe. Excessive wind and rain can hinder pollination, but that's all par for the course in farming it seems.

Speaking of pollination, two or more unrelated cultivars that bloom at the same time are recommended for maximum fruit production. Wild bees are natural pollinators, and honeybees may or may not be attracted to the flowers. More observation is needed.

Honeyberries grow in the wild in the boreal forests of Canada and the U.S., but are much smaller than the commercial varieties, many of which were brought over from Russia and Japan. I don't believe they gained popularity until recently because people tend to try the fruit as soon as it turns blue, and the bitter taste is a big turn-off. By waiting another three weeks to maturity, most honeyberries are quite palatable. In addition,

Dr. Bob Bors at the University of Saskatchewan and retired professor emeritus Dr. Maxine Thompson of the University of Oregon have been breeding for even sweeter and larger berries. Dr. Thompson's plants are in field trial, while Dr. Bors has released several different cultivars over the past couple of years. Both refer to their plants with the Japanese term, haskap.

Honeyberry or haskap fruit is usually tangier than the blueberry, sometimes considered to resemble a combination of blackberry/kiwi/blueberry. Its seeds are unnoticeable and the skin easily dissolves in your mouth. These two features, along with the intensely tantalizing taste, make for some incredible homemade ice cream! The berries can be used in any blueberry recipe, for jams or jellies or other baking, and easily dehydrate with a long shelf life. Simply blend a cup of berries with a dab of honey to taste and for pliability, and spread out on a sheet greased with coconut oil. Dehydrate in your oven or dehydrator, or even in the back window of your car. When dry enough to handle, and still pliable, transfer onto a piece of plastic wrap and roll up. Mine kept over a year without molding.

For more recipes and information, visit The Honeyberry Farm at www.honeyberryusa.com or contact us at 218-331-8070.

Weeds in the Asparagus Patch

By Bill Jahn
Iowa, Zone 5

We have a small organic produce business in western Iowa. The acreage we acquired in 2005 provided the space we needed to add asparagus to our crop mix, an addition our customers and we had long wanted. As is usually the case with my gardening activities, the new planting of asparagus was accompanied by mistakes that I've been adjusting to ever since. Perhaps readers will learn from the mistakes and the adjustments.

I have been an impatient person for every one of my 67 years, and that led to the first mistake. Soon after acquiring the property, we had a good portion of the future garden area cleared of brush and unsalvageable buildings. It all looked so clean and benign after that! That winter I ordered 500 asparagus roots (Mary Washington) and designated a 50-foot by 50-foot area for planting them in the spring. A typical recommendation is to plant rows of asparagus five feet apart, so my plan was to have 10, 50-foot rows, five feet apart. I was also aware that for a couple years prior to planting a crop like asparagus, the area should be planted with annual crops or cover crops to eliminate perennial weeds. But I was anxious to get the patch established and after all, I imagined from the comfort of my armchair that winter, I was certainly going to be able to handle a few weeds.

Come spring, I prepared the trenches, planted the roots and then, along with the emerging asparagus, came the brome grass, Canada thistle, and a million varieties of annual weeds. Then I compounded the mistake by doing it again the next year, as I expanded the asparagus planting to 30, 50-foot rows. It's not easy being me.

The weed problem actually had two sources. My failure to rid the area of perennial weeds was one, but at least in my opinion, the five-foot spacing between the rows was another. Once the spring harvest is over, asparagus ferns quickly grow and canopy the paths between the rows, making it difficult to see and remove even the annual weeds, some of which get pretty big in a well-fertilized organic asparagus patch. At the end of this article, I'll describe my recent asparagus patch expansion that takes both these problems into account.

These early plantings had decent yields, but the annual and perennial weeds clearly took their toll, and they even made the picking itself increasingly difficult toward the end of the spring harvest. It was obvious that I was never going to get these weeds eliminated or even controlled, so my efforts turned to managing them.

My annual asparagus bed maintenance and weed management regime was pretty simple for the first few years. I left the ferns (and weeds) in place over the winter in order to catch the snow. The sometimes very deep drifts provide some insulation and moisture to the planting. Depending on weather conditions, sometime between late January and mid March, I would burn the dead weeds and ferns and then mow what had not burned. Soon after that, I would spread fertilizer directly over the rows (currently I use a commercial product made from composted poultry manure).

Then, when the ground was ready, but well before the spears emerged, I tilled the entire area, even the rows of asparagus, with the tiller set very shallow. I would till again between the rows about half way through the picking season and then again after the harvest is finished and before the ferns canopy over the paths. After the harvest, I would again spread fertilizer directly over the rows of asparagus.

For the first few years, that was the extent of my weed management and bed maintenance effort, and it is still part of what I do each year in those early plantings. Notice in this regime that while the paths between the rows are tilled a couple times during the season, the weeds in the asparagus rows grow unabated. By halfway through the harvest, it becomes difficult and frustrating to harvest, with emerging spears often hidden by weeds until they are too large to sell. Furthermore, with such an unabated start, by the time the harvest is over and the spears are allowed to fern out, the weeds in the rows are well established and often become tall enough to shade the ferns, diminishing the sunlight they need to rejuvenate the roots below. To somewhat combat this, my latest addition to the weed management regime in these early plantings involves mowing.

It works as follows. My harvest usually begins in early to mid April here in zone 5. Sometime in May, when the weeds in the asparagus rows make harvest difficult, I choose the most weed bound one-third of the planting and pick all spears, even those only a couple inches tall, and then mow that entire third, with the mower set at a four-inch height. I usually till between the rows at that time and the result is a pleasingly clean looking bed (I know, the weeds are still lurking there, but it looks and feels so much better). Within three or four days, I'm picking again from that section with no obstruction from weeds. I then do the same thing in another one-third of the planting, and a few days later in the final third. Staggering the mowing in this way allows the harvest and sales to continue uninterrupted. By the time the harvest nears completion, usually sometime in June, the weeds in the rows are again a problem. I make a final thorough picking, mow the entire planting, spread the fertilizer and till the paths. The spears that emerge after that are left to fern out and they will have a big jump on the mowed weeds. Instead of the weeds shading the ferns, the ferns help shade the weeds. Since adding mowing to my weed management regime, I've noticed much healthier ferns during the summer and better yields the next year.

Asparagus is a good seller in my business, but the weed problem had kept me from expanding the planting. Mowing the growing weeds made a significant, positive difference, but I wanted a better "solution" before expanding further. The main problem with weed management after harvest is the difficulty getting at the weeds as the ferns canopy over the paths. It seems like wading through the underbrush in a jungle, and I seldom attempt it.

I am experimenting with a different planting configuration that looks promising. I have planted a single, 200-foot row of asparagus down the center of a 15-foot wide strip. For two years prior to planting the asparagus, I planted annual vegetables and cover crops in the 15-foot by 200-foot strip. That seems to have eliminated the perennial weeds. After planting the asparagus (spring 2012), I planted an annual crop, potatoes, on either side of the asparagus, leaving two feet of open ground on each side between the potatoes and the asparagus. That made it very easy to rid the asparagus planting of *every* annual weed. I weeded the asparagus row three or four times that summer and each time it took about five minutes with a stirrup hoe. We'll see if it remains that easy as the planting matures, but I am hopeful that without the canopy formed by adjacent rows of ferns, the weeds will be easy to see and get to.

I think I would employ some version of this planting strategy, even for a small plot intended just for personal use. Since it is a perennial, many instructions suggest growing asparagus out of the way of the annual vegetable garden. Perhaps this is not always best. A two- or three-foot wide bed, set apart from the main garden, is easily neglected and invaded by neighboring grass and weeds, especially if things are kept organic. I suggest at least considering integrating a single row of asparagus, or multiple rows separated by many feet, into the main vegetable garden where it is seen often and the area around the rows can be quickly weeded several times a year. Such a planting regime can also serve as a way of dividing up a garden space, making record keeping and planning easier.

I hope my mistakes and adjustments to them are useful to some readers. Anyone with questions is welcome to send them to me at wmgardens@iowatelecom.net.

Birds be gone!

I was having a big problem with little birds eating anything that started to grow in my garden. I replanted three times and they continued to make themselves at home. It was eviction time! My husband hung old CDs and DVDs across the garden here and there. It puts on a huge light show dashing all over the place. They moved out. Haven't seen a bird in there since. — Brenda Chalfant, Nevada

The homestead kitchen:

Food Storage

for Beginners with Little Money

By Pam, Editor-At-Large
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Mayflowertradingcompany.com

There are multiple ways to build food storage. There is the long-term, store it in a closet for years, for the "what if" scenario. There are emergency meals that store long-term, to which you "just add water," but are expensive per calorie.

Then there is the "pantry building" way, which is simply buying two or three of everything you get when you go to the supermarket. If you normally buy a package of spaghetti noodles and a jar of Ragu, buy several of each, and keep them in the cupboard. By buying five of everything you normally buy (excluding perishables like lettuce), you have a month's worth of food in a week. Every time you buy something you already have, put the new stuff in the back and use the older stuff first. Keep adding a little all the time—like a piggy bank.

Things like canned soup, vegetables and fruit, ketchup, mustard and barbeque sauce, pickles, olives and sauerkraut last a lot longer than the "best by date," and it's easy to catch sales. Cream of chicken or mushroom soup makes a nice sauce for white beans and rice. Barbecue sauce adds zest to red beans. A jar of salsa adds zing to pinto beans and rice, together or separate. Get a couple dozen packets of dry gravy, sloppy joe, spaghetti, and taco mixes. Tomato soup can be used with dry spaghetti, sloppy joe, or taco mix as a substitute for tomato sauce. Bacon bits, granulated garlic, and dry minced onions make nice additions to a variety of dishes.

Peanut butter is a great source of protein and keeps quite a while. Canned stew and chili should have a place on the shelf. I, personally, find Spam disgusting, but it lasts decades because of the nitrates. There's canned chicken and, of course, tuna and salmon. Jerky lasts longer in the freezer than on the shelf, but heads up—rehydrated it is nasty.

Some other cheap and easy items are oatmeal, cream of wheat, rice, dry beans, barley or split peas for soup in one- or two-pound bags, mac & cheese, ramen noodles, Rice-A-Roni, instant potatoes, pasta noodles, Bisquick, and Stove Top Stuffing. Other than the stuffing, these things last well beyond the "best by" date. If space is an issue, keep them in a plastic tote.

A box of instant milk stores well for several years in a recyclable plastic bottle once opened.

Saltines last longer than bread, but not much past the "best by" date. Tortillas can substitute for bread and take little space in the freezer.

Save the freezer for things that can't be kept for an extended period any other way. Grated cheese in a re-sealable bag lasts months in the freezer. Buy meat in the family size or party pack and freeze it in smaller bags. *Always* keep the freezer full, any space should be filled with a bottle of water. It doesn't have to work as hard when it's full, so it costs less to run, and if the power goes out it will stay cold longer.

Have you ever tried sprouting? That's a great way to put fresh "greens" in your diet without going to the grocery store or having a garden.

Get some "feel good" things, too, like Jell-O and hard candy. Pudding doesn't turn out very well with instant milk, but it works okay with canned milk. If you want to get things like cake, muffin or brownie mixes, a can of dehydrated whole eggs is a wise move. You can store eggs for over a year in the freezer. Beat a dozen eggs, pour them into an ice cube tray, and when they are frozen, put them in a ziplock-type freezer bag. Just take out what you need, let it thaw covered in the refrigerator, fry it for scrambled eggs, or use it in a recipe.

Christmas time popcorn tins work really well for 25 pounds of sugar or flour, and are rodent proof if that is an issue for you.

Coffee, tea, Tang, Kool-Aid, Country Time Lemonade: I always keep Country Time on hand because I never know when my sister-in-law is going to show up with a bottle of vodka. Gotta love that girl!

Baking soda for cooking, but it can also be used for brushing teeth, as an antacid, cleaning the bathroom, and a hundred other things. Baking powder, yeast,

brown sugar, and shortening are also some things you might want to have on hand if you like to bake from scratch.

Salt—do yourself a favor and buy it in the big bag; it'll last a decade without any fancy packaging as long as you keep it dry. With pre-made and fast food, we really don't realize how much salt we eat and need. It's cheap and the most basic seasoning in the world.

Add extra cooking oil while you're at it. In a pinch, it can be used as a substitute for butter or margarine in mac & cheese, etc. Whatever you do, don't forget to have jugs of water stashed in case your services are down. *(Ed. note: Don't forget those frozen jugs in the freezer count in emergencies, too.)*

Variety is important, but if you find your "pantry" has some things you don't normally eat, commit yourself to eating one of those less favorite items once a week until it's gone. Or every couple of months you can have an "eat from the pantry" week where you avoid the grocery store completely and eat only what you have on hand.

Not going to the store for a week or two will really let you see what you need to stock up on or what you will potentially be doing without—make a list during this week. This method works well for soap, toothpaste and toilet paper, too. Once the pantry is stocked, you can replace what you use as it goes on sale, whenever you shop for fresh vegetables and meat. Eating for a year from the pantry is easily doable. If you prefer to have food packaged for long-term storage for use years down the road, we should discuss the pros and cons of those products.

Pam and her husband have fancied themselves homesteaders for over three decades. They own Mayflower Trading Company with the motto: A pilgrimage to resource efficiency. The mission being, to help others with products and/or advise in their own pilgrimage to self-sufficiency. You can visit them at www.mayflowertrading.com.

The homestead kitchen:

Canning Butter

By Lil, greengate@jps.net

Canning butter* is not that hard, it just takes time. But please be careful; that butter is very hot. Follow the directions below, and you should not have any problems. Read all of the instructions so you will know what is needed before you begin.

1. I use any butter that is on sale. Lesser quality butter requires more shaking, but the results are the same. It did not matter what brand I used, it all worked the same.

2. Heat pint jars in a 250°F oven for 20 minutes, without rings or seals. One pound of butter slightly more than fills one pint jar, so if you melt 11 pounds of butter, heat 12 pint jars. A roasting pan works well for holding the pint jars while in the oven. (Or like our regular oven canning, set them on a cookie sheet. Even though they are empty, you don't want them falling all over in the oven.)

Jars are put in oven dry. You leave the jars in the oven until they are filled. The 20 minutes is the least amount of time they have to be in the oven to get good and hot. You are going to be filling them with boiling liquid, so the jars have to be hot (so they don't break).

3. While the jars are heating, melt butter slowly until it comes to a slow boil. If you have a favorite pot that you make jams or jellies in, this same pot is great for melting the butter. Using a large spatula, stir the bottom of the pot often to keep the butter from scorching. Reduce heat and simmer for 5 minutes at least; a good simmer time will lessen the amount of shaking required (read below about the shaking). Place the lids in a small pot and cover with boiling water, leaving the lids in hot water until needed.

Using the wide mouth jars makes getting the butter out of the jars a lot easier.

4. Stirring the melted butter from the bottom to the top with a soup ladle or small pot with a handle, pour the melted butter carefully into heated jars through a canning jar funnel. Leave 3/4" of head space in the jar, which allows room for the shaking process. (You want to keep stirring up the melted butter as you fill the jars, you want an even amount of the ingredients in each jar. The butter will separate if let stand for just a few seconds.)

5. Carefully wipe off the top of the jars, then get a hot lid from the simmering water, add the lid and ring and tighten securely. Lids will seal as they cool. Once a few lids "ping," shake while the jars are still warm, but cool enough to handle easily, because the butter will separate and become foamy on top and white on the bottom. In a few minutes, shake again, and repeat until the butter retains the same consistency throughout the jar. (You do not have to shake them hard, just back and forth or up and down. Enough to mix the liquid inside of the jars.)

6. At this point, while still slightly warm, put the jars into a refrigerator. While cooling and hardening, shake again, and the melted butter will then look like butter and become firm. This final shaking is very important! Check every 5 minutes and give the jars a little shake until they are hardened in the jar! Leave in the refrigerator for an hour. (I shake them about every 3 minutes. It does not take long for the butter to set, and once it does, you just leave them for an hour or so.)

7. Canned butter should store for three years or longer on a cool, dark shelf. (It does last a long time. Canned butter does not "melt" again when opened, so it does not need to be refrigerated upon opening, provided it is used within a reasonable length of time.)

You will also be full of satisfaction while placing this "butter in a jar" on your pantry shelves.

I had one jar that set before it was well mixed. Just place the jar in very hot water to get it to melt and then shake it again to mix it up. It will set and be just fine. You do not have to unseal or open the jar, just get the butter to melt and shake again.

