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Home magazine

practical ideas for self-reliant living

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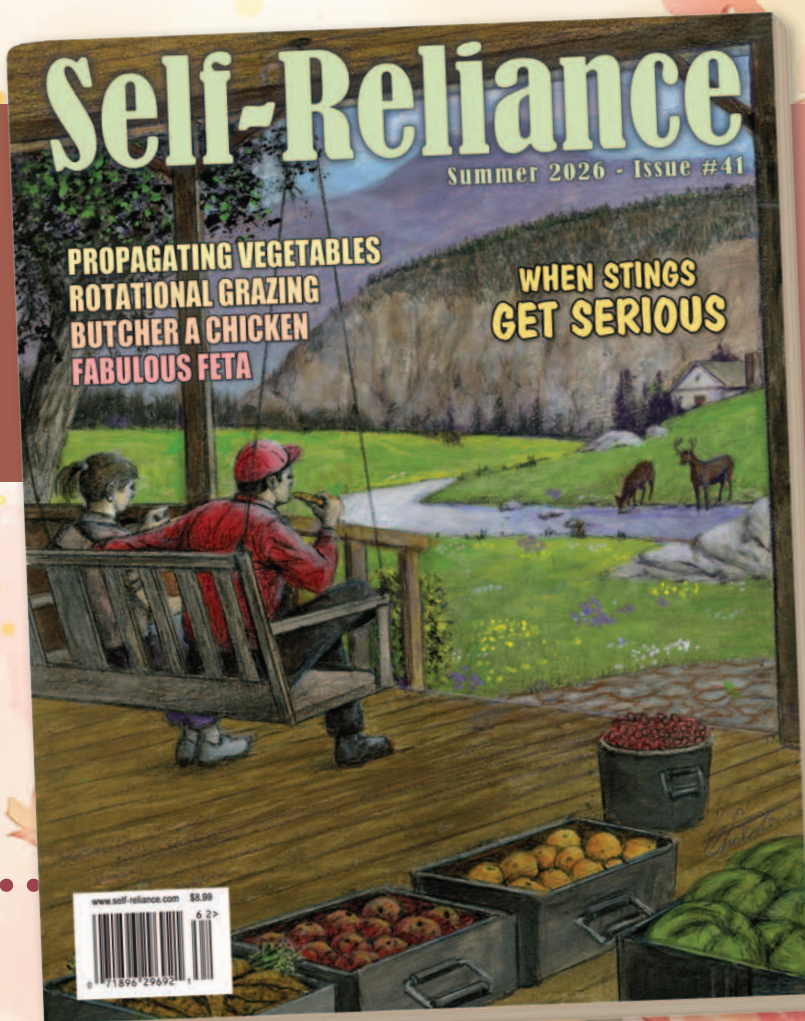
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Backwoods Home Magazine is written for people who have a desire to pursue personal independence, self-sufficiency, and their dreams. We offer “how-to” articles on owner-built housing, independent energy, gardening, health, self-employment, country living, and other topics related to an independent and self-reliant lifestyle.

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Departments

- | | | | |
|----|--|-----|---|
| 6 | Publisher's Note | 88 | Ask Jackie: <i>Raspberries not ripening, onion relish, leggy tomatoes, etc.</i> |
| 7 | My View: <i>Ambition and patience</i> | 102 | Homestead Humbles & Fumbles: <i>Deworming sheep the hard way</i> |
| 18 | Ayoob on Firearms: <i>Guns of The Revolution — and their legacy</i> | 104 | The Irreverent Joke Page |
| 24 | Poem | 118 | Letters |
| 73 | Lenie in the kitchen: <i>Onion "pye"</i> | 122 | My Back Porch: <i>From the quiet of my back porch to the winds of the Atlantic Ocean</i> |
| 76 | Country Moments | 124 | The Last Word: <i>"The female soldier"</i> |
| 80 | Kids' corner: <i>Cool, refreshing summer drinks</i> | 126 | BHM bookstore |
| 83 | Coloring page: <i>Fireworks</i> | 129 | Order form |
| | | ??? | Where's Country Cat? |



About the cover

This poignant scene was painted by our artist, Don Childers. It is the summer of 1777 on a Virginian farm. Two soldiers of the Continental Army wait for one of their comrades to join them. General George Washington had made a request for the formation of additional regiments. The farmer-turned-soldier hugs his wife and young son one last time. He hopes to be back home soon.



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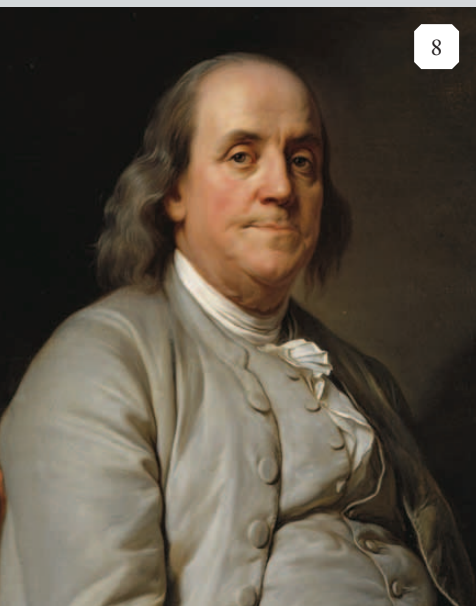
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8



18



66

Americana

- 8 **When did we become Americans?**
By John Silveira
- 25 **Wisdom from The American Porch**
By Jim Capossela
- 84 **Soda pop and The Fourth of July**
By Tom Kovach
- 86 **The gee-whiz! page — 1776 and all that**
By O.E. MacDougal

Self-reliance

- 53 **Firewood on a budget**
By Pete Cecil
- 60 **Do-it-yourself off-grid fridges**
By Kathryn Clover
- 105 **Solar-powered weather station**
By Jeffrey R. Yago, P.E.
- 110 **The real scoop on going off-grid**
By Jackie Clay-Atkinson

Food and recipes

- 66 **Apple pie with a twist**
By Lisa Nourse
- 68 **In search of the perfect strawberry shortcake**
By Jim Capossela
- 74 **Hardtack in the pantry**
By H. Joe Huff

Farm and garden

- 28 **Buried in blueberries**
By Patrice Lewis
- 35 **Raspberry Chronicles**
By Daniel Bushnell
- 39 **Experimenting with dry gardening**
By Timothy Major
- 42 **Weeds — not just nuisance plants**
By Lisa Nourse
- 48 **Adventures in deer fencing**
By Patrice Lewis
- 92 **Why have my chickens stopped laying in the summer?**
By Sarah Flanagan
- 94 **Deworming poultry the natural way**
By Dawn Lamoureux-Crocker
- 97 **A beginner's guide to keeping sheep on the homestead**
By Dawn Lamoureux-Crocker

Building

- 54 **Building a bat house**
By Pete Cecil
- 56 **Building a round-bale movable platform**
By Don Lewis



Publisher's Note

America 250

I'm a big fan of celebrating milestones and a quarter millennium is a fantastic number. Yet, it's tiny compared to our mother country, Britain, which has been around for over 1,000 years. If you're 50 years old, you've been alive for 20 percent of America's existence. Our artist Don Childers, at 95, has been around for nearly 40 percent of its existence. While 250 years is a blink of an eye in a historical sense, the US has still become arguably the most influential nation to ever exist.

It has been the center of nearly every major leap forward since the Industrial Revolution, from electricity to aviation to the internet. Our foundational doctrine of *Life, Liberty, and the Pursuit of Happiness* in my opinion is more important than those achievements, but also likely the reason behind them. Starting this country with the idea that arbitrarily restrictive rules are unacceptable has given us a culture of self-reliance that nowhere else can match.

The diversity of ways people choose to live in the US is incredible. Being able to choose to send your kids to public school, private school, or to homeschool them yourself is

far from the norm in much of the world. Germany has outright banned homeschooling since 1918.

The ease of starting your own business here is something we don't think twice about. According to the World Bank, it takes on average less than a week to start a business in the US, a month in Brazil, two months in India, and well over three months in other countries, if they let you form a business at all. When I registered my company with the State of Oregon, it cost me \$100 and a 24-hour wait.