We have canned over 52 pints of butter in the past year. We love having it handy and safe to use. I buy butter on sale, then keep it frozen until I have enough for canning two or three batches of a dozen jars each. And the next batch of butter I will be doing shortly will be put into the half pint jars. I want to see how well it does, and that amount is great for just the two of us to use.

Any questions, please ask. If I can help you, I will.

Happy canning, and God bless, Lil.

**Note this is for real butter, not margarine or other substitutes.*

Lil stated in her letter: **We are eating butter that has been canned for a few years now, and it tastes great. So it will last a long time if kept in a cool, dark, dry place. Storing in a closet in a box works great. It does not have to be pampered to keep, but using good common sense while storing does the trick.**

And the winner is....

Congratulations Molly! You are the winner of the cookbook contest! Thanks to all who participated.

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#1
Molly Dulak
Ringle, Wisconsin

Homegrown Busy Day Casserole

Serves 8-10

1-1/2 cups wild rice *or* 4 medium potatoes, cubed
1 cup each: carrots, celery, green pepper, cubed
1 medium onion, diced
1 clove garlic, minced
2 lbs. venison *or* beef (roast or stew meat), cubed
2-1/2 teaspoons seasoned salt
4 cups beef broth

Layer all ingredients in order listed above into a large slow cooker. Do not stir!

Cook on low setting, 6-8 hours.

This is a family favorite recipe for those days we know are going to be busy. Most of the ingredients are harvested on our own little piece of land and are staples to our pantry. It's also a great dish for beginning cooks as there is room for creativity and it is an easy recipe for children to follow. One basic meal, so many ways to fix it!

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#2
Debbie Betts
Rochester, New York

Cheese-Summer Squash Casserole

Serves 4

3 cups summer squash
2 tablespoons butter, melted
1 cup cracker crumbs
2 tablespoons onion, chopped fine
1 cup cheese, shredded
2 eggs, beaten

1. Combine all ingredients and mix well.

2. Put in a greased baking dish, cover and bake at 350 degrees for 1 hour.

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#3
Maggie Maye Rose
Linden, Tennessee

Breakfast Casserole

Serves 12

12-15 eggs
1/2 cup flour
1 teaspoon baking powder
1 pint cottage cheese
1 lb. grated cheese
1/2 cup melted butter
Ham, bacon or sausage
Pepper if desired

Combine eggs, butter, flour and baking powder. Beat until smooth. Add cottage cheese, cheese, and meat. Pour into a 9 x 13 baking dish and bake at 350°F for 35-40 minutes.

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#4
Esther Harmon
Banner Elk, North Carolina

Layered Vegetable Casserole

On the bottom of a greased round 9" casserole dish, place a rather thick layer of very thinly sliced potatoes (about 2 cups).

Rinse 1/2 cup instant brown rice, drain well and place on top of potatoes.

Top with 1-to 1-1/2 cups cooked hamburger or diced ham.

Add a layer of thinly sliced onions, a layer of carrots (sliced and cooked tender-crisp) or the same amount of green pepper, or mix the two.

Over all of this pour a pint of tomatoes* and top with fine bread crumbs. Bake covered at 350°F 1-1-1/2 hours until potatoes are tender and it's golden on top.

**You may also use a can of cream of mushroom soup mixed with 1/2 cup milk in place of the tomatoes.*

The homestead kitchen:

Can Your Squash

By M. Friesen

Almost every expert canner advises not to can zucchini or yellow summer squash. I disagree. True, the texture is not the same as it is when the squash comes straight from the garden, but it tastes mighty good in the middle of winter.

My goal is to raise as many of our vegetables as possible for year-round consumption on a very small lot in town. Summer squashes are prolific and eventually, it is impossible to even give them away. Thus began my quest for ways to use squash in the winter.

I freeze grated zucchini for breads, cakes and cookies, but I can only consume so much that way. That's where canning comes in. I use only small squash like I would use in the summer. I cut them up and put them in large plastic bags in the freezer until I have enough to can. Then I follow the instructions put out by the county extension. (Process pints for 30 minutes or quarts for 40 minutes at 10 lbs. pressure in a pressure canner.) Now I'm ready to cook with my canned squash. This is our all-time favorite recipe:

Drain 2 quarts squash. Combine with 1 can cream of mushroom soup (homemade is fine) and spread in a greased 9 x 13 pan. Top with little bits of Velveeta-type cheese. Prepare one box of stuffing. Spread evenly over the top. Cover and bake at 350°F for 1 hour, removing foil for the last 15 minutes.

Recipe #2:

Drain 1 or 2 quarts of squash. Cook onion and green pepper. Add to squash along with diced canned tomatoes. Simmer. Right before serving, add Velveeta-type cheese, Italian seasoning, and garlic powder. Stir until cheese is melted. This runs a close second to the stuffing recipe.

Calico Skillet is another favorite:

Prepare a box of macaroni and cheese, or make your own. Drain 1 quart mixed zucchini and yellow squash. Add 1 pint well-drained diced tomatoes to the prepared mac and cheese, along with Italian seasoning and garlic.

Sometimes I add cooked hamburger, venison, turkey or additional cheese.

Cream of Zucchini Soup is a good way to used canned zucchini.

Cook one chopped onion. Puree onion and undrained zucchini in food processor. Put in pan with:

2 teaspoons chicken bouillon granules
1/2 teaspoon seasoned salt
1 teaspoon salt
1–12 oz. can and 1–5 oz. can of evaporated milk
1 tablespoon butter

Heat until hot, but not boiling. (I don't use the evaporated milk, I use skim milk to cut calories, but the evaporated milk makes the soup wonderful.) My family also likes cayenne pepper in the soup and we serve it with cornbread.

I like to dump jars of canned squash in vegetable soups. I also save the drained juice for soup rather than discarding it. My latest use for the extra squash is to cook it with onion, puree it, and freeze in one-cup packages. I use it to make homemade "cream of" soups to use in casseroles. The yellow summer squash looks much like cream of chicken soup. So far no one has realized I have switched from cans of soup to homemade. If you are creative, you will come up with many more ideas to use your bounty of canned squash.

Pickling is one way to use your squash, but have you ever tried canning it?

The homestead kitchen:

COOKING ON AN OPEN HEARTH

Are you ready for the storm?

By Wayne Tucker
Rhode Island

I was the cook on a commercial fishing boat off the coast of Rhode Island some 30 years ago. As a life-long mariner, I always have my eye out for impending storms (both real and metaphorical). As the cook, it was my duty to have plenty of food prepared for the crew in advance of a blow, because when the storm hit with a full gale, cooking was nearly impossible. In a violent sea, all hands (including the cook) would be required on deck to secure the fishing equipment so the ship could ride out the storm. The food I prepared in advance of the maelstrom was then available for the crew whenever an opportune time came to eat.

I still maintain this practice at my homestead whenever there is an approaching hurricane or blizzard; but instead of a rolling galley, I have a solid stone hearth (picture 1) to cook on with a wood fire, cast iron skillets and Dutch ovens. If the grid goes down, I barely notice. With a steady light from the fireplace and heat that warms body and soul while cooking the food; my hearth is as life sustaining in a storm as a good ship is at sea. In the past two years, I have allegorically sailed through Hurricane Irene, Storm Sandy, and the Blizzard of 2013 at my hearth. I have great respect for storms, but I find them exhilarating, not intimidating.

Hearth cooking allows you lots of flexibility. You are not tied to a clock or the precision normally associated with cooking a meal if you choose the right foods to cook. Once food is cooked, a Dutch oven can be banked with ashes and kept warm for hours or easily re-heated with coals and hot ashes. Cast iron heats slowly so food does not scorch easily and it holds heat for a long time. With a little practice, you can set up your hearth to cook a meal and keep it warm for a long time without constant fussing.

Since I live in a very rural area, I am always well stocked with staples,

but here I will present a hearth cooked meal from items you most likely already have in your pantry, or you can substitute with what you do have. The flexibility of time you will have around the cooking allows for hours to do other things like plow snow, hook-up a generator, or entertain children.

Get a good fire going early on (at least 24 hours ahead of the storm), and keep it going night and day

Make sure you have a good supply of seasoned dry firewood stacked and covered close-by to your hearth. You don't want to be venturing out in the storm to gather wet wood to throw on your cooking fire! The longer your hearth is pre-heated, the easier it will be to control cooking heat and maintain coals for your skillets, pots and Dutch ovens. (picture2) I use only quality seasoned cast iron cookware (Griswold is my choice). Please refer to other Countryside articles (V.96 #5, V.95 #5, V.94 #3) for excellent advice on cast iron cookware and how to use and care for it.

Once you have a good steady fire going with lots of hot coals, you can begin planning and gathering items for your menu. I would suggest that you only cook in a storm the things you have already mastered cooking on a hearth before any storm is looming. The time for trial and error is not during the chaos generated by Mother Nature. Try it first on a cool clear weekend in the fall or spring. Plan to do other things while you are hearth cooking so you get used to the routine and can have confidence during an emergency situation that your Dutch ovens covered in coals and ashes will be fine while you hook-up your generator or read to the children by the firelight because there is no tv.

Let's try two recipes that can be done simultaneously; once you have mastered each separately. Each of these two recipes can be altered any way you like because they are basic. Once you can do the bread recipe, it is easy to vary and I will give you my favorite variation to try. The beans and bacon recipe is also very simple, but once you master the technique, you can do chili, soup, or stews from your own recipes. If you are a Vegan, you will eliminate browning meats, but apply the same technique to sauté your veggies in vegetable oil prior to adding them to your stock.

Start bread dough one day ahead of the storm

I use the "No-Knead Bread" recipe from *The New York Times* adapted from Jim Lahey of Sullivan Street Bakery. It is simple, easy and makes absolutely wonderful crusty fresh bread. So gather flour, salt, dry yeast and measuring devices.

Mix together in a bowl:

3 cups flour

1/4 teaspoon instant yeast
1-1/4 teaspoons salt
Add 1-1/2 cups of water and blend with a wooden spoon until smooth.

(As a variation, once you master this basic recipe, I love Anadama Bread. Substitute 1 cup yellow cornmeal for 1 of the 3 cups of flour and 1/2 cup molasses for 1/2 cup of the water.)

Place dough in greased bowl and cover with plastic wrap. Let dough rise at least 12 hours, but preferably 18 hours on hearth (picture 3). Rotate bowl occasionally for even warmth.

Turn dough out onto a floured surface and fold it on itself twice pressing hard. Cover and let rise for 15 minutes.

Use just enough flour to keep dough from sticking and form it into a ball. Put dough seam side down on a floured cotton towel (not terrycloth). Sprinkle dough with more flour and cover it with another cotton towel. Let dough rise for two more hours until double in size.

While the dough is rising the last two hours, preheat your Dutch oven with hot coals to around 450°F. This requires some judgment and experience with your Dutch oven. I use a flat lid oven with feet so I can shovel coals onto the hearth, stand the oven over them, put the lid on with a poker and shovel coals on top (picture 4), and then bank the sides with ashes.

When the dough is ready, carefully remove the pre-heated oven lid with poker and place it on the hearth next to the oven with coals still on top. Remove the top towel from the dough and place your hand under the bottom towel. Flip the dough into the oven and center it (I use heavy leather welding gloves and move the oven back and forth for this). Replace lid and replenish with coals if necessary. Re-bank with ashes and allow to cook until done. This will take 45-60 minutes with the right heat. However, while learning, check the bread after 30 minutes and you will observe one of the following:

If the heat is just right, the bread will have continued to rise forming a crust and may be starting to brown. Replace lid and continue cooking until crust is nicely browned in another 15-30 minutes. Remove oven from heat. Remove bread and place on rack to cool (picture 4).

If the heat is too low, bread will not have fully risen and crust may not be forming. Add coals and continue to cook checking every 15-30 minutes until bread has browned. It may not rise fully under these conditions, but should still be okay.

If the Dutch oven is too hot to begin with, smoke will come out from under the lid before 30 minutes. Remove oven from heat. Remove lid and check bread. It may be scorched on the bottom, but not on the top. Continue cooking with just top heat until top crust is brown. Remove bread and cool. Cut off any black crust and discard. The rest of the bread should be okay.

If oven is way too hot, the bread will be burned. You may be able to open the bread and eat the inside, but likely you will discard it and try again with less heat to start with.

To make a complete meal timed to serve warm bread with hot meal

Master both recipes first. To complete the meal, gather dark red kidney beans (pre-soaked if using dry; or two 19 oz. cans).

1 lb. bacon
1 large onion
Beer (or wine)
Molasses
Ketchup
Dry mustard
Worcestershire sauce
Cayenne pepper sauce
Salt and pepper (picture 5)

While bread is rising *for the first time* (before the storm) fry one pound of sliced bacon cut into one-inch strips in large cast iron skillet over open fire (picture 6). Be careful that you have a slow fire and the skillet is not sitting directly on hot coals, but above them. You will know by the sound of the grease when it is getting hot. You do not want to ignite that hot grease, so as skillet heats up, remove from fire and place on hearth, turning bacon as it continues to cook. Re-heat skillet in fire periodically and remove to hearth again continuing to turn until all bacon is nicely browned. Reserve two tablespoons of fat for cooking onion, drain bacon and place in second Dutch oven (still cool). Fry chopped onion in skillet with reserved bacon grease until translucent, and put into oven with bacon:

Pour beans and juice into oven along with:
1 cup of beer
1/2 cup of molasses
1/2 cup ketchup
1 tablespoon dry mustard
2 tablespoons Worcestershire
1 tablespoons red pepper sauce (or to taste)
1 teaspoon salt
1 teaspoon fresh ground pepper

Stir mixture thoroughly. Replace lid, bank with hot coals and ashes for slow heat (200-250°F) and bake overnight. Beans can be kept in the oven on the hearth and re-warmed if needed (picture 7).

Serve bread and a plate of beans to anyone who is hungry during the storm whether the grid is up or not. Think back to a time, not so long ago, when people cooked like this all the time. It is still a good skill to have.

Oh give me mercy for my dreams
Cause every confrontation seems
To tell me what it really means
To be this lonely sailor
And when you take me by your side
You love me warm you love me
And I should have realized
I had no reasons to be frightened
But I am ready for the storm yes sir ready I am

The homestead kitchen:

When it Comes to Nutrition, Natural is Better

By Ira Edwards
Oregon, imedwds@gmail.com

Now living on a 5,000-square-foot city lot, I have a house and barn, five chickens, three apple trees and about 900-square-feet of garden. I'm a rather small farmer, but happy to have much of our food come fresh from the garden or home preserved. With 62 years together, my wife and I are in good health. We always had a garden when we could, though we didn't know how important it was for our health.

As a child in the 1930s and '40s, my job, other than taking care of the goats and pumping and carrying water, was to fight a constant battle to keep the hemp and pigweed from over-growing our small, hilly Iowa farm. A scythe was too heavy for my skinny muscles, and a sickle didn't cut thick stalks. Then, the life of a farmer didn't look good. Looking back, it had its upsides. Food was scarce, but we had all the black walnuts we could use, and cracking those with hammer and sad-iron kept us busy during long, dark winter evenings. We could gather sour gooseberries up in the hollow and nettles down by the creek. A mineral-rich well and large garden compensated for too-little food. We got sacks of flour and sugar from the store.

Then came years without a garden. College years in a dorm and years after in temporary places, food mostly came from the store. We found wild blackberries and an occasional abandoned fruit tree. I had learned from childhood to never waste anything, and we ate what others would not. I didn't know that was good nutrition; I was just thankful to have food.

Those days, you could work your way through college without loans or grants. After pre-med in Idaho and three years of research in Washington, I went to medical school, but the MD degree was not to be. The main thing I got from those 3-1/2 years was a good understanding of biochemistry and physiology, needed later for understanding nutrition. Understanding health and disease came not from medical school, but 30 years later as I studied nutrition.

Several years ago I published an orthomolecular nutrition textbook, a different kind of text with emphasis on understanding. Now I am trying to make it simple with brief papers and pamphlets. Here are some important points:

• The greatest hindrance to good health is misinformation coming from dominant medical, commerce, and university and government sources. Alternative sources also convey misinformation, but with much less damage.

• Morality or ethics is a part of every thought or act. Leave it out and corruption enters. The drug industry is profit-oriented, which would be normal and healthy if morality were not ignored. However, corruption rules.

• Misdirection of research toward potentially profitable products, at the expense of healthful products, has left nutrition science lagging. Much we do not know, and what we do know is often obscured and ignored.

• Genetic engineering is valid science. However, corruption in agribusiness industries has brought unsafe products and processes that are severe threats to the future of food production. In the present circumstances, "GMO" products are not safe, and at a minimum, should be labeled.

• Not a universal rule, but usually natural is far better than artificial. Raw milk is much better than commercial milk. Most boxed and bagged foods are not healthful. Products labeled "natural" may not be.

• Natural fats of all kinds are healthful. Commercial seed oils (corn, soy, etc.) are not natural. It does not appear that any un-natural or chemically altered fat is healthful. Natural animal fats (from grazing, not from grain-fed animals) include vital nutrients lacking in plant foods.

• Bad nutrition is a major cause of violent behavior, low intelligence and many kinds of chronic diseases.

I could go on, but let me recommend two books:

Nutrition and Physical Degeneration, published in 1939 by dentist Weston A. Price, a scientist with the resources and attitude to do better research than most that we see now.

Vitamin K_2 and The Calcium Paradox by Dr. Kate Rheaume-Bleue, 2012. This almost unknown vitamin from natto (a fermented soybean dish), cheese and eggs can do more for arteries and bones than other foods, much more than any drug.

With the hundreds of books on my shelves, I still found much to learn in my first issue of Countryside.

Homestead health:

Aromatherapy

By Julie Andrews
Florida

The clear approach to aromatherapy could be said to be through your nose, and it is, in large part. But what about feelings, emotions, even the physical changes that come about through the use of essential oils? Clearly these pathways lead us to a certain surface knowledge of essential oils, and perhaps even a calling to deepen our understanding of how and why the oils work.

I have been using therapeutic grade essential oils in my acupuncture practice for many years, even before I graduated from acupuncture school. Even if you are not an acupuncturist, you can still use the oils on the acupoints. Put just put one drop onto a Q-tip and apply the Q-tip to the point. Peter Holmes of Snow Lotus Essential Oils teaches acupuncturist to not only use the Q-tip method on points before inserting needles, but to use them in relation to the meridians, organs and organ systems; valuable information for an acupuncturist incorporating the oils into their practice.

Many of the oils I use are ordered from Essential 3 in Oregon. The staff is well trained and accessible. If you have questions, they'll try their best to answer them. They will also set up a wholesale account if you qualify allowing you to buy professional sizes, which are nice if you are diffusing the oils in a clinic, home or even a barn. Mountain Rose Herbs also markets therapeutic grade essential oils plus lots of other items, and they're a great company to deal with.

I know there are many other companies offering therapeutic grade essential oils for sale, but those mentioned above are the ones I have the most experience with.

My passion for horses has led me to use the oils to improve the health and well-being of my four equines. Horses are very sensitive creatures and are receptive to the use of the oils in small amounts. I have been, to some degree, a person who believed "a little is good so a lot is better." The horses have taught me, more than humans, that this is not true. I almost never use the oils except in small amounts and rarely undiluted. For humans, I usually mix with grapeseed oil, and for animals, aloe vera gel (it goes through the hair and does not leave an oily residue).

Here is a tip for those who may have an old horse (or a young horse) with pelvic problems making rear hoof care difficult: Mix about eight drops of orange essential oil with about two ounces of aloe vera gel. Turn and rotate gently to mix and apply to the hip area when you plan to trim or clean hooves. The oil makes the job so much easier and after several applications, the horse may no longer need the oil. It's sometimes hard on older horses to have their feet worked on, and anything we can do to help them is a bonus for them as well as the hoof-care person.

Insomnia is a condition so prevalent in our society that it is almost considered normal. Most everyone knows about the use of lavender to help bring about sleep, but do you know it's best not to use spike lavender due to its high concentration of camphor which is stimulating rather than sedating? A lavandin is a cross between pure lavender and spike lavender and will contain varying amounts of camphor. Massages using oils such as marjoram, lavender, chamomile, neroli or rose can ease tension and restore restful sleep. This can be done by anyone in the family or a friend. It does not have to be a professional massage therapist, but they are so wonderful, and what a treat it is to get a professional massage with the essential oils.

An oil used especially for releasing muscle tension is myrtle. Being a rubifacient, it brings heat to the area being massaged, so make sure heat is indicated or the condition could be made worse with the use of myrtle. So much tension is held in the shoulders, neck and the jaw. A diluted myrtle oil massaged into these areas can work wonders and give a pleasant warm feeling.

An oil to always keep on hand is yarrow. It stimulates a strong emotional release, is a powerful anti-inflammatory, and has anti-bacterial properties, but is gentle on the skin. Its most endearing quality in my clinic, barn and home, is its use as an antidote for an adverse reaction to an essential oil. And while on the subject of adverse reactions, if the essential oils ever get in or around the eye, always use an oil such as grapeseed or even vegetable oil if that's all you have, to drop into the eye or to rub around the eye. Never use water, which will make matters worse.

The oils give us a unique perception of the world around us through our sense of smell. They help us to become sensitive to the changes within ourselves; of the harmony and balance they engender. Use them with knowledge and awareness, but use them. Of course they are not a substitute for appropriate medical care when necessary.

The goat barn:

An Accidental Goat Roper

By Jerri Cook
Countryside staff

Every now and then, I hear a word or phrase that's common in one area of the country but completely foreign to me. While brainstorming ideas for a title for this article, I mentioned the term "goat roper" to my well-traveled husband. He shot me an incredulous look and chuckled. "You can't use that."

"Why not?" I kind of liked it.

"Goat roper is derogatory, definitely not a term of endearment. Your readers will be mad at you." Sigh. I was disappointed but decided to do some research just to be sure of the meaning of this slur. My disappointment churned into confusion as I learned the origins of this supposed smear. The more I read, the less of a slur it appeared to be.

The phrase "goat roper" originated in the latter half of the 19th century in the Desert Southwest. It was hurled at small stock owners by ranchers, cowboys, and bankers to make fun of small farmers and homesteaders who weren't willingly assimilated into the burgeoning beef industry. The implication was that these smaller farmers were slow, stupid, and just not worthy of any real respect from the beef industry.

But here's what I don't understand—what's so bad about being an independent small stock producer or homesteader who respects the natural pace of things? Nothing. Small, steady, and independent is the way to go.

I decided to stick with the title, because I'm not going to let a half-baked attempt at an insult stop me from embracing the principles I value. The term may have been intended to poke fun at small-scale producers and independent pioneers who were squarely in the way of giant agri-business. But fast-forward to this century, and there can be no doubt at all—it's the goat ropers who are having the last laugh.

The accident

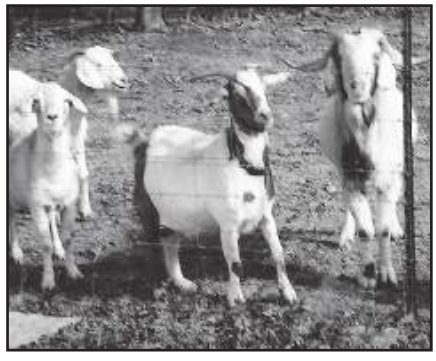
Seventeen years ago, a drunk driver struck and nearly killed Denise Cuprowski's husband, Lee. Like the process of pursuing an insurance claim, the process of healing was long and hard fought. The family relied on Lee's income, and when that was gone, life in New Jersey got hard. After a year without an income, the family lost their New Jersey home. With bills mounting and prospects sinking, the Cuprowski family picked themselves up and set out for Adairsville, Georgia, where Lee had family. They rented a small apartment in town, and Lee found work on a local farm.

This wasn't the greatest of times for the beleaguered family, but they managed. What they didn't know, couldn't have known, is that this accident that kept unfolding as hardship and worry was in fact marking the way for an adventure that would inspire many of the family they left in New Jersey to join them in Georgia.

While working on the farm, Lee learned of a house for rent in the country. The family packed up again, and made the short move to their new, but decidedly temporary home. When Lee finally got a settlement from the drunk driver's insurance company, he and Denise bought 28 acres across the road from the house they were renting. Lee rented another 100 acres, bought some Angus steers, and set out to raise beef with no thought at all about goats. Until….

The goat ropers

When Denise's son John entered high school, he joined FFA. It wasn't long until John decided he wanted to raise meat goats. By this time, the herd of Angus cattle was doing well and bringing in some money. The family had also added more animals over the years. In addition to the beef cattle, they had donkeys, pigs, and sheep. But John wanted goats.



Denise's son decided to raise Boer meat goats for FFA, and she has continued to raise them.

Eventually, John tired of raising meat goats, but his parents continued on. "We had bought a few Boers from someone Lee knew. After John moved on, they kept having babies, and we just kept them," she says. "We learned as we went along." Now, 10 years later, it's Denise who

Denise bottle-feeds the Boer kids.

is out in the pasture in the middle of the night looking for her goats and bottle-feeding kids.

The Cuprowskis raise Boer goats, a meat breed that is widely believed to have originated on the African continent. This breed became popular with American breeders in the latter half of the 20th century, but that's not to say that goat meat was rarely consumed here. The native people of the Southwest and Mexico were consuming goat meat long before anyone ever heard of Boer goats.

While crossing through the Desert Southwest, settlers often ate goat meat along the way. *In Feast or Famine: Food and Drink in American Westward Expansion*, Reginald Hosman explains how the Anglo settlers found goat exotic, but for the native inhabitants, goat, mutton, and wild game was what was for dinner. Not beef.

Marian described the Mexican inhabitants of Albuquerque as living on a diet of goat meat and mutton, supplemented with deer and antelope meat, and pinto beans with red pepper.

She remembered Santa Fe in the mid-1850s as a lively, colorful place. It was a supply center for the whole surrounding country, and there were freight wagons pulling in daily from Fort Union, Texas, and California. Great wagon trains were leaving in all directions, on streets enlivened by chickens, roosters, and goats.

Rather than the hogs and cattle, the Mexicans of the Southwest depended on sheep and goats.

The book documents the eating habits of the settlers as they traveled West. When the settlers arrived in the Southwest, they were surprised to find native people raising and eating goat. Although the native people tended to let their meat goats get larger than European settlers were used to, the newcomers quickly adapted to the native dishes.

To market, to market

Most of the Cuprowski's's animals are bought as replacement stock and for butcher and processing within the large Hispanic community near their farm. In fact, most goat meat produced in the United States is consumed by immigrant communities. It's really not all that surprising considering that before the globalization of beef production and processing, goats were kept for both milk and meat on every continent, including ours. The modern American foodscape is built on cultures from around the globe. *E pluribus unum*.

The demand for a stable, steady supply of goat meat is rising in the United States at the same time supply is declining. The University of Wisconsin Cooperative Extension (UW Extension) reports a two percent decline in production in 2010 due to increased demand and decreased supply because of drought. It's likely that the supply of goat meat in the United States will continue to fall short of demand. Because of this, the markets for meat goats are growing. The market is ripe for all sorts of marketing strategies. Suggestions from the University of Wisconsin Extension include:

- Direct marketing, including direct sales to consumers of live goats or goat meat
- Goat meat sales at farmers markets
- On-farm sales of live or processed (under state regulations)
- Restaurants
- Livestock auctions
- Developing relationships with Halal processors
- Mexican groceries
- Developing relationships with Catholic churches serving the Hispanic population

The UW Extension also reports that interaction with the immigrant community has led to an increased demand for goat meat as it becomes more acceptable in mainstream American cuisine.

Who's laughing now?

The world is an unstable place.

No one knows this better than the global beef industry. International regulations, political brinksmanship, and droughts have all served to give the mighty beef industry seizures. Then, there's the constant threats of government shut downs, terrorist attacks, and war that make markets and consumers uneasy. All in all, now is probably the worst time to be a large-scale beef producer. But it's a great time to be a goat meat producer. While big government and big agri-business are worried about global disease and looming governmental collapses of one sort or the other, independent meat goat producers are making steady progress right under their noses. Laugh on, goat ropers, laugh on.

Further reading

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Goats and Grain

COUNTRYSIDE: My wife and I read with interest Mariah Reynold's article, "Goats 101." As long-time goat owners, we appreciated the information she offered for people newly considering goats. They are great animals, but they can be a challenge.

One point on which we differ is on the use of grain as feed for goats. A goat's four-stomach system is designed for roughage, not concentrated foods like grains. When we're milking, we give each doe a cup of barley during milking to provide a little extra energy, and as a treat. But larger quantities of grain can be fatal to goats. Even good-quality alfalfa hay or fresh grass can be hazardous to goats if they eat too much too fast.

Goats are smart enough to get through gates and fences, but not smart enough to know when to stop eating. If there's grain around, they will find it. We've lost at least a half dozen goats to grain overload over the years. Our most recent casualty was our #1 goat, Christy, who got into the chicken feed about two weeks ago. She quickly developed bloat and acidosis, and died within 24 hours.

When a goat eats too much grain or other carbohydrate-heavy food, the carbs break down into acids that throw off the balance of bacteria in their rumen. The unwanted bacteria generate toxins that can kill a goat quickly. Bloat can be identified by distension of the abdomen on the upper left and lower right sides. The accompanying acidosis tends to cause a sweet smell on the goat's breath. Usually the affected goat will not want to get up on its feet, and will moan in pain if the bloat is bad.

There are two types of bloat: gassy, and foamy. Grain overload usually causes gassy bloat, but we keep Bloat Guard on hand just in case there's a foamy bloat. Bloat Guard disperses the foam. It doesn't have any side effects and there's no milk or meat withdrawal, so it doesn't hurt to administer it if foamy bloat is suspected.

The most important thing in treating bloat is to catch it early. If you know the goats have been into the grain, watch them closely, and give them as much baking soda as they want. Baking soda helps rebalance the rumen by neutralizing the excess acid. If the goat becomes lethargic, treat it with Bloat Guard. Also, get him or her up on its feet and walk it around—that helps work the grain and its byproducts through their system.

If the goat cries in pain and won't get up, give a penicillin injection to kill the offending bacteria, and a tube of activated charcoal orally to absorb the toxins. We have sometimes done these two steps preventively when we knew that certain goats had eaten too much grain; last summer we saved two goats that way.

Watch the goat's temperature, too. You can give Banamine for pain, as long as the goat's temp is normal (101-102°F). (Note that both penicillin and Banamine have milk and meat withdrawal requirements.) But Banamine has a tendency to lower body temperature. If the goat's temp starts to drop, skip the Banamine and call your vet immediately. You don't have much time left. You may wish to tube them, to release any gas and liquid in the rumen. Administer more charcoal, too. There are some other medicines your vet can administer, but it has to be done quickly, and even then the goat's recovery is not certain.

In the late stages of grain overload, the goat moans in pain and its body slowly shuts down. The temp will drop to the 90s, and eventually it won't register on your thermometer. Death follows soon after.

We have never been able to save a goat with severe grain overload. In one case, our vet even tried surgery, but it wasn't successful. Prevention is a far better option. We now keep our grains well away from the goats, locked in another building, behind what we hope is a goat-proof door. And we don't feed them grain at all, except as a treat during milking and kidding. – *D.J. Mitchell, Jackrabbit Ranch, Paragonah, Utah*

Various views of Bev's hay bunk. Feeding from inside the barn is much more pleasant during inclement weather and the bunk also keeps precipitation off the hay.

Feeds & feeding:

Inside Loading Hay Bunk

By Bev Sandlin
Executive Editor, Seasonedcitizenprepper.com

Homesteading is hard work, especially as you get older. Three feet of snow and -40°F temperatures make it even less fun! I try to take advantage of every possible time and effort saving idea I can come up with.

Here is an idea for creating a hay bunk that you can load from the inside of the barn.

I cut out a square between the existing studs. I reinforced that with a stud up the middle—that stud also provided a solid slide back for the door. Then I cut a 3/4-inch piece of plywood as a door. I created a slide with a couple of 2 x 4s to keep it in place.

Then I created a pulley system to easily pull it up and hold it in place. I just used a piece of rope, a pulley, an eye bolt and a nail to hold it in place. I can now open and close it with ease. In the summer I just leave it open.

Note the scissors hanging on a nail. I use that to cut strings on the bales.

Note the rake leaning up against the wall on the right side. I use it for pushing the hay into the bunk and also for cleanup of the loose hay that inevitably accumulates.

Hard to see here, but I ran a piece of aluminum flashing that I had laying around on the bottom of the feed bunk to make the hay slide easily. A person with full strength would probably not need this, but I no longer have the strength that I did. I can fit two full hay bales in this hay bunk from this position.

The top picture is of the inside loading hay bunk from the outside under the lean-to. Note the 2 x 4s on top of the bunk. The horses can easily reach the hay through them but it helps to stop them from pulling the slabs of hay up and throwing it on the ground—saves hay! I also have a salt block in that bunk, besides the one on the ground and there is another on the other side in a salt feeder. I believe in feeding salt free choice. I have seen up to four deer licking on the blocks.