Roughly 60 percent of land in the US is privately owned, a large portion of which is small farms. In many countries, private land doesn't even exist. In China you can lease it from the Government for no more than 70 years. Not exactly something to pass down for generations.

We could fill out the rest of this magazine with more examples of our First Amendment rights to free expression or our Second Amendment rights to bear arms. While the US has never been perfect, it's the best place to be for folks to have the freedom to make their own way. Here's to another 250 years!

Digital publications

I'm happy to announce that we now offer digital subscriptions to both *Backwoods Home Magazine* and our sister publication, *Self-Reliance*, as well as digital versions of

our more than 50 books. You can choose digital-only, print + digital, or of course, print-only. All books and subscriptions are available at backwoodshome.com, where you can view your purchases there or download them as PDFs and read them at your leisure on any device you can jam a PDF into. Digital subscribers will also receive a link straight to their email inbox whenever a new issue comes out.

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As a thank you to our subscribers, we're giving away the digital version of this issue and the next one free of charge! So if we have your email on file, we'll shoot you direct links when the issues are available. — **Sam Duffy**



My parents and I had a pint in the Bell in Hand Tavern, a three-minute walk from the Boston Massacre site and a one-minute walk from Faneuil Hall where Samuel Adams rallied Bostonians against British taxation. Paul Revere and Daniel Webster were known to frequent the tavern. It claims to be the oldest continuously operating pub in the US, though that is hotly contested.

My View

Ambition and patience

Some homesteader friends and I were sitting around our dining room table, packing seeds for our little seed business. We were deep in a discussion about why so many new homesteaders failed, yet some thrived. No, it wasn't about money, whether some folks had more cash to work with than others. Heck, I'd been as poor as a church mouse early on in my homesteading career. No, it wasn't about "luck," as all of us have had runs of good and bad luck in our lives.

Was it the area we homesteaded in? Nope. I know successful homesteaders all over the map, from Southern California to Alaska, Oregon to Maine. Well, what the heck was it, we wondered, after tossing the subject back and forth while packing tomato and bean seeds.

I thought about it so much that even while I was sleeping, I'd wake up and think about it. You know what? I believe there's a fine balance between ambition and patience that draws the line between those who succeed and those who fail.

Hey, everyone knows ambition is what brings success, right? Yes and no. Yes, a homesteader needs ambition or establishing and maintaining a homestead can never get done. After all, homesteading requires a lot of work and sweat. There's no candy-coating that fact.

Even when you've been homesteading for a lifetime, you need to be thinking of how you can work smarter, not harder. How to make something work better. I know I find myself planning my next day while getting ready for bed. (No wonder I can't sleep! The mind keeps churning.)

But ambition can also kill the dream of a new homesteader or family. It seems to be the "norm" for every new homesteader to want to do *everything* from the get-go. I hear, "Yes, I want to raise rabbits, chickens, cows, goats, and sheep, spin my own wool, have a big garden, can all my food, forage wild foods, hunt for meat, learn medicinal plants, have a big orchard, have berries, homeschool the kids, and build my own house." Yep. Um hum ...

These folks spin their tires, so to speak, trying to do everything at once. Yes, they're ambitious, but they lack patience. Young folks, especially, seem to lack that key trait. They want the best right *now*. They go out and get credit cards and run them to the max, buying everything their heart desires; those purebred rabbits, that tractor, those cool tools, the latest iPhone. It doesn't seem to stop.

Yep, I was kind of that way myself, but for the credit card thing. Through many years, some of them pretty darned hard, I learned to temper that uncontrolled ambition with patience. Somewhere along the line, I actually listened to



Jackie Clay-Atkinson

my parents who always preached "save up for things." And I began to do that. Sure, I couldn't buy on impulse, but by saving up, it gave me a chance to wonder if I really *needed* that thing or just *wanted* it. There's a big difference! We always want things. It's human nature. But homesteaders, especially, must temper their wants with realistic needs and spend accordingly. Today we use debt very cautiously. No balance on our "for emergencies" credit card. We only borrow with a specific thing in mind, knowing we can pay it off easily and early, so interest doesn't eat us alive. I got a credit card offer today with an interest rate of "only" 24.9 percent! Hey, when I was younger, they called interest like that loan sharking!

Patience also helps one to slow down. To spend the time to do a job right, not just slam through it to do something else halfway. Okay, I don't have to plant the whole acre of garden in one day. I'll take more time and do it right, mulching plants as I go so the weeds don't take over later, putting cages around the tomatoes so the slugs don't enjoy ripe fruit later ... Rushing and trying to do too much causes depression and then folks give up. I'm sure you've all heard it: "I tried to garden but I must not have a green thumb, so I quit." Or, "Gardening is just too much work."

It applies to everything in life. We've all got to have a good balance between ambition and drive along with the patience required to succeed. At 79-plus years, I've pretty much got that balance figured out. No, our homestead isn't perfect. There are plenty of things I'd like to change. But it functions well and we are content. Are we totally self-reliant? No. But we are very self-reliant. Nobody ever gets there, but we all follow the path. It'll be full of thorns and snarls but if we keep up, with patience, we'll get very close. The trick is to enjoy the ride. — *Jackie Clay-Atkinson*

When did we become *Americans?*

By John Silveira

The first English colony established on the Atlantic coast of North America, in what would someday become the United States, was Virginia in 1607. Massachusetts followed in 1620, then New Hampshire in 1623, Maryland in 1634, etc., until 1732 when Georgia became the last of the 13 original colonies we learned about in school. The inhabitants of *all* these colonies still considered themselves Englishmen and women, and because each colony was founded under a different charter, if the colonists identified themselves as anything other than English, it was as Virginians, New Yorkers, Georgians, or as residents of whatever colony they resided in and very likely were born in. It's like today, we think of ourselves as Americans, but many of us may also regard ourselves as Texans, Californians, Oregonians, Hoosiers (Indiana), Downeasters (the Maine coast), etc. But what these early colonists *weren't* identifying themselves as was Americans.

However, over time, those in England gradually referred to the colonists as just that: Americans, regardless of the colonies they lived in. The same with the rest of the Old World — France, Spain, Netherlands, and other European countries — if they didn't refer to the inhabitants

of Britain's American colonies as Englishmen, they, too, often referred to them as Englishmen in America, or simply as Americans ... but in their respective languages, of course.

Despite still identifying themselves as English, the colonists knew they were different from their European brethren, and the people in Britain absolutely looked at the colonists as being different. The aristocracy, members of Parliament, merchants, and even the king himself often considered them rubes, or worse, as cash cows whose sole purpose was to fill the coffers, including the war chest of the king, and to make English manufacturers and tradesmen rich. It worked for a while.

By the mid-1700s, both time (some of the colonies were more than 100 years old) and distance (the colonies were about 3,000 miles from London) opened a rift between the Englishmen living in Britain and the Englishmen living in North America. They were beginning to become two distinct peoples who spoke the same language. To the Brits the rift was obvious, but it was just beginning to dawn on the colonists. However, it was with the events that led up to the first shots of the revolution at Lexington Green and Concord Bridge in April 1775, and the convening of the Second Continental Congress in Philadelphia less than a month later, and the Battle of Bunker Hill in June

— where the fiction that the colonists were still ordinary Englishmen began to crumble in earnest.

The problems that opened the rift were the various policies, titled “acts” (acts were laws passed by both houses of Parliament) and “proclamations” (which were decrees issued by the king and his Privy Council) that worked against the colonists' interests. I'm not going to discuss every one of them, but some are worthy of mention: the *Navigation Acts* (there were several), the *Proclamation of 1763*, the *Stamp Act*, the *Townshend Acts*, and the *Coercive Acts* (called the “Intolerable Acts” by the colonists) which were enacted either to try to extract taxes, restrict trade, or punish the colonists for not obeying Parliament or the king. But the colonists who were subjected to those taxes and laws, though Englishmen who were loyal to the Crown, were not allowed a seat in the room where these acts and proclamations were created.

Lack of representation was a legitimate grievance. The population of the 13 combined colonies was about 2½ million people, about ½ million of whom were slaves. This left about 2 million who considered themselves citizens of England. The population of Great Britain, at that time, was about 7½ to 8 million. This meant that more than 20 percent of all Englishmen were living in the North

The unanimous Declaration

American colonies. This was a huge number of people for Parliament to be regulating and taxing when they had no representation there. If they were going to be taxed and governed, the colonists wanted some seats in the body that was doing it.