This feed bunk was already here when I bought this place. But carrying the hay around, lifting it into the bunk and getting it between the slats was a real chore! Most people prefer to feed outside because it keeps the manure from building up in the barn. Coming up with an inside load made a huge difference for the better!

Dan is the palomino and Colada is the grey mare. They are both broke to ride and drive. And, for what it is worth, they are both "barn broke" and do not mess inside if they are not tied in—so nice.

Seasonedcitizenprepper.com is a blog site devoted to the older homesteader/prepper that believes in prudent, practical preparedness. Self-reliance, frugal living, and faith are the cornerstones of this site. Our goal is to facilitate sharing of knowledge among our subscribers in order to build a sense of community.

Feeds & feeding:

Holy Mountain Farm Combats

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At Holy Mountain Farm in Redbush, Kentucky, the Bruno family raises Katahdin sheep, Alpine dairy goats, Jersey milk cows and heritage breeds of turkeys, chickens, ducks and geese. Their goal is "to raise livestock organically to help feed others the way that God intended." The Bruno family raises their animals humanely and lovingly, and one of the main components of this is making sure they have a healthy, complete feed ration.

The Brunos realized that the diet they were feeding their animals was very expensive and something had to change. They say, "We were feeding our animals with certified organic grain which was very costly. We do not have a lot of pasture here, but use all that we have to feed our animals." The Brunos discovered the Fodder-Pro Feed System in the FarmTek catalog, which they had been receiving for a while. They continue, "We thought that the Fodder-Pro Feed System would help us out during the winter months when the pasture is lacking for the animals."

The system is working out quite well for Holy Mountain Farm. "It provides enough fresh fodder to supplement our goats, sheep, chickens and dairy cows at the same time. It is very cost effective by making the organic grains last a lot longer," says the Bruno family. They have seen a real improvement in the health and wellbeing of their livestock as well. "The fodder is very healthy for the animals and their production has gone up. The poultry are a lot healthier and the milking animals' production has really increased."

The Brunos are happy, not only that their system is easy to use and economical, but that their animals seem so happy with fodder as part of their diet. "We have been able to make our grain stretch for quite a while longer, which means we are spending money less often. Also, we feel that with fodder, the animals are getting the extra nutrition they need." They continue, "They all seem so content on the fodder diet. This system has been a blessing and the animals love it!"

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HOW HARD CAN IT BE?

There IS a trick to opening feed bags

By Ken McGregor
Canada

I used to fight to open feed sacks. We had goats, pigs, chickens, dogs and cats that all had to be fed from sacks from our local feed mill. Some sacks were plastic, some paper, but opening them was a constant source of frustration. The stitched closing of the bags defied being snipped. You could saw off either end of the knotted thread with the same results. You might get a small parting, but most of the time I found myself having to hold the bag sides apart as I slashed the stretched thread with a knife in my third hand.

I tried cutting the bag open just below the stitching but those bags are tough and it ruined them for refilling. Our feed mill reuses the bags if they aren't too stained, and we all want to do our part to cut down on waste packaging.

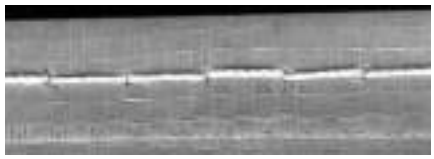
I was complaining one day at the feed mill and they were surprised I had never been introduced to the secret of stitched closures. In the slim chance you don't know the secret, I will go over the steps to easily open stitched bags:

Orient the bag so the flat regular stitch side faces you. One side is obviously loop knotted, this side should face away from you.

The end you need to work on is now on your right.

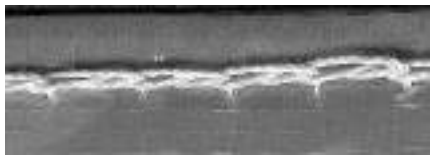
Carefully unloop the end. Since there are single and double chain stitches this can be a picky moment or two. You want to have an end that when pulled, unknots the looped cord. If you pull too soon the cord will knot and you will have to unknot it, so pull gently. Sometimes it is easier to cut the cord and start over.

A single looped chain stitch will now unlock all the facing loops and the bag will completely open. A double looped chain stitch requires sawing the loops apart by alternating pulls on the two threads using both hands.



Flatthread: This is the correct side to orient yourself so you go to the right to unravel the lock stitch.

Loopthread: This is the wrong side to orient yourself to. If you see this turn the sack around to face the flat thread side.



I will confess—being a died-in-the-wool homesteader with grandparents who defined frugal having survived the Great Depression—I save the cord. I started with a small ball and now I have a ball about the size of a hardball. I wrap the thread around in a random fashion and use a crochet hook to slip the loose end under an existing wrap. If I ever need three to four-foot threads already precut, I have some on hand. If not, eventually I'll have a softball!

(Ed. note: It also prevents animals from eating it—and you know they'll try!)

A ball of thread from feed bags could be in your future if you start saving it now! If you wrap the thread around the ball while you rotate the ball so the wraps are a small distance apart, you will find the ball seems to stay round. You try to alternate the ball's orientation from thread to thread. The harder you pull the thread the harder the ball. You can tuck the wrap end under an alternating wrap if you want to keep the threads separate, or tie the thread end to end if you imagine a use for a single length.

The apiary:

Bad Queens & Laying Workers

Perry & Beverly Riley
Life of Riley Honey Farm, LLC

Raising honeybees is a challenge. One day your hive looks good and a few days later you wonder if it's going to live. There are all kinds of diseases—foulbrood, nosema, etc. and pests—mites, hive beetles, wax moths, etc., that can weaken a hive. Sometimes a hive becomes weak because they lost their queen and eventually it will die. If they are queenless too long a worker may start laying. Since she is not fertile she will only lay drone eggs. You can tell if you have a laying worker because all the brood cells will be drone cells. You will know they are drone cells because all the cells will be raised rather than flat. They will not be in a solid pattern but will be scattered throughout the frame. When this happens, the hive will gradually decline because there are no worker bees being produced.

When you have a hive that has become queenless, it is possible to save the hive if you catch it in time. If it is so weak that wax moths have taken the hive over, it is almost impossible to save. Before that time there is a relatively good chance of saving the hive. In order for the hive to make brood they have to keep the inside of the hive 95°F. If you have a hive with two deep hive bodies and a honey super on it, the bees will have declined in number and there may not be enough bees to keep it warm. The bees will need to be crowded. Therefore, you should remove the honey super and you may even need to remove one deep hive body so that the bees are crowded up enough to keep the hive warm. If it is not warm enough the bees will not make brood.

You can correct this situation by buying a new queen for the hive. A far better solution is to let the bees make their own queen. Bees have been making queens for thousands of years and they can do a lot better job than we can. When they make a new queen, she will have genetics that have adapted to and survived the local climate. They cannot make a queen on their own so you need to help them. You do this by getting a frame that has eggs less than three days old from another hive. Insert this frame with eggs into your queenless hive. They should have a queen cell made within five days. Generally, they will make a queen cell the first time you try. If they do not, you may have to try a second time. When you do this the genes from the queenless hive are dead. All the new genes will come from the hive you took the eggs from and the drones the new queen mates with.

When you have a hive that has a weak queen she must be replaced. To get rid of the old queen you can go through the hive and find her. If you find her, pinch her. This may seem cruel, but it is essential to save the hive. It is sacrificing one to save the multitude.

Sometimes, if the hive is fairly large, it is difficult to find the queen. Don't spend a lot of wasted time trying to find her. It is very easy to get rid of her and it doesn't take much

Weak queens need to be replaced. If you have a large hive, it may be difficult to find her, so brush them all onto the ground and let the bees start over.

time. Simply load the complete hive up in your vehicle and take it 100 yards away. You will need one empty deep hive body and if you have a super on the hive you will need an empty super body. Take each hive body with bees and set them on the ground individually. Leave the hive stand in your vehicle. Place an empty hive body on it. Take each frame from the hive that is now on the ground and brush all the bees off onto the ground. As you finish with a frame, put it in your empty hive body. Frames that have brood have to be destroyed. You can destroy it by letting it set outside or freezing it. This is necessary because we want the hive to realize it is queenless. When you have finished the first hive body, it is now empty and can be placed on top of the hive in the truck and you can repeat the same process until all the bees have been brushed on the ground. You then take the hive back to its original location. This hive will not have any bees in it but the bees will come back and many of them will be there waiting for you. The queen will not be able to come back because she is too heavy with eggs and cannot fly. You have eliminated the queen and now have a queenless hive.

After you get rid of her they will not realize they are queenless for five to seven days, so do not do anything more to the hive. After five to seven days you can treat it as a queenless hive and insert another brood frame with eggs less than three days old.

If a hive has a laying worker and you put a queen in without removing the laying worker, the workers will kill the queen because they have accepted their laying worker as their queen. The laying worker can also be replaced using the same process that was used with the bad queen. She, too, will be heavy and unable to fly back to the hive.

You have a lot of work in getting a hive established and you should do everything you can to keep every hive flourishing. It is the responsibility of the beekeeper to do this.

In order for a beehive to survive the long, dreary days of winter they have to have a strong queen.

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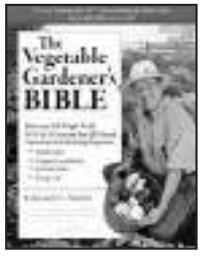

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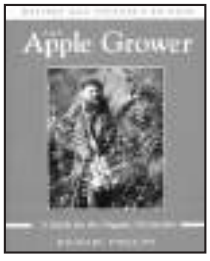
Michael Phillips



Apples represent "organic's final frontier" for many backyard and commercial growers. The number of insect pests and diseases that can plague the popular fruit have made a completely organic approach seemingly next to impossible.

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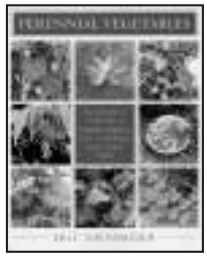
The Gardener's Weed Book will show you: How to control weeds organically: mulching, hand weeding, cutting and mowing, growing smother crops; How to identify weeds, with illustrations of seedlings and mature plants; What weeds reveal about soil conditions and gardening techniques; All about your weeds: origin and range, site, soil, and season, full description, and related plants. **144 pages, $14.95**

Perennial Vegetables

From Artichokes to Zuiki Taro, A Gardener's Guide to Over 100 Delicious and Easy to Grow Edibles

Eric Toensmeier



There is a fantastic array of vegetables you can grow in your garden, and not all of them are annuals. In *Perennial Vegetables* the adventurous gardener will find information, tips, and sound advice on less common edibles that will make any garden a perpetual, low-maintenance source of food.

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The Backyard Orchardist

A Complete Guide to Growing Fruit Trees in the Home Garden

Stella Otto

The *BackYard Orchardist* includes information on site selection, propagation, soil nutrition, pest control strategies and disease identification as well as specific information on apples, pears, cherries, apricots and more. It is one of the finest sources of fruit growing information available. Well written and bulging with information, it will fill a conspicuous void on any homestead. **250 pages, $17.95**

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Kiko Denzer and Hannah Field

Kiko Denzer and Hannah Field, maker and baker, invite you into the artisan tradition. First, build a masonry oven out of mud. Then mix flour and water for real bread "better than anything you can buy." Total cost? Hardly more than a baking stone—and it can cook everything else, from 2-minute pizza to holiday fowl, or a week's meals.

Clear, abundant drawings and photos clarify every step of the process, from making "oven mud," to fire, and to bread. Informative text puts it all into context with artisan traditions of many ages & cultures. Beautifully sculpted ovens (by the author and readers) will inspire the artist in anyone. And the simple, 4 step recipe (based on professional and homestead experience) promises authentic hearth loaves for anyone, on any schedule.

From weekend gardeners to "simple living," back-to-the-landers; Peace Corps volunteers to neighborhood community-builders; third-graders to earth-artists of all ages, this book feeds many hungers! **132 pages, $17.95**

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Back To Basics

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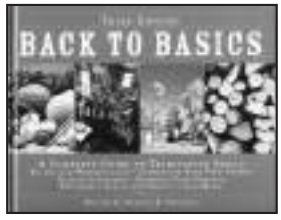
Abigail R. Gehring



Anyone who wants to learn basic living skills and adapt them for a better life in the twenty-first century need look no further than this eminently useful, full-color guide. Escape to an era before power saws and fast food restaurants and rediscover the pleasures and challenges of a healthier, greener, and more self-sufficient lifestyle.

Back to Basics will help you dye your own wool with plant pigments, graft trees, raise chickens, craft a hutch table with hand tools, make treats such as blueberry peach jam and cheddar cheese and instructions on how to build a log cabin or an adobe brick homestead.

Even if you live in a city apartment you will find your imagination sparked. This may be the most thorough book on voluntary simplicity available. **464 pages, $24.95**

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101 easy-to-make things for your garden, home or farm

Ken Braren & Roger Griffith

If you want to save time and money, or make your life easier and more productive, look through this book. We believe you will find something that will be easy for you to build, even with only hand tools and limited experience. Here are some of those ideas: Fireplace front, to conserve heat; Root cellar, to store those valuable vegetables through the winter; Fences, gates, stiles—even a turnstile; Animal shelters—from birds to horses; Window greenhouse; Inexpensive solar drier; And dozens of small, useful items, such as stove wood containers, a macramé hanger, tool storage units, and seed containers. **176 pages, $14.95**

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Country neighbors:

Put Down the Phone

Pick UP a Plant!

By Joe

Modernity's greatest gift to humanity was indoor plumbing. At least that's what my father, a civil engineer, maintained for over 50 years. On the other hand, Mom thought it was her seemingly unlimited credit card that allowed her access to shop before funds were available. Back in their day, Grandma and Grandpa never could get enough of their color set. Being that they lived through the advent of radio and television, their position was purely driven by the color aspect. It was truly a marvel for them. As for me, even at an early age, I had nihilistic feelings toward technology. I never bought into the latest gizmo or techno-fad as being that attractive or noteworthy. However, I did recognize a distraction when I saw it. And, a whopper of a distraction snuck right in through our front door.

From adults to children, the sick to the healthy, to death do us part, it seems as if nearly all walks of life can't seem to get enough of their smartphones. It's completely understandable. With a gazillion apps available, ranging from stargazing maps with instant identification, or second-by-second stock market reporting, to apps that help you to level the picture you just hung, who wouldn't be captivated? The possibilities are endless. That is where the issue lies.

The Dose Makes the Poison

A pinch of salt in soup can do wonders for flavor. However, pour the entire contents of the salt container into the soup and what results is highly toxic, denatured concoction beyond consumption. Smartphone users can fall into that trap as well, in that too much of a good thing is simply bad. For example, using a smartphone for business purposes can be a productive advantage. However, when alone, or in a social situation that involves interaction with strangers, many smartphone users tend to collapse into the ether of their phones as a way to avoid human outreach. How many times have you been in line at your local grocers and looked up from your smartphone to see others hammering away on their smartphones? This abuse of over-electronic connection can lead to social disconnection, and eventually, the lost art of communication and human interaction. As concerning as this loss is, to further compound the issue, I am afraid that in many cases this habit has become our children's new normal. If you need verification, just spend a few minutes in nearly any high school hallway between classes. You'll likely see a smartphone in every hand as students march like zombies to their next class. And to top it off, this trend has now started to make it's way down through the ranks to the elementary schools. I've heard accounts of children in first grade now carrying smartphones. This new normal is not acceptable.

Kids and adults (and cats!) are fascinated by the Mimosa plant, which moves when you touch it.

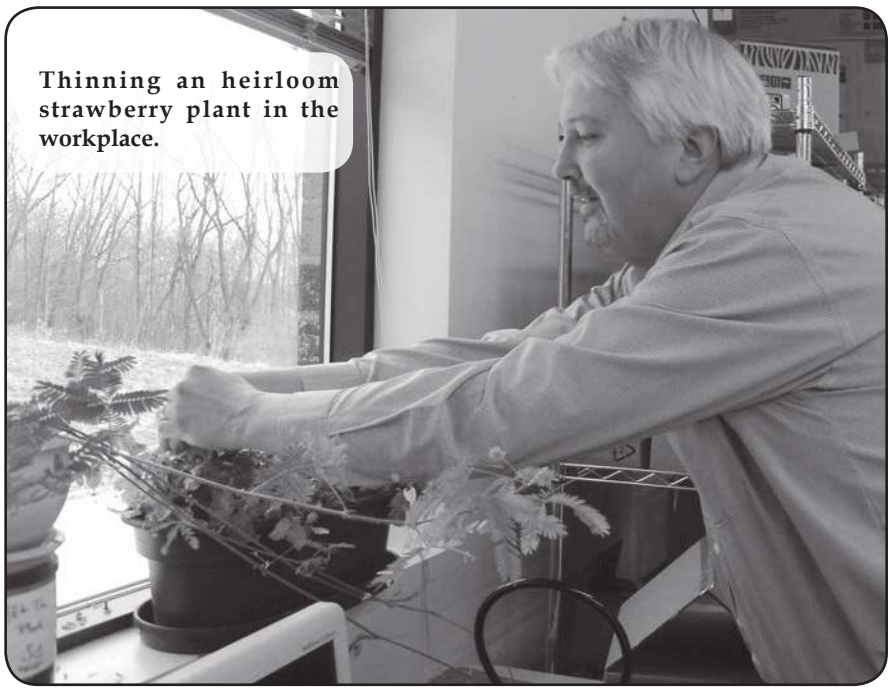
Don't blame smartphones or the myriad of entrepreneurs developing apps. We are to blame. The ease of breaking social ties and our lust for more at-the-touch information has spurred on this 21st century gold rush. All is not lost though. This is how you take action to ensure direct human contact continues as a characteristic of the social genome.

The Antidote

Put down your smartphone. It's a tool, not a living thing. Instead, pick up something that is. A plant. An animal. People. Better yet, bring together plants, animals, and people. Think of strategies to involve you and others and those things natural to our world. Start now. Here are a few examples to get you on your way.

One of the best ways to get in on the ground level is to simply start at the ground level. For example, kindergarteners to third graders can't seem to get enough of baby animals. My wife, Kelly, makes it a point each year to not only provide fertile duck eggs for elementary teachers to hatch with their classes, she also ensures that whatever unique animals we may have on the farm that year make it to the spring show-and-tell circuit. One year she brought in our sweetest, children-loving giant of a Newfoundland. Not only could the children not keep their hands off of Nana, but Nana ensured that every child received at least one giant lick and a nose kiss before leaving. Other years the menagerie-in-tow included Saxony, Peking, and a variety of teeny but noisy Call ducks. I think this year it will be our new baby buck dwarf goat, Andy, who has a native attraction to humans. The net was that each living exhibit did their natural best to draw the young ones' attention to the living. In return, the children were left with lasting memories that helped to further ensure sustainable ties to the natural world.

Children aren't the only ones that are in need of finding their way back to the natural world. The majority of adults do too. The reality of leaning to the tempo of a relentless bustle



Thinning an heirloom strawberry plant in the workplace.

and grind has left many adults lost or simply forgetting their instinctive identities. The solution to this issue is straightforward. In most places of business, bringing in giant dogs or ducks for rehabilitative visits wouldn't be acceptable. However, potted plants and excess produce from your summer garden typically is acceptable within that norm. The strategy is the same for adults as for children: Provide unique and novel plants and produce to gain attention. An excellent plant folks just can't get enough of is a Mimosa, sometimes referred to as a sensitive plant. This plant has stems and leaves that when touched by the unsuspecting person, fold as if by magic. Adults can't get enough of the interaction to the point that almost all who encounter this phenomena ask for their own plant to take home for their spouse and children to enjoy. That's a double win.

Another strategy is growing a few heirloom or novelty fruits or vegetables with the intention of sharing them in your workplace cafeteria or break room. My favorite produce to share is heirloom tomatoes. The colors, shapes and textures will draw in the most stubborn of techno geek to your plan. Providing a short history of where they came from, how and when they arrived in America and a hint of the rich flavor to expect is customary and will further ensure success. Have enough samples available for participants to enjoy then and there, as well as an adequate supply on-hand for them to take home. Who knows—your intentions might spur the action necessary for families to break their addictions to gadgets by starting a family garden so they can grow their own. That's the hope.

Pledging to Help Change to a New But Improved Normal

Daily I use a very sophisticated smartphone, a phone that has more computing capability than the on-board computers that operated early satellites. However, choosing to be part of this world, I refuse to allow technology to interfere with basic human norms. Instead, I work at outreach to others, and I use whatever means to do so.

Now is the time to start this migration away from the distractions of smartphones and gizmos that covertly attack our inner being. Join me, and persuade others, to put down their smartphones, and pick up being human again. Our children, our species, and our world, is counting on you.

Handy homestead tips:

27 Tips for Better Living

COUNTRYSIDE: I have been meaning to write for some time, and now that the chores are all done, I have a few minutes to sit down and write.

I am a very busy 72-year-young lady who loves the country life. You can have the big cities, been there and done that one. It didn't work for me, but I have really found my piece of paradise. I can grow vegetables and fruit, can, freeze, dehydrate, have a few chickens, hogs and the like, and be busier than a beaver from early morn till late at night. At the end of my day, I can't tell you half of what I have done, but I have been happy doing it!

Readers have such good ideas on how to live on less and stretch the buck, I thought you might be interested in some of my tips and ideas. Once you get started on this type of lifestyle, there is no other way. So here we go with some of my crazy ideas.

• I re-use my ziploc-type baggies. Just wash them thoroughly, hang them up to dry, and reuse them.

• When I buy bananas, I take them apart and they last longer. My mother would wrap the bananas in a tea towel and put them in the fridge and they would last for a week.

• Opened chunks of cheese will stay fresher much longer if wrapped in aluminum foil and refrigerated.

• Keep a chalkboard eraser in your car glove compartment for use when your car windows fog up. Works better than cloth.

• Put small piles of cornmeal where you see ants. Ants eat the cornmeal but cannot digest it, and it kills them. No harm to pets or children.

• When I buy celery, I don't discard those green leafy tops, I chop them up and put them in my dehydrator. When they are dry, I crush them in my hand, mix in a little salt, and presto, you have delicious celery seasoning.

• Always keep your refrigerator clutter free. Keep leftovers in as small a container as possible; this allows you space for other things. We don't need these huge refrigerators; we just need to be more organized. Use the fridge wisely.

• I let my clothes dryer hose blow inside the house in winter. I put a short ladies' hosiery on the end to stop the lint from blowing into the house. It's a great source of heat. *(Ed. note: It's also a great source of humidity, which you may or may not want.)*

• Unplug all unused electric appliances when not in use. They all use standby electricity.

• Only use electric lights in the room that's in use. Kids have a tendency to leave lights on everywhere.

• Make your own dried minced onion in your dehydrator. Cut up an onion into small pieces, dehydrate, and it's done. It's cheaper and much better tasting than the store-bought stuff.

• I cut up our used copy machine paper into four equal squares for shopping lists and all the other lists we have going on around here because we can't remember stuff until we write it down. (Go ahead and laugh, your time is coming, if you are lucky.)

• Squeeze your toilet rolls from round to oval. You will find the roll will last longer. No more spinning the roll and wasting paper.

• Open the drapes to let the sunlight in your house in the winter—free heat. Close them when the sun goes down.

• Make a stew or soup out of all

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the leftovers in the fridge. Bake some biscuits and you have lunch and dinner for days. A spoonful on top of my basset hound's meal makes him happy too.

• Give the post office back their rubber bands that they bind your mail together with. I bet they use several million of those a day. I save up a few weeks' worth and put them in a plastic bag. Hey, the post office can use all the help we can give them.

• Don't throw your bread crusts away. Cut into cubes and dry on the counter to use in your favorite dish.

• My showerhead is in the bathtub, so I put the plug in and soak my feet at the same time I'm showering. I also let the hot water run over my hair shampoo and conditioner bottles, it helps the shampoo/conditioner run out of the bottles easier. I have been known to bathe my dog after I'm done. He loves the nice warm water.

• I have a rescued basset hound. I walk the dog, exercise (I have two newly replaced hips), pick up the trash and visit with my neighbors along the way. I try to keep 20 miles of road clear of trash. I drive my car to a new spot each day, and that's where I start my walk. You would not believe how much aluminum I pick up and recycle. Wish I could train my dog to pick up some trash! It's a good moneymaker for our church.

• I wear my sweatshirt right side out one day, then turn it inside out the next. I think it looks kind of cool. Besides, who's going to argue with a 72-year-young country woman?

• Crush your tin cans by taking both ends out of the can and crush them. (I just step on mine.) The cans will take up less space in the recycling bin and cost less to dispose of. I pay for each trash bag to our local disposal company. *(Ed. note: In many places the tin cans can be recycled.)*

• When your toothpaste tube is empty, cut across the tube about half way up, open up each end and dig out the balance of the toothpaste. There's at least three to four days' worth of toothpaste hiding in each end.

• Buy the good paper plates so they can be reused by rinsing off the breadcrumbs and drying.

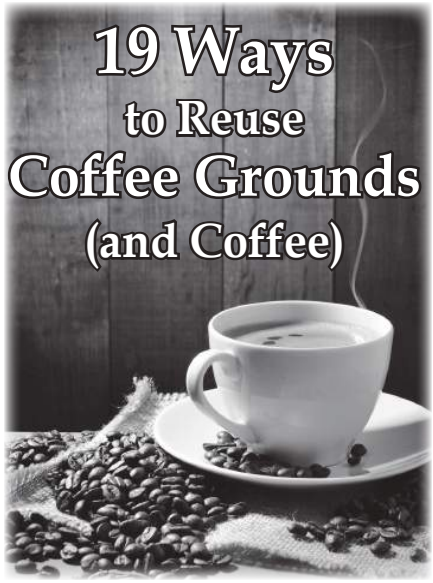
• Reuse your dishwater by watering your plants outside and inside. In our last ice storm, we were without electricity for 11 days. I flushed our toilets with used dishwater. It was a lifesaver. We became very inventive during this period.

• My water heater keeps our water at a very reasonable temperature for at least two days. Therefore, I switch off our water heater at the fuse box until our water is lukewarm. I do switch it on when I need hot water for showering and laundry.

• Turn your thermostat down to 55°F at night and 60°F during the day. Mine is on an automatic timer. I wear thermal underwear and a good thick sweater during the day. The body adapts to lower temperatures and is much healthier.

• I hang my washed clothes on the line. I bought a hexagon line dryer at an auction for $3 and love it.

Well, I have run out of ideas for now. I would love to hear some more cost-saving ideas, however crazy they are. – *Pat, Missouri*



Countryside: We use our coffee grounds in our garden always. We would use them around our plants also, but usually we have just enough to give the garden a good amount each year. I know the grounds promote worms, and a garden sure can use good earthworms. Hope you find some other ideas that are helpful. We love being in the country and learning new ideas.

In the garden:

1. Organic fertilizer: Sprinkle them in the soil of plants that love acidic soils, especially rosebushes (my roses love coffee grounds!), rhododendrons, camellias, evergreens, carrots, and radishes.

2. Organic pest and ant repellent: Sprinkle areas where ants, slugs, and snails hang out and destroy your garden.

3. Organic cat repellent: Yes, I love cats, but if you want to keep them out of your plants and garden, coffee grounds will do the trick.

4. Mushroom growing soil: Inoculated mushroom plugs nestled into moist coffee grounds can mean a great mushroom crop for you. Put grounds in a glass container and press a mushroom plug into them, repeating with more grounds and mushroom plugs until you run out of room. If you see mold, just remove it.

5. Bait worm life support: Add coffee grounds to soil to help keep bait worms alive longer.

In the house:

6. Closet deodorizer: Old pantyhose plus coffee grounds equals a sachet to keep your closet free of odors.

7. Refrigerator and freezer deodorizer: Place grounds in a small cup in the fridge or freezer much as you would baking soda.

8. Pin cushion filler: If you still use pin cushions (like I do), dried coffee grounds are a great filler for the cushions. *(Ed. note: This is one place fresh is probably better than used.)*

9. Abrasive cleaner: For stubborn grease and stains on pots and pans, coffee grounds really get in there and do the job.

10. Dust deflector: We're talking about the fireplace here; sprinkle coffee grounds on ashes before you start collecting them to minimize the dust. I love this tip and use it often.

11. Furniture scratch toucher-up-

per: Use a Q-tip and coffee grounds to fill in scratches on wooden furniture—remember the coffee will stain the wood, so don't use it on something that won't match.

12. Meat tenderizer: This is one for leftover coffee as opposed to coffee grounds; soak steaks in coffee to tenderize and for an interesting added flavor.

In your beauty routine:

13. Hand soap: Rub grounds on your hands to get rid of stubborn odors like onion and garlic. In fact, the soap I use in my kitchen is made with used coffee grounds—Caffè Vaniglia soap from saponissimo.

14. Face mask: An egg white mixed with 1/4 cup grounds makes a great exfoliating face mask.

15. Hair rinse: After washing your hair, rub in coffee grounds for shine, softness, and even a bit of color for those of you who are dark-haired; remember coffee grounds act as a dye, so if you have light hair, unless you want highlights, this one isn't for you.

16. Cellulite rub: Mix one tablespoon of olive oil with 1/4 cup moist, warm coffee grounds and spread on cellulite hot spots. Wrap tightly with plastic wrap, leave on for a few minutes, and then remove wrap and shower as normal. For best results, do a couple times a week. (If anyone tries this, you "must" let me know how it turns out. Not to be done if you are on a septic system.)

For fun:

17. Dye: Use a mix of coffee grounds and water to dye clothing, paper, or even Easter eggs.

18. Tattoo base: Make homemade temporary tattoos using coffee grounds and henna.

And finally, on your dog:

19. Dog flea dip: I haven't had the nerve to try this one yet, but next bath time, my dogs are getting some coffee grounds rubbed into them after the shampoo and rinse routine. (Again, remember this acts as a dye, so you might not want to use this on white/light-colored fur.)

Even if you don't drink coffee, you can ask your local coffee shops and other places that serve coffee for their grounds, and start reusing them. The environment will thank you! – *Lil*

Re-cycling "recyclables" in the garden

COUNTRYSIDE: Over the years, I've found uses for things I'd normally recycle—in my garden. Here are a few of them:

• Plastic spoons/knives left over from barbeques, drive-throughs, etc., make excellent plant markers in the garden. Use an indelible-ink pen; mark on backside of spoon, or knife handle, and, after harvest, collect them, and save for next year. Wooden plant/row markers are expensive, and they rot.

• Square, wax, half-gallon orange juice containers make great seed planters. Lay it on one of its sides; cut along one long side, and the two short ends. Poke a few holes in the bottom, for drainage. Fill with planting medium; plant seeds; water, and use the "flap" as a roof. As it's a carton, you can mark the sides to locate the seeds, date, etc.

• Post-its—they're so handy. Use to mark flower pots/starter trays. Use a little tape to hold it on the pot, as sometimes, after watering, the sticky part becomes "un-sticky."

• One gallon, plastic milk jugs make excellent slow-release waterers. Just poke one or two holes in the bottom; place near plant. Replenish water through top pouring spout.

• Large, cardboard cartons can be very useful as walkways in your garden. I cut along one side, and remove any packing tape, etc. They are biodegradable, so will probably only last a season, but prevent weeds from growing, and me stepping on young plants. Every few days or so, I turn them over, and dispose of any slugs that may have decided to set up house. – *Ann, Owego, New York*

Country neighbors:

Remembering... Ellen's Lessons

Ellen: Sept. 17, 1937–Jan. 30, 2011

By Suzanne Rushwin
New York

Ellen and Suzette in Ellen's kitchen, November, 2011.

I'm sure most have had at one time or another, someone in their lives that inspired or helped to guide them. I would like to share my story of such a person.

I first met Ellen in May, 2005. She was an avid reader of Countryside as am I. I was busy enjoying my May/June issue when I ran across this tiny article written by Ellen about the importance of balancing your pH. After I read what she wrote, I just had to know more. Of course, she just happened to put her phone number at the end of the article.

The information in her article struck a chord in me. I was hoping to get some answers as to why I was feeling sick and tired all the time. Well, what I found out was this dear lady had MS and was willing to help me. We came to the conclusion that I was being poisoned by my amalgam fillings and stressed out from caring for my special needs child. My son Joey has Down's syndrome and had to have open heart surgery when he was only four months old. When he was 18 months old, he became autistic. He went from saying two-chord couplets to staring into space, using his peripheral vision to look at things and doing a thing called "stimming," which in itself is very addicting. The more he did it, the more he couldn't control not doing it. *(Ed. note: Stimming is a self-stimulatory behavior, such as flapping of the hands, rocking, spinning. If you've ever tapped a pencil or twirled your hair, you've engaged in stimming. It's usually used to reduce anxiety or fear.)* The neurodevelopmentalist we worked with explained it like this: Stimming induces endorphins in the brain. In effect, they get a physical "high" from doing it. She recommended pinhole glasses to eliminate his peripheral vision, which helped somewhat, but he was still stimming.