Lack of representation created resentment among the colonists which led to tax evasion, smuggling, and the creation of black markets. These taxes made many colonial merchants and seafaring traders criminals for breaking laws whose sole purposes were to line the pockets of British manufacturers, politicians, and of course, the king himself.

Navigation Acts

Some of the earliest acts, passed by the Parliament and blessed by the king, were the *Navigation Acts*, of which there were several. Most were passed in the 1600s, when the populations of the colonies were so small that dissenting voices were ignored. These were laws governing trade in the colonies. In total, the acts dictated that many imports to and exports from the colonies had to be carried on English ships. They also mandated that goods imported into the colonies had to pass through England first, where they could be taxed. These laws also forbade the colonies from directly engaging in trade with rivals to the English trade, especially the Dutch.

Did the colonists resent these laws? Yes. Parliament was making goods in the colonies more expensive.

Did the colonists flout these laws? Of course they did.

Other acts and proclamations came in the latter half of the 1700s, starting with the *Royal Proclamation of 1763* that followed the French and Indian War (1754-1763). That war was part of a larger global conflict known as the Seven Years' War



Portraits: Wikimedia

King George III was the one man who could have prevented the Revolutionary War, and kept the American colonies in the British Empire. He did neither.

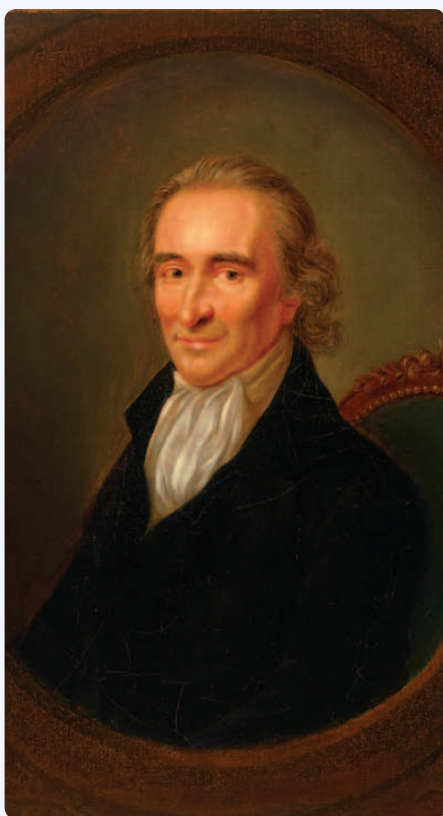
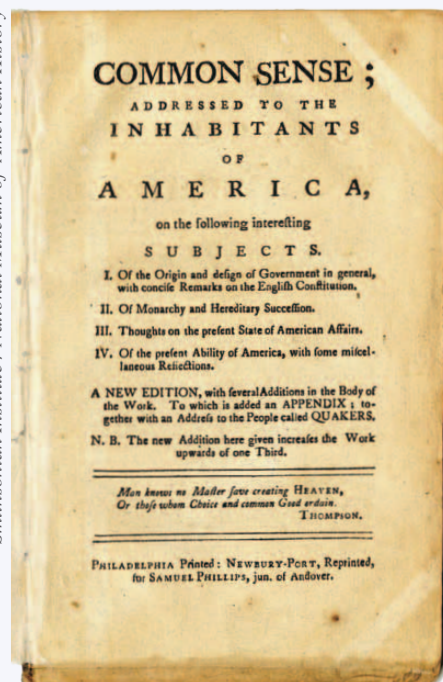
which was fought between Britain and Prussia on the one side, and France and Austria on the other. It was fought in North America, Europe, the Caribbean, and Asia. Some have called it the first "world war."

In the fighting that took place in North America, the combatants were Great Britain and her Indian allies versus France and her Indian allies. In 1763 the war ended in a decisive victory for the British, which was the world's premier superpower of its day, and they drove the French out of North America, leading to British control of the Ohio Valley and Canada. The *Royal Proclamation* that followed angered the colonists.

Royal Proclamation of 1763

This proclamation, issued by King George III, after the French and Indian War ended, restricted colonization west of the Appalachian Mountains. The intention was to stabilize relations with the native tribes living there. Further, the proclamation forced colonists who had already settled there or were doing business there to abandon their settlements and move back east of the mountain range. The colonists felt they had fought alongside Britain to secure this territory, and now the king was closing the lands to them.

of the thirteen united States of America.



Thomas Paine was a prolific writer. He wrote "Common Sense," the pamphlet that helped mold public opinion that led to American independence.

Common Sense

Thomas Paine's *Common Sense* was published January 10, 1776, and immediately became a best seller in the colonies. We aren't certain how many copies were sold, somewhere between 120,000 and perhaps half a million, but either number is incredible in a population of perhaps 2½ million people. The pamphlet was short, less than 50 pages, but it not only shifted public opinion toward independence, it influenced the Committee of Five, which included Thomas Jefferson, when the *Declaration of Independence* was drafted.

In his pamphlet Paine argued, among other things, that monarchies and aristocracies, being hereditary (such as what existed in England), were inherently wrong. Furthermore, a government, even a "good" one, is nothing more than a "necessary evil," while a bad government is intolerable, and that the only form of government that is moral and makes sense (though still a necessary evil) is a democratic republic with a written constitution. He further argued that the only legitimate purpose of government is to protect life, liberty, and property. But it is important to note he addressed his booklet to the "inhabitants of America," not the "Englishmen living in America," nor the inhabitants of each of the separate English colonies.

Unlike petitions sent to London to protest the various edicts and taxes, Paine's pamphlet did not profess any kind of loyalty to the king. It did exactly the opposite; it disparaged a monarchical form of government, and in doing so helped create a shift in public opinion that swung many more of the colonists to the side for declaring independence.

A second intention of the proclamation was to confine the colonists to the coast where trade with the mother country was easier. This would make it easier to market English goods to the settlers. From the point of view of both Parliament and the Crown, this was the purpose of the colonies: to fuel the new Industrial Revolution and make the mother country richer.

But waging wars around the world had been expensive; they drained the British coffers. To pay off her war debts and replenish the English treasury, Parliament turned to taxes. In particular, they were going to tax the colonies in North America. But this decision would set events in motion that would change the world.

The Stamp Act

Just before passing the *Stamp Act*, Parliament had passed two other acts that affected the colonies. They were the *Sugar Act* (April 5, 1764), and the *Currency Act* (April 19, 1764). Neither sat well with the colonists.

The *Sugar Act* was intended to raise revenue with taxes on foreign molasses and molasses-based products imported, which affected the distilling industry in New England. It also increased taxes on "luxury" imports, such as certain wines, silk fabrics, and some spices, while also restricting exports on raw products such as lumber, harming colonial trade.

It also aggressively enforced laws against smuggling, a "crime" which had become more common *because* of these onerous taxes and restrictions imposed by the *Act*, and trials of anyone accused of smuggling would now take place in vice-admiralty courts, which were presided over by British-appointed judges, rather than in colonial courts where verdicts were rendered by a jury of one's peers. The British knew they'd have a hard time getting convictions in the colonial courts where the smugglers were often merchants who were neighbors with members of the court.

Benjamin Franklin

One of the few people in the colonies the Europeans respected was Benjamin Franklin. His exceptional range of accomplishments are such that, even after 250 years have passed, he remains the best-known example of an American polymath. On his trips to Europe, he hobnobbed with dozens of the intellectual and social elites of Europe, including the French philosopher Voltaire, the British chemist Joseph Priestly, the Scottish philosopher David Hume, as well as counts and countesses, barons and baronesses. He even had an audience with King Louis XVI at Versailles.

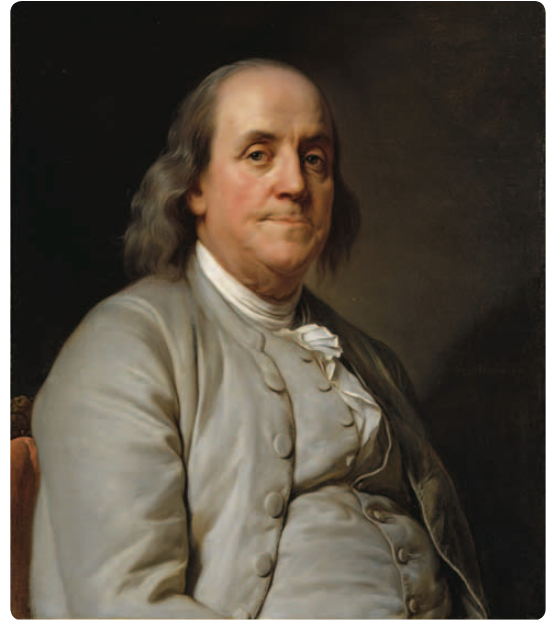
Within the colonies there was also a shortage of “hard money,” which is also called “specie.” In this case specie referred to British coins made from gold and silver, called British Sterling, and even Spanish gold and silver coins that were the international currency of their day, just as the US dollar is today.

Because of this, the various colonies began printing their own currency with which to facilitate trade. This paper money worked fine for the colonists, but neither the British government nor merchants in England wanted this paper currency. Thus, the *Currency Act* (April 19, 1764) was implemented restricting payments to specie.

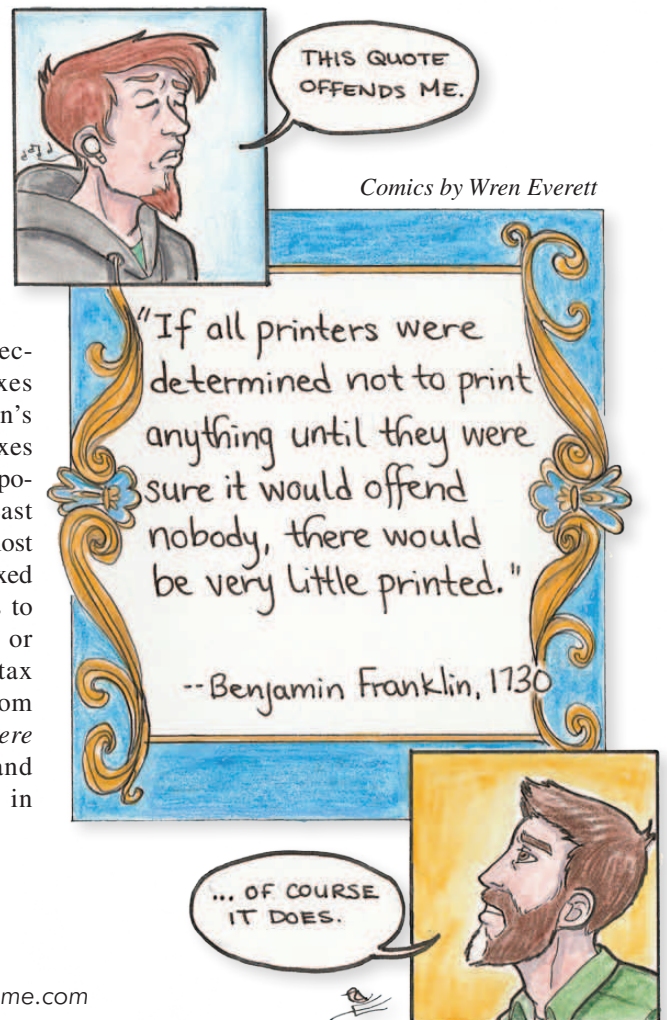
But the act that followed was worse. It was the *Stamp Act* (March 22, 1765) which was a direct tax on individual colonists. It taxed printed items such as contracts, wills, marriage licenses, pamphlets, almanacs, newspapers, diplomas, and even such things as dice and playing cards. The taxes ranged from a halfpenny to several pounds sterling, depending on what was being taxed. This may not sound like much, but in today's 2026 US dollars it's equivalent to taxes ranging from about \$0.15 to almost \$1,000. A deed,

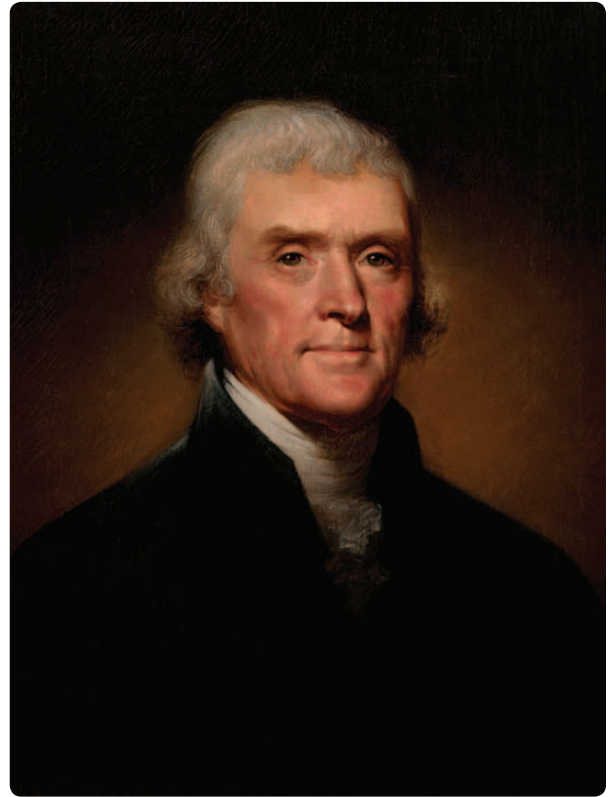
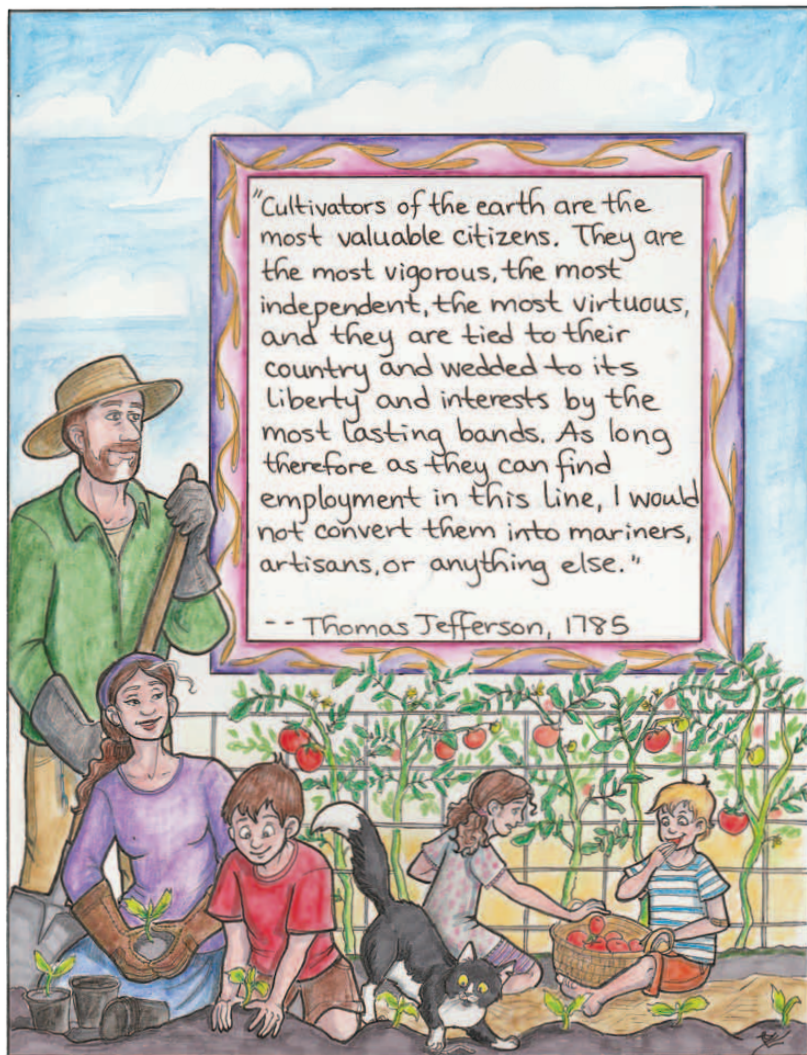
a mortgage, or a bond was taxed as much as \$65. A marriage license, \$100, wills as much as \$160. A newspaper or pamphlet could be taxed as much as \$25 per sheet. A deck of playing cards was taxed about \$3.60, and a set of dice about \$36. This was at a time when the average unskilled male worker in the colonies made *about a dollar a day for a 10- to 12-hour workday*. These taxes were viewed as onerous, and it meant money poured out of the colonies and into the British treasury. Parliament's claim was that the taxes covered what the Crown spent to protect the colonists from both the French and their Indian allies. Fair enough.