Because of his autism, he was not developing as he should. By the time I met Ellen, he was 4-1/2 years old and still not potty trained. Ellen introduce me to an organization called A.I.M. by Stephen Lewis which is based on quantum physics. I was able to put Joey in their program for free because they had just started a scholarship program for children with autism. From the very first day Joe was in it, his stimming totally disappeared. I'm not sure exactly how it works, all I know is that it did, and that was good enough for me. He went on to be potty trained, he reads, rides a bike, roller skates, and is currently learning to ski. Because of his Down's, things take him a little longer, but eventually he does get it. He's 12 now, his heart has never been an issue since the surgery, and he's a happy young boy who loves his family.

As for me, Ellen talked to me about having all my dental fillings replaced with composites. She helped me to do some detoxing and told me I should take some vitamins. These were things she had already done herself, so she knew what she was talking about. After a time, I was finally free of my symptoms.

Through all of this we were busy realizing our dream of moving to our piece of heaven. Well, it wasn't quite heaven, it actually required a lot of work on our part. Ellen was a

part of it right from the beginning. Every phone call we had would start out with "So what's going on at your house today?" Well, we quickly became friends through one phone call after another. I soon realized we needed each other. Even though we were 20 years apart in age, we seemed to be linked. Ellen's situation made her very limited on what she could do. Her days were spent in a wheelchair or her bed. She spent many hours on her computer doing research. She hardly ever left her house unless she had to. My adventures became her adventures—and I had plenty of those. With four grown children and four more still at home, we had plenty to talk about. She would tell me about her two children and all they were doing. She was very proud of her family. Then there was her beloved husband, Ed. He calls Ellen his "soul mate." They were trying to create their homestead, too.

Ed had built their house especially with Ellen in mind. He made everything wheelchair accessible, including the lower than standard height kitchen countertops, which meant all his cabinets had to be custom made. He did all this himself. He was Ellen's total caregiver. I found out firsthand just how much he did.

In November 2011, I was able to go and stay with Ellen in Texas, so Ed could come up to New York to visit with his son and his family. This would be the one and only time we would ever actually see each other. We met Ed the summer before when he came up to see his son in Corning, New York. He drove the two hours over to our house and spent the day with us. That was a very special day because Ed baptized my whole family in the name of Yahshua in our pond. On that particular visit, Ellen stayed in a nursing home while Ed was gone. It was not very comfortable for Ellen.

The following year I suggested that I could come to visit her while Ed was here in New York. They liked the idea and even paid for my plane ticket. I spent a wonderful 10 days with Ellen. We spent time talking, just enjoying each other's company, eating meals together, and helping her to organize some things in her house she just couldn't do. You know, that thing most women need to do (deep cleaning) that sometimes men don't understand. I was happy to do it for her.

When I first met Ellen eight years ago, she was still getting herself in and out of her wheelchair. Then about three years ago she suffered a bad case of flu. She almost died, and it left her weak. It took her a long time to recover from that. After that she depended on total care. Even so, she still sought out anything new she could do to improve things for herself. She never gave up. During my visit the one thing that amazed me was that she was so frail (only 73 pounds), yet she had no pain, no heart problems. She really did what she preached and it definitely made a difference.

There is one more special person I must tell you about. His name is Arthur and he was one of Ellen's dearest friends. Right next to Ed's unselfish devotion was Arthur, who promised Ellen that as long as she wanted to stay there, he would try to keep her going. He has been a tremendous help to my family, as well.

Because of Ellen, Ed, and Arthur, my family now lives life totally different from before. These last eight years have been simply incredible, each thing a story in itself. I've been shown many truths, and I will always treasure my memories of Ellen.

Country neighbors:

GARDENING
A MAN'S VIEW

By Joe March
Maine Zone 5

In my estimation, nothing beats fresh homegrown garden vegetables. Garden food is not only tasty, but you know how it's grown—no sewer sludge, what pesticides were used, soil enhancements and the quality of water used. Home gardening can be cost saving, environmentally friendly, carbon reducing, interesting, organic, educational and fun.

In past years my wife handled most gardening chores. I supplied a few homemade tomato cages, beanpoles, fencing, advice and complaints. I retired at the age of 62 and decided—after some hints from my wife—that I would pitch in on the veggie production at our place.

As I had been in excavation for over 45 years, I knew it would be a breeze. After all, you might say I had a PHD (Profound Horticultural Desire) in dirt. My prior business years told me preparation was everything; plan ahead, set a goal and go for it. All men know action is paramount, but they always think first.

Settling into my recliner and fortified with garden books, seed catalogs, magazines, a giant iced tea and a massive bowl of popcorn, I drew up an attack pattern. For me, popcorn is brain food—it stimulated me into a constructive attitude. It's man fuel.

My plan would be long term—not a flash in the pan venture.

Based on my excavation knowledge, I started with a site evaluation. I needed a fairly level spot with good sun, sufficient size and close enough to the house for a water hose connection. After some study I located the perfect spot. It meant moving my boys' swing set, wading pool, basketball hoop, sandbox, bike rack, baseball diamond, playhouse, whiffle ball setup and the wife's clothesline. No big deal, but my kids complained about the swings being on such a hill that the whole A-frame toppled over with any serious swinging action. Again, my construction savvy kicked in—myself and most men have a mind like a steel trap—and I set the posts in cement. The swing chains now hang about 45-degrees vertical, but the boys got the hang of it after a spell. After all, they are young *men* and my blood, so you know they're smart.

Thinking organic, I decided to make up a compost pile. I planned ahead, and thought the process through completely. Comfy in my chair, stocked with popcorn and tea, compost how-to books and literature in hand, my compost venture started. My mind was in overdrive.

Most Maine land is poor—acid and clay soil, if you're lucky enough to have soil at all. My coastal Maine lot was about a 1.5 on the 10 scale of goodness. About average for my area.

Some compost material I already had on hand; veggie kitchen scraps, coffee grounds, wood ashes, leaves, grass clippings, seaweed, and sawdust from my wood shop. This I figured to augment with horse, cow and poultry manure.

After several farm trips with garbage cans in my mini van, I had some piles of rotten goodies, but nowhere near enough of it. My van was pretty ripe, even though I had two-dozen pine tree air fresheners, six rolls of paper towels soaked in Airwick and liberally sprayed the entire interior with Pine Sol laced with Chanel No. 5.

I went to Plan B—all real men have a backup plan.

I toodled down to my nearby Chevy dealer and bought a snazzy brown (the poop wouldn't show so much) pickup. I chose GM because I figured we—the taxpayer—own 'em, so why not keep it in house, so to speak.

The pickup worked great. My farmer friend loaded me with a tractor scoop and soon I had some nice piles in my yard compost "pantry." Trouble was, I had to shovel the stuff *out* of the pickup. Bummer.

Two iced teas and a bowl of corn later saw me off to a farm equipment dealer on the Atlantic Highway. Two hours later, with a handsome power dump insert in my new brown pickup, I just pushed a button and two cubic yards (about 30 large trash cans full) effortlessly slid out. My kids said it was "Awesome, totally awesome!" I beamed with pride. Men possess the profound ability to bond, even over equipment and poop.

I mixed compost material based on what my books said about carbon/nitrogen quantities as best I could. I inserted a long stem thermometer, went to step three of my plan, and let her cook.

Step three was starting seeds. Pre-started plants are for babies, not men. I bought a nifty 8 x 8 clear plastic starter house, heater, grow lights, heat mats, benches, water system,

fans, tools, Pro-Mix, flats and hanging pots. It cost a few jingles, but that's going at it man fashion—lead, follow, or get out of my way!

Since my plan was to have raised beds, I set out to construct some. Taking my new pickup I zoomed off to the home center for some planks, stakes and hardware. Back at the garden site with a wicked big pile of timber, I set to work. Man, those big spikes drive hard into pressure-treated lumber! After bending over several spikes and whaling my finger once, it was time for tea, corn, and a plan.

Being a true man-genius I soon had the problem beat with a darling of an air-nailer and compressor. Nothing like the right tool for the job. I went around nailing everything I could find, it was so much fun. It gave me a true feeling of power that all men love.

Next I purchased a big 10-horse chipper shredder to prepare brush and yard waste for compost. I named it "Jaws." Watching Jaws digest a bunch of limbs and spit out beautiful chips was a sight to behold. The awesome power thrilled me. All men adore power.

Next I set to making a high rugged fence to keep critters out as I live in the woods and hungry wildlife abounds. I cut some cedar posts on my own land, which was handy and easy. The postholes were a different story. After a losing battle with an iron bar, sledgehammer, shovel, big iron wedge and bruised fingers, I blasted off to the home center. The store help knew me on a first name basis by now. I bought the biggest, meanest mother of all posthole diggers. It was raw power.

My hands hurt wicked, so I got some safety gear. On-the-job safety is priority. Outfitted with hard hat, ear protectors, bug screen, gloves, leggings, quick draw pruners, heavy shirt, safety orange-glo traffic vest, strobe light, first-aid kit and "man down" flag, I felt better and looked the part of the swash buckling gardening hero that I am.

Noticing my compost pile was at the turn stage by my thermo-probe,

I tore into the pile with a stout four-tined fork. I sweat. My back hurt, my legs hurt. Blisters I had from the iron bar post episode bled profusely.

By now you can guess the next move—tea, corn and bandages. Later, after idly thumbing through a garden magazine, mentally licking my wounds, the problem solved itself as always. Men are the "A-Team" when it comes to problem solving. I will sum it up with one word—Kubota.

A trip to the friendly dealer soon saw me outfitted with a sparkling orange diesel, four-wheel drive tractor complete with hydraulic bucket loader. I noted the transmission was controlled by a pedal with arrows for forward and back. The throttle had a rabbit and turtle, so even my wife could get the hang of it. A drink holder was an added bonus.

I soon had my compost pile turned nicely. Now I could load my pickup/dump with free horse manure at a no-tractor-in-residence place.

My garden was coming along splendidly—almost a small farm. You can't beat a man for excelling at anything he's a mind to. Male minds are naturally fertile.

I saw a show on television about man caves. They showed sports, game rooms, tv rooms, pool rooms, bars and more. Why not a garden man cave? I roared off and in no time at all landed back at my "farm" with an ornate cast iron table, umbrella, chairs, gas grill, cooler, Hawaiian oil lamps, fire pit, mammoth LP gas corn popper, and a keg of iced tea. A setup for a man's man. The real article. You could cut the testosterone with a knife!

The day we moved the plants from the greenhouse and planted the raised beds, I threw a party at my garden man cave. Ladies were in awe of my little farm. Men expanded their chests with a "man can get it done" look on their faces, pounding each other on the back and saying, "My kind of place," "Right on man," and other manly remarks of admiration of the male race and wisdom.

Soon my plants were thriving, as were the weeds. After some back-breaking weeding it occurred to me that there must be a better way. I needed *power.* Yes, a power tiller! A man's tiller, not one I saw in an ad that was named after an insect. Not some dinky eggbeater. A ripping beast of a clod busting, snarling demon of a rototiller. I sent for a CD of such an animal.

I soon sat down to watch my CD with the ever-present brain food. A lineup of husky red tillers were pictured. Shown was a pretty, petite blond woman turning some tough buckwheat cover crop into a perfect seedbed in one pass using only *one hand* to guide the beast. That would leave a hand free to clutch my iced tea! That did it. I ordered "Big Red," the top of the line model.

After Red came, I pulled the "struggle string" and it roared to life; my weeds started to wilt at just the sight of such a powerful machine. Red surged forward and committed mass weed murder. I gave several salute blasts on the air horns and activated the four way flashers and strobe light. Effortlessly Big Red chewed weeds as I sipped iced tea happy as a clam at high tide.

Then things happened fast. Big Red swerved hard to port, I spilled my tea and Red did battle with my wire fence. The fence won—eventually. Red chewed up 40 feet of wire before the wound-up wire bird's nest—now the size of a barrel—killed the engine.

It all happened in a heartbeat and I'm not sure how it all started. Pos-

sibly the swash buckling garden hero got distracted by a cute blonde on the neighbor's high dive board and twitched the helm.

Harvest time came and went. I had some top-notch veggies. Even though I gave it my all to get the first tomatoes, I got beat out by an old gal down the street who started seeds in tin cans in a window near the woodstove. She hardened them off in a cold frame made out of old window sash and planted early in old tire "raised beds" with Idlenot low-fat milk jugs for hot caps. A couple shovels of fresh manure covered with old newspaper in the bottom of the hole provided some heat. She beat me on peas, too. I swear the crafty old lady drilled holes in the frozen ground to plant 'em early.

On the plus side, I had some excellent fresh produce. I grew enough tomatoes to half fill Yankee stadium. I thought I would try a few plants of all varieties. I truly don't know how many varieties you have to choose from, but I stopped at 86 due to lack of space. At six each, that's 516 plants and a *lot* of tomatoes. I canned and froze a lot and ate a ton. I also lost 12 pounds due to the exercise, and learned a lot. We gave bushels away and sold about $600 worth off the front porch. The boys beat me out, selling over $750 of lemonade and cookies. Smart boys—they got me to buy their inventory and the little guys were bright enough not to sell iced tea or popcorn.

Next year—a man always plans ahead—a roadside farm stand. Antique tractors, cider mill, orchard, cranberry bog, grape arbor, nut trees, berries, melon patch—it's endless what a man can do.

The wife, quietly—she knows when I'm in a tea/corn thinking trance to be soft spoken—mentioned money. When you tie the knot, your darling wife-to-be smiles sweetly, and okays the richer or poorer part. Women quickly forget what they want too.

Shucks, my farmer friend said he didn't make any money the first 15 or so years. All men know that. Men are born with financial wizardry.

Women—I truly love them, but they just don't get it. It's a guy thing.

Last train out to get off the grid?

Amazing "Solar Generator" Is Like Having A Secret Power Plant Hidden In Your Home!

BY MIKE WALTERS
STAFF WRITER, OFF THE GRID NEWS

New solar powered backup provides instant electrical power in any outage or disaster.

If you have ever wanted to have an emergency backup system that supplies continuous electrical power, this will be the most important message you will ever read. Here is why.

There is now a completely portable (and ultra-high efficient) solar power generator which produces up to 1800 watts of household electricity on demand when you need it most. News of this "solar backup generator" (it's the first "off-the-grid" breakthrough in 50 years) is spreading like wild fire all across the country!

Why?

The answer is easy. You see, this solar generator is extremely powerful and yet very simple to use. It produces continuous electricity and runs with absolutely no noise whatsoever. It emits no fumes. But the best part about the solar generator is that once you own one, you can...

Generate Free Electricity From The Sun!

Charged by the sun with a powerful solar panel, the unit then stores the power for your use when you need it. We all face natural disasters, with hurricanes, tornadoes, snow and ice storms cutting off electrical power to millions of Americans each year.

Then there are man-made disasters and outages. Blackouts and rolling brownouts are becoming common in many parts of the United States as our grid gets stretched beyond its capacity.

The truth is, we are extremely vulnerable to all kinds of meltdowns that can create temporary or even permanent electrical outages. That's why if you are one of the few Americans that thinks ahead, you need to…

Have A Solar Powered Backup In Place!

When you compare a solar generator to a gas generator, the difference is pretty remarkable. Here's why. First, gas generators make an incredible amount of racket… if you can even get them started in the first place. With a gas generator, you pull and pull some more, all because your generator has been sitting in the cold and the carburetor is playing hard to get. This, of course, is not a lot of fun in the dark. Another reason to avoid gas generators is that you just can't safely run one in your house. But the number one reason you don't want to be caught in a time of crisis with a gas generator is…

Gas Stations Can't Pump Gas Without Electricity!

It's true. When the power goes out, you're left with whatever gas you have on hand because the gas station pumps all run on electricity. A few gallons stored in a gas can means a little electricity for a little while, then it's quickly "back to black."

Here's the thing: I could go on and on about life without electricity and what a nightmare gas generators can be. But here's the bottom line: Solutions From Science is now offering an amazing power generating system that can provide plenty of electrical power in the event of an outage or emergency. And the best part is that you can have the power safely in your house.

A True Breakthrough In Home Power Generation!

Let me try to explain the features and benefits of a solar generator as simply as possible. If I could bring one over to your house and let you start plugging in appliances, you would immediately understand what all the fuss is about. But I can't do that. Anyway, here are some of the reasons I think you'll want a solar generator:

#1. Maximum Power In Minimum Time.