But the colonists had objections. One was that the taxes were actually fueling Britain's global wars. Second, the taxes were to protect British monopolies including the British East India Company. Third, and most important, they were being taxed with no say in Parliament as to how the money was raised or spent. They believed that tax levies should come only from the colonial legislatures *where they had representation*, and they had no representation in Parliament.



Scientist, inventor, philosopher, writer, publisher, statesman, diplomat ... Benjamin Franklin was the best known and most widely admired “American” on the planet during his lifetime.





Thomas Jefferson, destined to become the third president of the United States, was the primary author of the Declaration of Independence.

Parliament and the king disagreed; they averred they could tax and govern the colonists any way they wanted to. After all, they were just colonists.

Resistance to the *Stamp Act* spread through the colonies almost overnight. It was sometimes accompanied by violent protests that included intimidation of the tax collectors. It also led to boycotts of imported British goods.

Meanwhile, the colonists called for a *Stamp Act* Congress to convene in New York City, to which 9 of the 13 colonies sent delegates. From October 7-25 the Congress laid out their grievances against the *Stamp Act* in a document they called the *Declaration of Rights and Grievances*, in which they argued that without representation in Parliament, taxing them was unconstitutional.

They sent their *Declaration of Rights and Grievances* to both the

king and Parliament. As angry as they were, they still regarded themselves as Englishmen, and they made it a point to express their loyalty to their sovereign, King George III, in the document. They hoped the king would intervene in the conflict between themselves and Parliament, where the *Stamp Act* had been created. But the king never sided with the colonists, and he often refused to read their petitions. This would occur again and again in the future.

The widespread boycotts and protests across the colonies were early acts of defiance that showed the colonies, when they had to, could act as one, something that hadn't happened before. This unity was a foreshadowing of what was to come. But they still considered themselves Englishmen and residents of their respective colonies. They weren't Americans, yet.

The boycotts were effective and hurt British trade in the colonies so much that merchants in Britain did something the colonists had failed to do: They petitioned Parliament to repeal the *Stamp Act*, and Parliament did so on March 18, 1766 — a year after it had been passed. But on the very same day Parliament passed the *Declaratory Act* which affirmed Parliament's absolute authority to legislate and rule the colonies as they saw fit. The *Declaratory Act* was a harbinger of things to come.

Townshend Acts

Britain still needed taxes to cover the cost of their military adventures and to pay off their debts. They also now wanted to use part of whatever money the new taxes raised to directly pay the salaries of the colonial governors and judges. This way the governors and judges would owe their



John Dickinson hoped for a peaceful reconciliation with the Crown, even after the fighting began, but he wholeheartedly endorsed independence once it was declared.



Richard Henry Lee set before the Congress the proposal that called for our separation from Britain, which led to the Declaration of Independence.

allegiances directly to the king and Parliament and would be independent of the colonial legislatures. This would strengthen Parliament's control over the colonies. Or so they thought.

The first test of the *Declaratory Act* was the passage of the *Townshend Acts* (1767-1768). These acts were a series of laws which imposed duties on imports the colonists didn't have the facilities to make, couldn't grow, or couldn't mine, such as paint, glass, paper, lead, tea, and more. The acts also reasserted that trials of those who violated these acts — smugglers and black marketeers — would take place in vice-admiralty courts.

Not surprisingly, following their enactment, the *Townshend Acts* were met with more colonial boycotts of British-made goods, more smuggling, and a flourishing black market trade. This again hurt manufacturers in Britain so much that they pressured

Parliament, once again, and the taxes were dropped on most imports. But Parliament pointedly kept the tax on tea, if only to demonstrate that they could still levy taxes without requiring the colonists' consent. The colonists viewed this as more taxation without representation.

Eventually, *Townshend Acts* were followed by the *Tea Act* (May 10, 1773) which was meant to save the struggling British East India Company by giving them a monopoly on tea going to the colonies. The colonists didn't want to be taxed to prop up a monopoly. On the night of December 16, 1773, in an act of defiance, a group of colonists calling themselves the Sons of Liberty boarded three ships, the *Dartmouth*, the *Eleanor*, and the *Beaver*, that were anchored in Boston Harbor. They then threw 342 chests of tea, worth \$1.7 million in today's US dollars, into the

water. It would come to famously be called the Boston Tea Party. A second smaller Tea Party took place the night of March 7, 1774, when some 60 colonists boarded the ship *Fortune* and tossed another 30 chests of tea into the harbor.

The colonists were on a roll.

Semiquincentennial

Why is the 250th anniversary of the Declaration of Independence called a semiquincentennial? Let's break it down beginning with centennial, which is "100 years," and quin, which is a prefix that means "five" (as in quintuplets — a set of five babies), and semi, which is a prefix that means "half" (as in semicircle — half of a circle), then semiquincentennial means half of 500 years which equals 250 years.

“Intolerable Acts”

After news of the dumping of the tea reached London, Parliament passed the *Coercive Acts*, called the “Intolerable Acts” by the colonists. They were a series of four acts, passed from March to June of 1774 to punish the Massachusetts Colony for the dumping of the tea. Combined, the *Acts* amounted to martial law. They included sending 2,000 more troops to occupy the city; the closing of Boston Harbor until the tea was paid for; restricting local town meetings and replacing elected officials with royal appointees; providing for royal officials to be tried in Britain and not in the colonies where they may have committed their crimes; and the housing of British troops in unoccupied buildings owned by the colonists, to help defer taxes the tea would have brought. This last item would be remembered, and eventually countered with the *Third Amendment* to the *Constitution of the United States*: “No soldier shall, in time of peace be quartered in any house,

without consent of the owner, nor in time of war, but in a manner to be prescribed by law.”

Other punitive acts followed, but instead of controlling the colonies, they fanned the flames of rebellion, and the colonists were armed and spoiling for a fight.

The fighting begins

Early on the morning of April 19, 1775, British troops began marching from Boston. They were heading to Lexington and Concord to seize powder, ammunition, and cannons. It was the first large-scale attempt at gun control in the colonies, and the colonists were ready for them. The attempt to grab their stores of weapons was successfully resisted by the patriots in the battles that ensued at Lexington Green and Concord Bridge.

The British losses were staggering. They were forced to retreat and were hectoring all the way by colonists who shot at them from behind trees and fieldstone walls, through the

towns of Lincoln, Menotomy (now known as Arlington), and Cambridge, until the troops that survived reached Charlestown, at midnight, where they were protected by naval guns of the British fleet. After that, the British stayed in Boston until they evacuated the city almost a year later, on March 17, 1776.

The war was now on.

At the Battle of Bunker Hill, the British losses were so severe that the British General Sir Henry Clinton remarked, “A few more such victories would have shortly put an end to British dominion in America.” While colonial general Nathaniel Greene, upon hearing of the outcome of the battle, wrote, “I wish we could sell them another hill at the same price.”

These battles raised the morale of the colonists and proved that an armed militia of ordinary citizens could successfully resist tyranny — even tyranny imposed by the most powerful army of its time.

Eighteen years later, this sentiment would be enshrined in the *Second Amendment* to the *Constitution of the United States*: “A well regulated Militia, being necessary to the security of a free State, *the right of the people to keep and bear Arms, shall not be infringed.*”

But I digress.

The Olive Branch Petition

On July 5, 1775, just 18 days after the Battle of Bunker Hill, members of the Second Continental Congress drew up the *Olive Branch Petition*. Written by Thomas Jefferson of Virginia, it was deemed too aggressive. So, it was edited by John Dickinson, representing Pennsylvania. Dickinson was a man who, despite armed insurrection in Massachusetts, still thought a peaceful resolution could be reached. The edited *Petition* was debated, then adopted and signed by the delegates July 8.

When did we become the United States of America?

When we became Americans and when we called ourselves the United States aren't the same thing. The country that was being born from the merging of the 13 colonies still did not have a name. So, where did the name of our country, The United States of America, come from? When was it first used? Who decided that that was what the new nation would be called?

As near as we can tell, it originated with an Irish immigrant, Stephen Moylan (1737-1811), who settled in Philadelphia, Pennsylvania in 1768. He came from Cork, Ireland, where his father was a merchant, and he started his own shipping firm after he arrived in Philadelphia, the largest city in the 13 original colonies. But with the outbreak of the Revolutionary War in 1775, Moylan sided with the patriots and joined the Continental Army. With his shipping experience, he helped in outfitting ships for the new Continental Navy.

By appointment of Congress he became the second Quartermaster General of the Army. Moylan quickly rose through the ranks, becoming a Lieutenant Colonel and an aide to George Washington. As near as historians can determine, it was Moylan, in a letter to a friend, dated January 2, 1776, who was the first person to call these colonies that were about to declare their independence the United States of America. How it got passed on from there is unknown, but six months later, the name would be emblazoned across the *Declaration of Independence*.

It was followed, the next day, with the *Declaration of the Causes and Necessity of Taking up Arms*. This was also written by Thomas Jefferson and revised by John Dickinson (to tone down Jefferson's rhetoric, once more). But the *Declaration of Causes* was not meant just for the king, it was also intended for the colonists because it explained to both the colonists and the king that the colonists did not want to break away from the Empire, but they would defend their rights as Englishmen to be treated as Englishmen. It presented arguments for why armed resistance was necessary after the abuses they, the colonists, had suffered for more than a decade at the hands of the English Parliament, beginning with the end of the French and Indian War. They hoped that when the king read the *Declaration of Causes* he would see that they were not taking up arms against him, but against the overreach of Parliament. They still hoped the king would intercede on their behalf.

The documents were sent together but would not reach London until September 5. However, weeks before that, on August 23, the king had already heard about the fighting at Lexington and Concord, and that which took place at Bunker Hill, and he had already issued the *Proclamation of Rebellion* which addressed the hostilities and proclaimed that the colonies were in open rebellion. Though both documents from the colonies again pledged loyalty to the king, blaming not him but Parliament for their grievances, he didn't bother to read either one. The war was on, but the *Declaration of Independence* was still 10 months away.

The Spirit of '76

1776 was one of the most eventful years in American history.

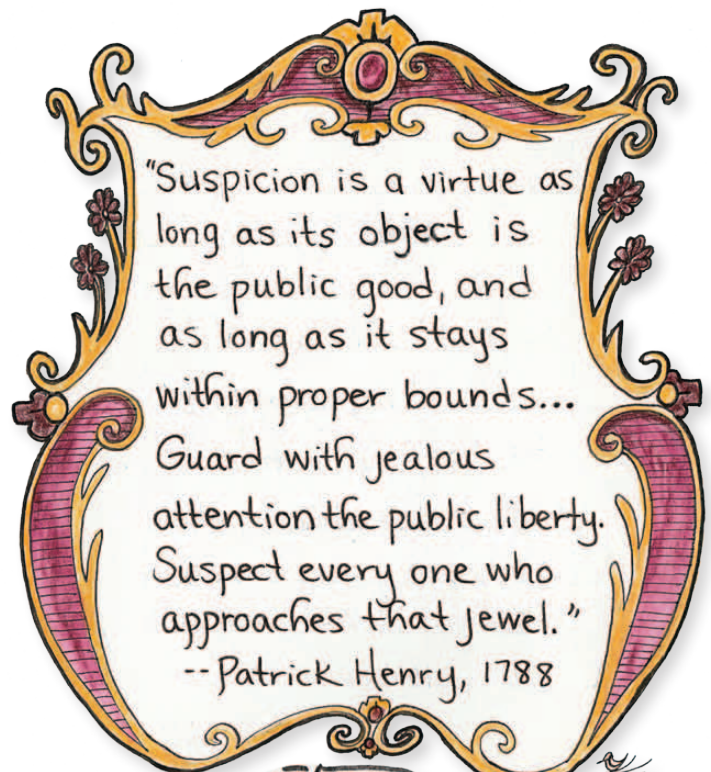
On January 3, the new name for the country appeared to have been written for the first time by an Irish immigrant named Stephen Moylan.

On January 10, Thomas Paine's pamphlet, *Common Sense*, was published and circulated through the colonies, swaying public opinion in favor of "American" independence.

Come July, we imagine that the *Declaration of Independence* came into existence on July 4, 1776, but that's not how it happened. It unfolded gradually.

On June 7, 1776, Richard Henry Lee of Virginia proposed that a resolution, now called the *Lee Resolution*, be adopted in which the colonies would declare their independence from Great Britain, create a plan to form foreign alliances, and a plan to form a confederation so the colonies could fight as one.

Four days later, on June 11, the Congress appointed Thomas Jefferson, John Adams, Benjamin Franklin, Roger Sherman, and Robert Livingston, referred to as



Patrick Henry

One of the most memorable quotes from American history came from the mouth of the firebrand Patrick Henry who, on March 23, 1775, while speaking before the Second Continental Congress, shouted the words, "Give me liberty or give me death." But six months earlier, on September 6, 1774, the second day of the convening of the First Continental Congress, he uttered words even more profound, words that set the stage for the unity the colonists needed if they were to become independent: "The distinctions between Virginians, Pennsylvanians, New Yorkers, and New Englanders, are no more. I am not a Virginian, but an American."

At the time, not many in the colonies yet considered themselves "Americans." That time was coming.

[illegible]

As for loyalty to King George III, the colonists had had it. After more than a decade of attempts to win concessions from Parliament, while pledging loyalty to him, they finally listed 27 grievances, “repeated injuries and usurpations,” in the *Declaration of Independence* that had

"I am apt to believe that it will be celebrated, by succeeding Generations, as the great anniversary Festival. It ought to be commemorated, as the Day of Deliverance

been committed by King George himself. (Take that, Georgie!)

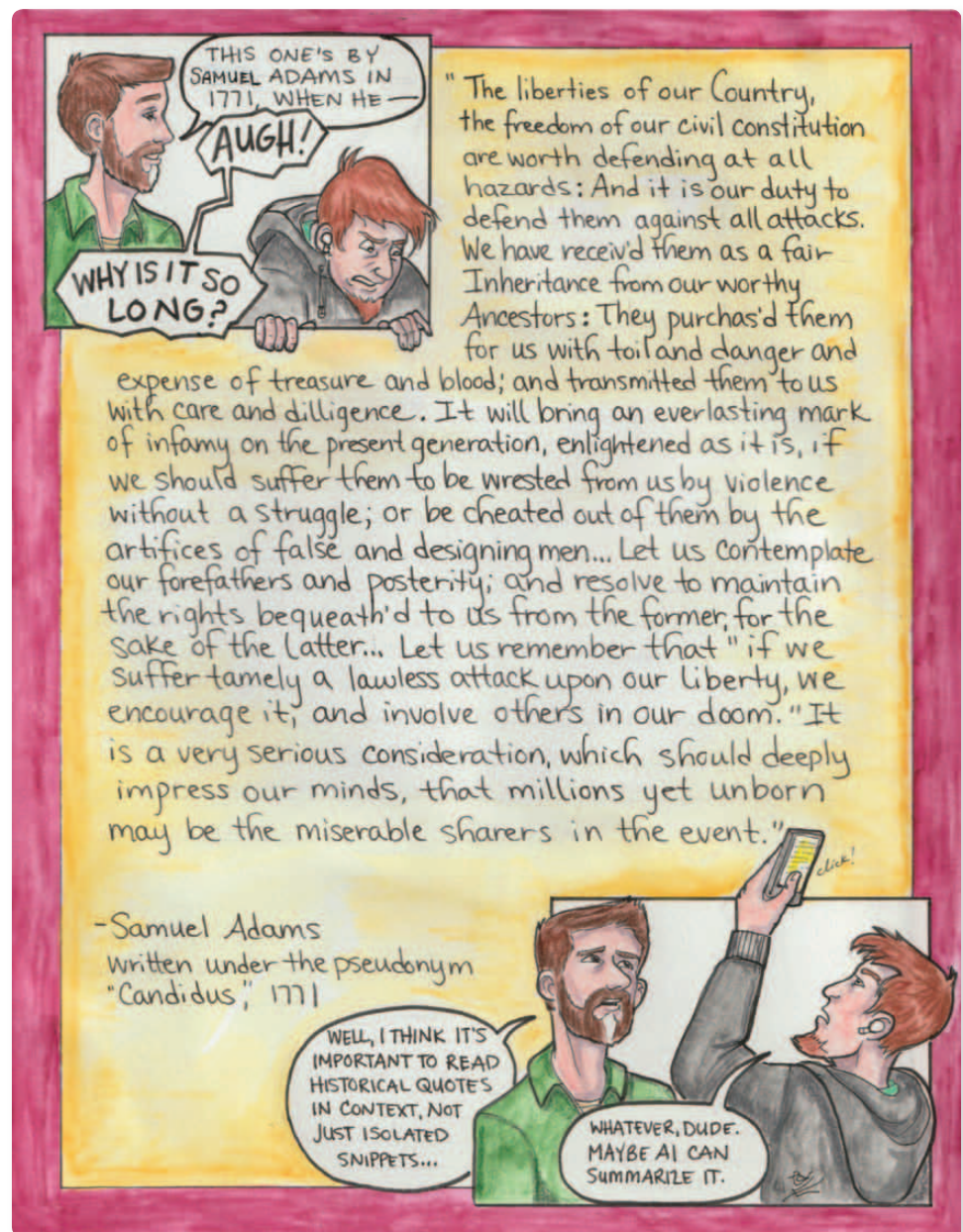
More battles would follow: Long Island, Trenton, Princeton, Brandywine, Saratoga, and others until, finally, the American victory came with the surrender of Britain's General Cornwallis at Yorktown, Virginia.