The solar generator can be set up in just a few minutes. Then, all you have to do is start plugging things in. It can run both AC & DC appliances anywhere… anytime.

#2. Back Up Power When You Need It Most.

It's called a "solar backup" because it's designed to come to your rescue when power trouble starts and your lights go out. Run a small refrigerator (high efficient ones are best) to keep your food from going bad.

#3. Portable Power.

If the going ever gets too tough where you are and you decide to "get out of dodge," you simply throw it in the car and take off to a safer destination.

#4. Generates Permanent Power.

The unit provides 1800 watts of electricity at peak power. That's enough to run many appliances in your house. The generator is recharged constantly by the sun allowing you to use the system while charging it at the same time. Many users choose to keep appliances plugged in permanently to reduce electrical costs and help pay for the unit.

#5. Multiple Uses.

You can use your solar backup to run essential appliances when emergencies arise. You can recharge phones, run shortwave radios, televisions, lights, fire place or furnace fans, as well as computers and printers. Plus, if you need to work in the woods at the cabin or in a boat, you can use the solar backup to run power tools, trimmers, blowers and coffee makers.

#6. Plug And Play Means Instant Power.

The emergency backup system comes ready to go. Just start plugging in your favorite household essentials.

By the way... the units go for about $1697.00 plus shipping and handling.

But I'm going to show you a way around that. I have negotiated a very special offer for readers of Countryside Magazine.

Here's the deal. You can use coupon code **CS125** to get one for $200.00 off as a reader of Countryside Magazine. To do that, the absolute fastest way to get one is by going to the website at:

www.MySolarBackup.com

If you would like to order by phone, you can call toll-free by dialing **800-218-4615**. Tell whoever answers that you want the "Solar Backup Generator" system rushed to you and you have a coupon because you are a reader of Countryside Magazine.

Or, if you prefer to pay by check or money order (payable to Solutions From Science), simply send your payment to:

Solutions From Science
Dept. Solar Backup CS125
2200 IL Route 84
P.O. Box 518
Thomson, IL 61285

I'm so convinced every American household needs a Solar Generator, that I've arranged for this special deal to get one to you at this dirt cheap price. (When you call, ask about their free shipping offer as well.)

Just hurry, call 800-218-4615

Sincerely,
Mike Walters

P.S. One more thing. It's very important. Make sure you use coupon code **CS125** to get all the discounts you have coming as a reader of Countryside Magazine.

Poor Will's Countryside Almanack for *Late Spring & Early Summer of 2013*

By W. L. Felker

Like a sound, spring spreads and spreads until it is swallowed up in space. Like the wind, it moves across the map invisible; we see it only in its effects. It appears like the tracks of the breeze on a field of wheat, like shadows of wind-blown clouds, like tossing branches that reveal the presence of the invisible, the passing of the unseen.
—Edwin Way Teale

The Ephemeris for May
The Phases of the Apple Blossom Moon and the Mock Orange Moon

As apple blossoms fall, late spring envelops the land, bringing the most fragrant time of year with the flowers of Japanese honeysuckles, peonies, iris and mock orange.

~ May ~

2: The Apple Blossom Moon enters its final quarter at 6:14 a.m.

9: The Mock Orange Moon is new at 7:29 p.m.

17: The moon enters its second quarter at 11:35 p.m.

24: The moon is full at 11:25 p.m.

31: The moon enters its final quarter at 1:58 p.m.

There will be a penumbral (partial) eclipse of the moon on May 25, visible throughout the Americas, except in the Northwest. Watch for it between 11:00 p.m. (EST) and midnight.

The Sun's Progress

On May 21, the sun enters Gemini and lies within just a small fraction of its summer solstice position.

The Planets

Venus once again becomes the bright evening star beginning on May 7, when it moves into Taurus. It will keep its dominance during the evening throughout the remainder of the year. Venus is in conjunction with Mercury on May 25 and with Jupiter on May 28. Saturn continues in Virgo, overhead south of Arcturus in the middle of the night.

The Stars

Throughout the evenings of May, the Big Dipper overhead tells about the bloom of daisies and rhododendrons and chives and wild raspberries. Castor and Pollux setting in the west pull the last of the dogwood and redbud petals from the trees. Rising Vega and Cygnus in the east foretell sweet corn and tomatoes, warm from the sun.

The Shooting Stars

The Eta Aquarids are active on May 5 and 6. Find them after midnight in Aquarius above the southeastern horizon. The dark moon should favor meteor viewing, and the early morning of May 5 should produce the most meteors.

A Calendar of Holidays and Special Occasions for Gardeners, Ranchers & Homesteaders

Early May through the Middle of June: At this time, explore the possibility of marketing to consumers who are celebrating the graduation of a child from high school or college. Lambs and kids born in late winter and spring may be suitable for this market.

May 5: ***Greek Orthodox Easter:*** Like Roman Easter kids and lambs, Orthodox Easter animals should also be milk fed. They can be a little bit bigger (between 40 and 60 pounds) than those used at Roman Easter, though, and should be nice and fat. This year, Orthodox Easter came a full five weeks after Roman Easter. Next year, both Roman and Orthodox Easter occur on the same day, April 20.

Cinco de Mayo: The first Sunday of May this year brings a "twofer" — Greek Orthodox Easter and Cinco de Mayo! In addition to the demands of the Orthodox market, lambs and kids may be in demand for the Hispanic market around this date. A 20–35 pound live weight milk-fed animal is favored. The number of Hispanics currently exceeds 30 million in the United States.

May 12: ***Mother's Day:*** Strawberries, fresh vegetables, along with young kid and lamb, help to create tempting menus for folks considering a home-made Mother's Day dinner.

May 27: ***Memorial Day:*** Have your poultry, chevon and lamb at local markets for Memorial Day cookouts and picnics.

Meteorology

Cool fronts are due to cross the Mississippi on or about May 2, 7, 12, 15, 21, 24, and 29. New moon on May 9 and full moon on May 24 could contribute to unseasonable cold and to unstable meteorological conditions. Tornadoes, floods or prolonged periods of soggy pasture are most likely to occur within the following windows: May 3—12 and May 17—24.

Key to the Nation's Weather

The typical May temperature at average elevations along the 40th Parallel, the average of the high of 72 and the low of 54, is 63 degrees. Using the following chart based on weather statistics from around the country, one can calculate approximate temperatures in other locations

close to the cities listed.

For example, with the base of "63" you can estimate normal temperatures in Minneapolis by subtracting 5 degrees from the base average. Or add 7 degrees to find out the likely conditions in Atlanta during the month.

Fairbanks, Alaska	**-16**
Cheyenne, Wyoming	**-13**
Portland, Maine	**-9**
Minneapolis, Minnesota	**-5**
Chicago, Illinois	**-5**
Des Moines, Iowa	**-2**
Average along the 40th parallel:	**63**
Washington, D.C.	**+2**
St. Louis, Missouri	**+3**
Louisville, Kentucky	**+3**
Little Rock, Arkansas	**+7**
Atlanta, Georgia	**+7**
New Orleans, Louisiana	**+13**
Miami, Florida	**+15**

Frostwatch

Between May 1 and June 1, only a few mornings of light frost occur at lower elevations along the 40th Parallel. Add 10 percent to the figures below for each 100 miles north of the 40th Parallel (or for each 500 feet of elevation above 1000 feet along that parallel). Subtract 10 percent for each 100 miles south of the 40th Parallel.

Approximate chances for freezing temperatures after these dates:

May l: 50%; May 10: 25%; May 15: 15%; May 31: 5%

The May Allergy Index

Pollen from flowering trees usually peaks about May 10, but trees continue to be the major source of pollen in the air until grass pollen replaces it in the third week of the month. Estimated Pollen Count on a scale of 0–700 grains per cubic meter: May 10: 500; May 15: 300; May 31: 100

The Ephemeris for June
The Phases of the Wild Raspberry Moon

Strawberries mark the end of late spring, and raspberries pull the year well into early summer. When wild raspberries are sweet enough to eat, then chiggers wander the undergrowth, and all the first brood of fledglings have left the nest.

~ June ~

8: The Wild Raspberry Moon is new at 10:56 a.m.

16: The moon enters its second quarter at 12:24 p.m.

23: The moon is full at 6:32 a.m.

29: The moon enters its final quarter at 11:54 p.m.

The Sun's Progress

Summer solstice for 2013 occurs on June 21 at 12:04 a.m. (EST). The sun enters the middle summer sign of Cancer at the same time. Between June 19 and 23, the sun remains at its solstice declination of 23 degrees 26 minutes, and the day's length remains virtually unchanged.

The Planets

Jupiter disappears from the evening sky in the first week of June. It will reappear as the morning star at the end of July's first week. Mars comes to the morning sky in Taurus after mid month. Venus, the evening star in Gemini, reaches conjunction with Mercury on June 20. Saturn continues to move across the night sky in Virgo.

The Stars

The Corona Borealis directly overhead these June evenings tells you that lilies and dayflowers, trumpet creepers and sweet clover are coming in all across the land. In the far west, Leo and its bright Regulus take the last of the privets and angelica and sweet rockets. Rising in the east, the great Milky Way forecasts goldenrod and asters.

A Calendar of Holidays and Special Occasions for Gardeners, Ranchers & Homesteaders

June 16: Father's Day: Heat up the grill and fix Dad a chicken, lamb or chevon barbeque. Get your early sweet corn and tomatoes to the roadside stand.

Meteorology

Cool fronts are due to cross the Mississippi on or about June 2, 6, 10, 15, 23 and 29. Major storms are most likely to occur on the days between June 5–8, June 13–16, and June 24–28. New moon on June 8 increases the chances for freezing temperatures along the Canadian border with the June 2 and 6 cool fronts. Full moon on June 23 could contribute to unstable meteorological conditions in conjunction with the June 23 cool front.

Key to the Nation's Weather

The typical June temperature at average elevations along the 40th Parallel, the average of the high of 81 and the low of 63, is 72 degrees. Using the following chart based on weather statistics from around the country, one can calculate approximate temperatures in other locations close to the cities listed.

For example, with the base of "72" you can estimate normal temperatures in Minneapolis by subtracting 5 degrees from the base average. Or add 5 degrees to find out the likely

conditions in Atlanta during the month.

Fairbanks, Alaska	**-14**
Cheyenne, Wyoming	**-12**
Portland, Maine	**-9**
Minneapolis, Minnesota	**-5**
Boston, Massachussetts	**-5**
Des Moines, Iowa	**-2**
Average along the 40th parallel:	**72**
Washington, D.C.	**+1**
Louisville, Kentucky	**+2**
St. Louis, Missouri	**+3**
Little Rock, Arkansas	**+5**
Atlanta, Georgia	**+5**
Miami, Florida	**+8**
New Orleans, Louisiana	**+9**

The Allergy Index

Pollen from flowering trees has reached very low levels. Most of the pollen in the air this month comes from grasses. Estimated Pollen Count on a scale of 0–700 grains per cubic meter: June 10: 40; June 15: 35; June 30: 25

The Almanack Daybook

Match this daybook with notes about events you observe in your own habitat. Comparing the items listed here with similar occurrences or practices where you live, you should be able to fine tune your sense of real time, add things of interest and importance to you, and create your own daybook.

May

1: Dandelion Blooming Season ends at average elevations along the 40th Parallel as Ruby Throated Hummingbird Season begins at feeders. Bellwort Season, Golden Seal Season, Golden Alexander Season, and Solomon's Seal Season mark the woods. Scarlet Pimpernel Season appears in the lawn.

2: A third of the year is over today. Oak and elm leaves are at least half sized. Depending on your location, maples are fully leafed, others just starting, some dropping seeds. The high tree line is completely alive all across the country, either with new glowing foliage or with orange buds or golden flowers.

3: Soil temperatures average in

the high 50s by today in most of the nation. The oats crop is typically all sown, and three-fourths of the seeds have emerged. Winter wheat is often more than two-feet high. Most of the tobacco beds have sprouted. Weevils build up in alfalfa. Flea beetles are in the corn. Bagworms and powdery mildew can be attacking the wheat. The last of the country's livestock moves to pasture.

4: On the eastern seaboard, horseshoe crabs are mating, and loggerhead turtles crawl ashore to lay their eggs. In the salt marshes of the South, fiddler crabs emerge from their tunnels in the creeks and estuaries.

5: Along the freeways, daisies, yellow sweet clover, blue flax, meadow goat's beard and parsnips flower. Red clover and white clover blossom in the pasture. Blackberries, black raspberries, multiflora roses and elderberry bushes bloom in the hedgerows.

6: Fledgling grackles, sparrows and cardinals are leaving their nests and are begging for food. Goslings and ducklings swim the rivers. Carp and pond koi are mating.

7: White-throated sparrows, ruby-crowned kinglets, yellow-rumped warblers, magnolia warblers, tanagers, grosbeaks, and orioles arrive in the North, announcing the gradual close of the season of night-time frosts.

8: Mayfly Season spreads north, along with Weevil Season in the alfalfa fields. As Petal-Fall Season closes for crab apples, cherry trees and redbuds, Thrush Season, Catbird Season and Scarlet Tanager Season come to the bushes.

9: Chives and horseradish and thyme are blossoming. Strawberries have set fruit and wild black raspberries flower.

10: Except in years of heavy April and early May rains, the field corn has just come up, warmed by normal high temperatures in the 70s , and relatively gentle lows in the upper 40s. Orchard grass is heading. Red and white clover blossom in the pasture.

11: Today often marks the center of pepper, cantaloupe, and cucumber planting along the 40th Parallel, and the quarter mark for soybean seeding. Migrant workers move north to help with setting plants. In the wood lots, eastern tent caterpillars are defoliating the cherry trees. Azalea mites appear on azaleas, cankerworms on elms and maples, lace bugs on the mountain ash.

12: Crappie fishing peaks in the shallows as the sun nears three-fourths of the way to summer solstice.

13: Poison ivy—like the Virginia creeper and wild grapes—develops to a third of its June size. Rose of Sharon and the green ash finally begin to leaf throughout the East. The foliage of ginkgoes, sycamores, witch hazels, and sweet gums is all at least a third to half of full size. Maples fill out quickly.

14: Morel season is over in Indiana but is just beginning at higher elevations in the far West. The bright yellow arrowleaf balsamroot is flowering there as cottonwoods fill out. Elk are migrating north into higher summer ranges, and cutthroat trout are getting ready to spawn.

15: Strawberry Ripening Season arrives in the early days of Swallowtail Season and Monarch Butterfly Season. Along the roadsides, find Meadow Goatsbeard Season and Sweet Clover Season and Buttercup Season.

16: Almost all the nation's corn has now been planted in drier years. Half of the soybean and half the sugar beet crops are in the ground, two-thirds of the potatoes, and at least a fourth of the tomatoes. Commercial sunflower planting time begins as the

chances for a light freeze plummet.

17: Multiflora roses and wild raspberries are budding. Late-flowering black walnuts and oaks become a major sources of pollen. Deep red ginger has replaced the toad trillium close to the ground, around the fingers of white sedum. Cedar waxwings migrate up the rivers as the last buckeye flowers fall. Half the goslings are bigger than your shoes. When the first firefly glows in the lawn, flea beetles come feeding in the vegetable garden.

18: Tall meadow rue is knee high now in the central wetlands and fields, pacing the angelica. In the rivers, lizard's tail has three leaves.

19: When ragweed has grown two feet tall, and cow vetch, yellow sweet cover, wild parsnips, poison hemlock, angelica, motherwort, wild roses, locusts, blackberries, and yarrow are flowering, then the last of the leaves come out for summer. Under the closing canopy, spring's garlic mustard, chickweed and catchweed die back, their yellow foliage accentuating a major decline of April growth.

20: Pheasant, grouse, and turkey chicks appear along the fencerows. The season's new ducklings swim the creeks. Bullfrogs call all along the rivers. Catfish, bullheads, northern pike, bluegills, largemouth and smallmouth bass, white bass, spotted bass, and striped bass spawn when the water temperature reaches 65 degrees.

21: By this time of year, slugs are usually roaming the garden. Flies are bothering the livestock. Bean leaf beetles are common in the fields. Alfalfa weevil and leafhopper infestations become more troublesome.

22: White-marked tussock moths attack the elms; May beetles find the oaks; scurfy scale comes to the lindens. Tadpoles become toads and frogs and finally move to land. Cricket song grows louder. Mosquitoes become more pesky.