Some historians have thought the Revolutionary War might have been avoided if Britain had simply allowed the colonies seats in Parliament. Maybe. But we'll never know. Don't forget, the colonists spent years trying to remain loyal to the king. And they were not trying to abolish taxes, their motto was, "no taxation without representation." If the Parliament had just listened, history might have been radically different.

It's worth noting that during the war, the British made two attempts to negotiate a peace — on their terms.

The first was the Staten Island Peace Conference (September 11, 1776). It was authorized by the king himself. It took place in a meeting in a private home on Staten Island. Representing the United States were Benjamin Franklin, John Adams, and Edward Rutledge. Representing Britain were British Admiral Lord Richard Howe and his brother, General William Howe. The British offered pardons to the rebels in exchange for the colonies rescinding the *Declaration of Independence* and returning to their place in the Empire. The Americans said no and insisted Great Britain formally recognize American independence. They left no room for compromise, so the negotiations ended in three hours and the war continued.

The second attempt was authorized by Parliament. It was the Carlisle Peace Commission (March 16, 1778) and was held 18 months later in York, Pennsylvania. It was requested by the British after the stunning American victory at the Battle of Saratoga. The British feared that the French were going to form an alliance with



the Americans. Led by the Earl of Carlisle, Britain offered "self-rule" and parliamentary representation to the Americans if they would lay down arms and return to the Empire. Yes, parliamentary participation had been what the "colonists" had been asking for, and had gone to war over, but now it was too little too late. Once again, the Americans would accept nothing less than British recognition of their independence. So, the negotiations crashed and the war continued.

The next time the British and the Americans negotiated was to sign the *Treaty of Paris* (September 3, 1783), when Britain formally surrendered and recognized their former colonies as the new United States

of America. They recognized them not as Englishmen anymore but as Americans.

Let's celebrate!

So, this July 4 and each subsequent July 4, for the rest of your life, go ahead and celebrate. Watch parades, set off fireworks, have barbecues, drink beer. The day is worth celebrating! And if you also want to celebrate July 2, like John Adams thought you would, do that, too! And don't forget to celebrate September 3, that September day in 1783 when the British threw in the towel and signed the *Treaty of Paris*, ending the war that made us Americans forevermore.

We are now Americans. Δ

Ayoob on Firearms

Guns of The Revolution — and their legacy

Two hundred fifty years since the *Declaration of Independence*: In the parlance of my generation, “What a long, strange trip it’s been.” The guns of the time, and how they set the stage for American gun use and the future, will be the topic here.

Americans have always valued self-sufficiency. The people who defeated the most powerful military force on Earth in the American Revolution were not for the most part professional soldiers born and bred: they were farmers, tradesmen, merchants, and assorted professionals who took up arms in a cause they believed in. Their guns reflected who they were, and would forever after symbolize their cherished freedoms.

The dominant small arm

It was the time of the musket, the dominant small arm of infantry. It was a flintlock muzzleloader, with a smooth, unrifled bore. Normally its projectile was a single lead ball, but it could also be loaded with multiple smaller pellets to function like a shotgun. Of course, it was a single-shot weapon which had to be reloaded after every time it was fired.

This was the standard weapon of the British military, and a number of them were in the hands of the Colonials as well. The rebels had an assortment of muskets, including many left over from the French and Indian War. The French not only lent troops and ships to the uprising, but muskets: The Charleville musket was



Massad Ayoob

widely used by the Yanks. However, the single hand weapon fired most often in the Revolution was the British-made version. Two types were predominant: the Short Land Pattern and the Long Land Pattern, distinguished by their differing barrel lengths and thus overall lengths. The longer gun gave a soldier more reach with the bayonet affixed for close combat, while the shorter was quicker to handle and a bit easier to carry. They were made of iron rather than steel, and their stocks were hardwood.

No one actually involved in the conflict seems to have referred to their primary weapon as “this or that Land Pattern.” The troops had their own nickname for these guns, the way future British soldiers would call their SMLE rifle, the Short Magazine Lee-Enfields, a “smelly.” No, the Brits had another name for the gun by which they’d live or die.

They called it the “Brown Bess.”

Much later, in 1911, Rudyard Kipling wrote a poem titled “Brown Bess.” It includes the lines,

*In the days of lace-ruffles, perukes
and brocade*

*Brown Bess was a partner whom
none could despise —*

An out-spoken, flinty-lipped, brazen-faced jade,

*With a habit of looking men straight
in the eyes —*

Adobe Stock / fysrow



*The Minuteman, with his own flintlock, remains
a symbol of American freedom to this day.*

At Blenheim and Ramillies fops would confess

They were pierced to the heart by the charms of Brown Bess ...

(Blenheim was a British victory that left some 27,000 of their enemy dead, wounded or captured, and Ramillies was likewise a rout of Britain's opposition, both won by the Duke of Marlborough some 70 years before the American Revolution. England had had time to develop its musketry tactics and collective skill.)

Where did the nickname come from? Apparently, at that time "brown" was a byword for something ordinary and blah that didn't stand out, rather like "gray" in this country today. "Bess" was a colloquialism for females, much the way a modern Australian may refer to a woman as "a Sheila."

Muskets were the primary small arm of both sides. However, the Colonials had something more in their armory.

They had rifles.

American rifles ...

The militia that fought the British, remember, were the American people. North America was primarily rural then. Hunting was an important source of food, and harvesting small game such as rabbits and squirrels required precision accuracy. So did target shooting, which was "*the American Sport*" in the years before baseball.

Known variously as "long rifles," "Kentucky rifles," and "Pennsylvania rifles," these shoulder arms looked like muskets at first glance. The difference was inside the barrels, spiral grooves known as "rifling" that gave the guns their name and stabilized a flying projectile so that it could group its round lead bullets much more tightly at much farther distances.

Rifles had rear sights to align with the front sights for precision accuracy. The typical musket had no rear sight, only a small post or bead at the



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*Redcoat reenactors with flintlock muskets:
Note the two puffs of smoke, at the lock and at the muzzle.*

front, which on the Brown Bess also served as a mounting lug for a bayonet. When they weren't doing volley fire, Brits were taught to fire at the enemy and then close on them with the bayonet. According to one source, something like one-third of the casualties among the Yanks were caused by bayonet wounds.