23: In the woods, Gold-Collared Blackfly Season and Green Six-Spotted Tiger Beetle Season have started. Along the back roads, it's Blackberry Blooming Season. In the garden, discover Leafhopper Season and Scorpion Fly Season.

24: When the canopy of leaves is complete, then flea beetles attack beet greens in your garden. Aphids multiply on Heliopsis plants. Damselflies and dragonflies hunt the ponds. Corn borers and armyworms assault the crops.

25: Elderberry bushes and panicled dogwoods reach full bloom. Bottle grass is fresh and sweet for chewing, and a few mulberries are ready to pick.

26: Middle Summer's wood nettle is past knee-high. Wild lettuce, wingstem, and dogbane have grown up hip-high. Grasses along the riverbanks are waist-high and seeding. Poison hemlock reaches chin-high, angelica over your head. The dusky violet smoke bush is in full bloom.

27: More than half the winter wheat has headed in the central portion of the nation, is turning pale gold below the Mason-Dixon Line. Along the Kentucky border, one tobacco bed in four is typically full of plants. Off the beaches of the Southeast, shrimpers fish for shrimp at the peak of the season.

28: As late spring turns to early summer, heat stress can slow the rate of weight gain in your kids and lambs. Protection from the weather, plenty of water and adequate supplements may help to reduce weight loss.

29: Cucumber planting is completed throughout the Midwest by now, and farmers are harvesting zucchini. The earliest corn is six to 12-inches tall, soybeans three to four. Blueberries are setting fruit in the Northeast. In Southern gardens, squash bugs and Japanese beetles are out in force.

30: Spring pasture now reaches its brightest green of the year, and haying moves towards the Canadian border from the South at the rate of about 100 miles a week, will be taking place almost everywhere in the United States by the middle of June.

31: Spring wheat is just about all planted in the North, and all the oats are in the ground between Denver and New York. Potatoes and commercial tomatoes and pickling cucumbers

have all been set out along the Great Lakes.

June

1: When the canopy has closed above the woodland wildflowers, when winter wheat is a soft pale green, and the clovers and vetches are all coming in, then it's the best time of year for golden parsnip blossoms throughout the countryside.

Catalpas and privets and hawthorns and pink spirea bloom at parsnip time, and the number of fireflies grows in proportion to the flowers on the day lilies

2: Rose chafers and two-spotted spider mites appear on rose bushes. Quail whistle, pair bonding for mating later in the month. Goslings are close to full-grown. Most eastern tent caterpillars have left the nest by today. Mulberry season begins for both the red and white varieties, and it typically lasts until the end of early summer.

3: Multiflora Rose Season begins with early summer; then Lamb's Ear Season, Heliopsis Season, Floribunda Rose Season, Oakleaf Hydrangea Season and Tea Rose Season follow in the garden. Moth Mullein Season, Sweet Clover Season, Canadian Thistle Season, Crown Vetch Season and Meadow Goatsbeard Season mark the roadsides.

4: Cucumber beetles reach the economic threshold on the farm and in the garden. Chinch bugs begin to hatch in the lawn. Whiteflies attack azaleas. Weevils assault the yellow poplars.

5: Leafminers work arborvitae, birch, locusts, boxwood, elms, holly, and juniper. Rose slugs attack ornamentals. Powdery mildew becomes a problem in the phlox.

6: Young blackbirds and grackles join their parents to harvest the ripening cherries and mulberries. Painted turtles are out laying eggs. Canadian geese are molting.

7: The breakdown of late spring becomes more apparent as poppies, columbines, pyrethrums, lupines, locust and Osage flowers, mock orange, peonies, iris and sweet rockets disappear. Strawberries are thinning as black raspberries start their season.

The darkening of the golden winter wheat measures the steady advance of early summer.

8: Catalpa Season and Privet Season and Pink Spirea Season parallel Firefly Season and Cucumber Beetle Season, Day Lily Season and Coreopsis Season, Purple Coneflower Season and Hollyhock Season, Chicory Season and Trumpet Creeper Season, Nodding Thistle Season and Great Mullein Season, Asiatic Lily Season and Sweet Ripe Black Raspberry Picking Season.

9: The first generation of sod webworms is usually born when the very first trumpet vines sport bright red-orange trumpets, the first blue chicory blossoms, and the first Deptford pink and first great mullein come into bloom.

10: Sawfly larvae eat the leaves on the mountain ash. Head scab and glume blotch develop on the winter wheat. Lace bugs cause yellow spotting on sycamores, oaks, and azaleas.

11: Along the 40th Parallel, the first cut of alfalfa hay is almost complete in an average year. Most of the soybeans and sunflowers have been planted.

12: Canadian thistles and nodding thistles are at their best. Orchard grass is getting brown and old, English rye grass full bloom, exotic bottle grass late bloom, brome grass very late, some timothy still tender.

13: Clustered snakeroot and honewort are going to seed as avens and wood nettle start their seasons. Bamboo grass has fresh growth, and July's wood mint is budding. Blackberries have set fruit throughout the country.

14: Now mulberries fill the last days of early summer, plump and sweet. It's high noon of the year, the peak of black raspberry time, the first days of sweet-corn-tassel time along the 40th Parallel.

15: In the mild nights it is Giant Cecropia Moth Emerging Season; throughout the days it is Monarch Butterfly Caterpillar Season. Garden seasons include Great Blue Hosta Season, Gooseneck Season and Russian Sage Season. Lizard's Tail Season is open by the water. Yellow Sundrop Season and Black-Eyed Susan Season are visible from the freeways.

16: Commercial broccoli and squash harvests are underway throughout the Lower Midwest. Six to eight leaves have usually emerged on the field corn there. Tobacco is almost all transplanted in Kentucky. Strawberries are about half harvested along the 40th Parallel, but that season is just beginning on the Canadian border. Cherry picking is in full swing throughout East.

17: All June's thistles are decaying below St. Louis, and cattails have their pollen. Sweet clover has almost disappeared by Nashville, and the blackberries are turning red. Below Memphis, Queen Anne's lace blooms, wild lettuce and horseweed, too.

18: When you see the first monarch butterflies in your garden, and the iris start to bud, that's the time to go out to the fields looking for serious infestations of armyworms, corn borers, flea beetles and leaf hoppers.

19: Mosquitoes, chiggers, and ticks have reached their summer strength. Long black cricket hunters hunt newborn crickets in the garden.

20: Across the center of the nation, there are roadsides of violet crown vetch, great fields of golden wheat.

21: In Maine, azaleas and columbine are still bright. Lupines hold in Bar Harbor. Foxglove and privet are budding in Bangor, strawberries just ripening. Through the valleys of

Vermont, the wheat is deep green. Parsnips are opening in New Hampshire as they go to seed in Missouri. In upstate New York, catalpas are still flowering, and peonies are still in bloom. The blossoms of mock orange are still fragrant in Minneapolis.

22: Japanese beetles are reaching the economic threshold on the farm. Daddy longlegs are mating. Katydids are silent but roving. The first woolly-bear caterpillars, harbingers of winter, cross the road.

23: In the Rocky Mountains, lupines are in full bloom at 4,000 feet, lilacs and early iris are coming in above 6,000 feet. Indiana April appears in fields of dandelions and spring beauties at 7,000 feet. At 8,000 feet, the heartleaf arnica, like a yellow bloodroot, pushes Middle Atlantic time almost to the end of March.

24: Along the 40th Parallel, wild garlic is blooming. Staghorns have pushed out on the sumac. Cattails are fully developed. May apples should be ready to harvest in the woods. Blackberries have always set fruit even in the coldest years.

25: Sycamore Bark Falling Season points toward middle summer and the center of the year. Thistle Down Season is another sure sign of middle summer. Leafhopper Season and Japanese Beetle Season reach economic levels on the farm and in the garden as the sycamore bark comes down.

26: Middle summer typically begins near this date and lasts through August 10. In those 45 days, approximately an hour is lost from the day's length along the 40th Parallel, and the year turns toward autumn. Even though night lengthens in this middle season, the amount of possible sunshine reaches its zenith, and the percentage of totally sunny days is the highest of the year. And between now and the end of the first week of August, average temperatures vary just one degree in most of the nation.

27: At the beginning of middle summer, purple coneflowers, grayheaded coneflowers, white vervain, oxeye, bouncing bets, ginseng, germander, teasel and wild lettuce blossom in the fields. Most of the wheat is cut across the southern half of the country. The oats crop ripens and the first tier of soybeans blooms. May apples should be ready to harvest in the woods.

28: Sycamore Bark Falling Season points to middle summer and the center of the year. Thistle Down Season is another sure sign of middle summer. The opening of Turtle Hatching Season presages the Dog Days of July, while Woolly Bear Caterpillar Season looks ahead to autumn. Thimbleplant Season, Wood Mint Season, Lopseed Season and Leafcup Season replace Black Snakeroot Season in the shade.

29: When elderberry flowers turn to fruit, then giant green June beetles appear in the garden and poisonous white snakeroot is budding. That's the time to dig your garlic before the heads break apart. Plant your autumn turnips right after that. When timothy is bearded with seeds, then the first rough-winged swallows migrate south. When the rose of Sharon flowers, the summer apple harvest will soon be in full swing.

30: June's berries are disappearing: black raspberries decline quickly, and the best mulberries have always fallen. Wild cherries are ripe, and elderberries have set fruit. The earliest cicadas start to chant at the start of middle summer. Along the 40th Parallel, a few green-hulled walnuts, golfball size, are already on the ground.

Lunar feeding patterns for people and beasts

The following weekly key to lunar position shows when the moon is above the continental United States, and therefore the period during which all creatures are typically most active. The second-most-active times occur when the moon is below the earth. Fishing and hunting may be more successful, and livestock, children and other family members may be slightly friskier with the moon overhead.

Date: Moon Above; Moon Below
May 1–2: Midnight to Dawn; Afternoons
3–9: Mornings; Evenings
10–17: Afternoons; Midnight to Dawn
18–24: Evenings; Mornings
25–31: Midnight to Dawn; Afternoons
June 1–8: Mornings; Evenings
9–16 Afternoons; Midnight to Dawn
17–23: Evenings; Mornings
24–30: Midnight to Dawn; Afternoons

Winners of the March-April Sckrambler

As of my deadline to Countryside, 56 correct responses had been received to the March-April Sckrambler. A prize of $5 was promised to the 2nd, the 12th, the 45th, the 78th, the 104th and the 155th person to return the correct Sckrambler solutions by my deadline. The 2nd was Ms. Michal Cottrill of Cosby, Tennessee; the 12th was Molly Dular (the Dulars: "Mom, Dad and four young'ens") from Ringle, Wisconsin; the 45th was Loretta Benner from Lucasville, Ohio. If other winners accumulate, their

names will appear in the next issue of COUNTRYSIDE.

Answers to the March-April Sckrambler

ANIR: RAIN
NOWS: SNOW
ESETL: SLEET
NTROF: FRONT
WTHREEA: WEATHER
AUSTRTS: STRATUS
BOMINSUTARTS: NIMBOSTRATUS
UUUMCSL: CUMULUS
UUUIOMCNLSBM: CUMULONIMBUS
RETEMORAB: BAROMETER
ZILBDRAZ: BLIZZARD
NUEDTHR: THUNDER
RUHRCIENA: HURRICANE
OAODNRT: TORNADO
GFO: FOG
ILHA: HAIL
ULALQS: SQUALL
GINNTHLIG: LIGHTNING
RRCSUI: CIRRUS
DGNSUO: SUNDOG

The May-June Sckrambler More Weather Words

KYS
IHHG
OWL
MUHIDYTI
CANEIHURR
YOEEHGRMTR
TEJ TSMRAE
HZEA
ROBATEMRE
MTAOPSHERE
AAAEVLNCH
RETEMOMENA
CYCLANTIONE
STRATUSALTO
AINROWB
WTRAE PSTOU
SIMT
LOCDU
TTNAIOIIPRECP
NASD VEDLI

If you are the 3rd, the 9th, the 43rd, the 68th, the 99th or the 142nd person to return your correct Sckrambler solutions by my deadline to: Poor Will, PO 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 PO 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.

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Indiana

FINE LINE FARM, Mike & Linda Wehner, 6624 N. 800 W., Madison, IN 47250. 812-873-0012. <lcoxwehner@yahoo.com> Lowline Angus.

KIRTLEY FAMILY FARMS, Kevin & Christy Kirtley, 22100 Cammack Rd., Noblesville, IN 46062. 317-407-8001.<cakirtley@frontier.com> <www.kirtleyfamilyfarms.com> Lowline Angus. Genetics for Grass-fed Beef, Fullblood and Percentage Lowline Angus cattle, embryos and semen.

Kansas

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Arizona

WITCH HAZEL DAIRY, Hazel McGuffin, PO Box 622, Vernon , AZ 85940. 928-358-0741. <witchhazeldairy@gmail.com><witchhazeldairy.weebly.com> Nubians

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Wisconsin

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Pennsylvania

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AMERICAN EMU ASSOCIATION, 1201 W Main St., Suite 2, Ottawa, IL 61350. 541-332-0675. <info@aea-emu.org> <www.aea-emu.org> Emu.

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After chores:

Adventures in Forestry

By Tony Burton
Georgia

Spring is the time when I get the urge to get outside and do yard work and yard maintenance. I get this urge mainly because my lovely wife urges me to have the urge. We live out in the country, so it's not just mowing grass and trimming hedges. This past spring she urged me to use one of our two chainsaws to do something that needed doing for quite some time: clear out some trees on our property that are either in the way or present a danger.

Lara found a weak spot, and attacked it: my Ego. "Tony, you are just so good with a chainsaw! You could get these trees down in a jiffy, no sweat." She has used similar tactics to get me to do other stuff. I don't mind. At least it's positive strokes.

So, I retrieved the larger chainsaw (why use a smaller one when a bigger one is available?) and after some minor tinkering, had it running. We advanced on the condemned trees, with me revving the saw like a character from a horror movie. One was dead but still sound, but two were tall, rotten pines, killed by pine bark beetles.

After easily felling these three trees, we decided to go up onto the bluff right behind our house and take down some smaller ones that were growing on the edge of the bluff. With all the storms that careen through the Southeast in the spring and summer, we have been worried that one of them will come down on the house or our little storage shed.

I did the proper things, you know.

I wore appropriate safety equipment. I tied a guide rope to the tree and ran it around another tree, so Lara could pull on the rope at a 90-degree angle, thus keeping her out of harm's way. I notched the tree deeply in the exact direction I wanted it to fall, and began cutting on the other side of the tree trunk.

When I was almost through the tree, it began to creak and lean, so I glanced up to check on its fall path. Not good. Instead of falling in the direction of the notch and the guide rope, it was falling toward my wife!

Remember, this tree was right on the edge of a little bluff. I looked up. I saw the tree falling in the wrong direction. My mind didn't register that it was falling at an extremely slow speed. I shouted something incoherent, jerked upright and stepped back… right over the edge of the bluff, with a running chainsaw in my hand.

(This is where you are supposed to go "Oh my God!" and clap your hand over your mouth, or something like that.)

I don't remember much about the trip down. I fell about five feet and bounced off the wall of the bluff, using my shoulder and elbow as a pivot point. I fell another five feet onto my buttocks, and rolled over onto my knees, with the still-running chainsaw held as far away from my body as possible!

The thought going through my mind as I fell? Well, it honestly was, "Oh, good grief, I'm going to fall on the raspberries!" We had planted raspberries on that slope, and I didn't want to crush them. They were staked to keep them upright, and I missed hitting an upright, two-foot-tall steel stake by about six inches. As I looked at it from my kneeling position on the ground, my mind went back to those movies about tiger traps with sharpened stakes in the bottom.

Lara came running over to the edge of the bluff, unharmed by the falling tree, and looked down in horror. "Oh, God! Tony, are you okay? Are you okay?" Her face was a study in panic mixed with disbelief.

"I'm okay, I'm okay!" I shouted, and waved my arms to show that everything was intact. I still held the chainsaw in my hand. For some reason, I kept my grip on the handle, squeezing the throttle the whole time, so it continued to roar and whine.

I was very sore that night, and for a couple of days afterward. My butt was bruised. I lost some skin on my right elbow, and still have a little scar from that, but other than that I'm in remarkably good shape for what happened. Lara is an RN, so she was able to bandage my scrapes as she lectured me to not ever scare her like that again. It took her a couple of hours to stop looking at me and asking, "Are you sure you're okay? Really?"

Oh. Almost forgot. Yes, we got the tree down. But in the process I really gave Lara, and I suppose my guardian angel, quite a fright.

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