The Americans' rifles, like their muskets, were muzzleloading single shot flintlocks. Gunpowder would be poured down the barrel from a flask. A bullet with a cloth patch would be forced down on top of it with a ramrod, a long thin stick carried in a tube under the barrel of the gun. Then, the "pan" of the lock mechanism would be "primed," ideally with finer grain gunpowder. The hammer would be cocked, to fall when the trigger was pulled. A piece of flint in the hammer would strike a flat piece of metal called a frizzen, creating a spark that would ignite the powder charge, sending flame through a hole in the barrel's chamber area to ignite the main charge of gunpowder and send the bullet forth. An onlooker would see a puff of smoke at the lock and then a cloud of smoke at the muzzle, and instead of a bang one would hear

"poof-bang," the first from the pan and the second from the main powder charge. That instant in between required great follow-through, that is, keeping the gun on target between the priming powder igniting and the bullet leaving the barrel.

The Yank sharpshooters were feared by the redcoats for good reasons, and one such reason was patriot Timothy Murphy who served in Morgan's Riflemen, a hand-picked group of marksmen led by Daniel Morgan. Murphy was said to be able to reliably hit a seven-inch target at 250 yards. During the Saratoga campaign, he was expressly ordered by Morgan to snipe British General Simon Fraser off his horse. Murphy obediently did so, mortally wounding the enemy leader from an estimated 300 yards, and then proceeded to kill the general's aide-de-camp from a similar distance.

The rifle lent itself to the sort of guerrilla warfare the militiamen practiced on the British column that retreated from Concord and Lexington at the beginning of the war: Take cover, shoot the enemy from a long distance while they return fire ineffectively with their



This flintlock is about to be “primed” with fine grain gunpowder.

short-range muskets, then disappear into the woods and plan the next ambush. Unfortunately, not every fight in the Revolution worked out that way. Don't be misled to think it was all American riflemen versus British musketeers; for most of the conflict, the musket substantially predominated in numbers on both sides of the fight.

Nor were the Americans the only ones with rifles. After the Brits learned the painful lesson of American rifle marksmanship, at least 1,000 Pattern 1776 flintlock rifles were shipped to British soldiers in North America. Rifles were used by the *jaegers* — hunters — among the Hessian forces that aided the Brits. Often clad in green uniforms to blend in with the forest, they had much the same stalking and shooting skills of the American rebels. In fact, the British military's experience facing American rifles led to one of the most innovative small arms to emerge from the war.

If some modern historians pooh-poohed the American flintlock rifles, the British military certainly didn't. A Scottish officer named Patrick Ferguson developed a flintlock rifle

that could be reloaded so fast a skilled shooter could get off six rounds per minute. By contrast, a soldier was expected to achieve three shots per minute with a conventional musket, perhaps four if he was particularly skillful. Conventional muzzleloading *rifles*, with their tighter-fitting projectiles, took even longer to reload.

The Ferguson rifle's trigger guard was also a lever, and if rotated parallel to stock and barrel for one full revolution, dropped a breech plug and opened the chamber. The soldier could push a ball in through the opening at the top rear of the rifle, pour in a charge of black powder behind it, and rotate the action closed. He then had only to prime the pan as on a regular flintlock and cock the hammer.

Another advantage of this forward-thinking design was that since the gun could be parallel to the ground through the whole load-and-fire procedure, the British soldier so equipped could remain prone behind cover and sustain fire. This was not possible with a conventional rifle or musket of the period since it had to be held perpendicular to the ground so gravity could bring the gunpowder

down the barrel of the muzzleloading weapon.

The British government gave Ferguson *carte blanche* for proof of concept. He patented the gun, a couple of hundred were manufactured, and he took a hundred of those weapons to equip the fighting team known as Ferguson's Rifle Corps.

Ferguson's rifles and men apparently gave an effective account of themselves at the Battle of Brandywine, where Ferguson himself was severely wounded. Still recovering during the Battle of Kings Mountain, with only one good arm, he reportedly wielded a saber with his left hand and held his horse's reins in his teeth. Though he obviously had the determination we associate with the Scots, he apparently lacked “the luck of the Irish” because he was killed in that battle. After his death the Brits rounded up the Ferguson rifles and stored them in an armory and disbanded his unit of riflemen.

... And American riflemen

The Revolution established for Americans a reputation as marksmen. Our country became known as a — sometimes *the* — Nation of Riflemen. By the time of the Civil War, demographics had changed, with much more of the population living in urban as opposed to rural areas than during the Revolution, and accordingly, fewer recruits who had “grown up with a gun in their hand” before they donned uniforms. The North was densely populated and heavily industrial while the South had remained more agrarian. The good news for the Union was that greater population and manufacturing capability gave them a decisive edge in the conflict ... but the bad news was that the largely rural Confederates had more collective hunting and shooting experience that made them much more effective marksmen on the battlefield.

This sufficiently concerned some Union generals that six years after

Appomattox, in 1871, they formed the National Rifle Association to foster small arms marksmanship nationwide among the public, the pool from which the armed forces would be drawn in the next, inevitable war.

As proof of the validity of their vision we have only to look at some of the greatest American heroes to emerge from the wars that followed. World War I: Among the most highly decorated American soldiers was Alvin York, who in the Ardennes used his rifle to wipe out multiple German machine gun nests, capture a huge number of enemy soldiers, and for good measure when he faced a bayonet charge alone killed six attacking enemies with six shots from his .45 service pistol. Before the war, he had grown up feeding his family on game he shot in the woods, and was the man to beat at local “turkey shoot” marksmanship contests.

World War II: The most decorated American soldier was young Audie Murphy, who had likewise hunted game since he was a boy and used those skills to kill something on the order of 250 of the enemy.

Vietnam: One of the most famous Americans to emerge was Carlos Hathcock, who had grown up shooting and even before being deployed had won the Wimbledon Cup, the exalted grail of extremely long-range rifle shooting, at the NRA-sponsored National Championships in Camp Perry, Ohio. This Marine Gunnery sergeant’s record of 93 confirmed kills was only the tip of the iceberg. Under USMC Scout-Sniper rules, a kill was only confirmed if logged by the observer on the typical two-man team. Hathcock preferred to work alone and was so good at his job that the commanders let him. In reality, he accounted for many more of the enemy than the official count.

The War on Terror: No individual won more fame on those far-flung battlefields than Chris Kyle, a master rifle shooter who racked up an

impressive kill count as a sniper. You guessed it: He had grown up shooting and was a superb shot even before he joined up.

Not for nothing is the NRA’s primary monthly magazine titled *American Rifleman*. Americans still love their guns. One study showed that in a given year in modern times, more recreational dollars are spent on hunting and shooting than are spent on golf.

As time went on

During the Revolution, Mother England shipped many guns to its red-coated troops in America, with which to suppress those aggravating Colonials. In the twentieth century, with good relations restored, the United States would in turn send many weapons to Great Britain.

World War I found the Brits short on Lee-Enfield primary battle rifles and unable to mass produce their new Pattern 14 Enfield, so they contracted with America’s gunmakers to do so. These “P14s” were manufactured in caliber .303 British by Winchester, Remington, and Remington’s subsidiary Eddystone which was expressly organized for the project. Over

600,000 got there in time to fight the *Boche*. When the United States joined that war, our country was likewise short of issue Springfields, so the stateside Enfield production lines re-chambered for the American .30-06 round, with the new caliber rifle dubbed the P17 model. Reportedly more doughboys carried American Enfields in that conflict than American Springfields.

As World War II unfolded, America famously became “arsenal to the free world,” and sent much armament to the Brits before the United States itself entered the conflict. England was once again short on small arms, and in a historic moment a movement called “Send A Gun to Defend a British Home” arose in the States. Countless rifles, shotguns, and handguns were sent to Britain, not for the military, but for the home guard and ordinary citizens to use as last-ditch defense against an anticipated Nazi invasion. Few of those guns found their way back and many, perhaps most, were destroyed in later years of peacetime anti-gun laws in Great Britain.



Adobe Stock / philip kinsey

The Colonials were armed with flintlocks like this one, and they were standard issue for the British soldiers as well.

SEND A GUN TO DEFEND A BRITISH HOME

British civilians, faced with threat of invasion,
desperately need arms for the defense of their homes.

THE AMERICAN COMMITTEE FOR DEFENSE
OF BRITISH HOMES

has organized to collect gifts of

PISTOLS—RIFLES—REVOLVERS
SHOTGUNS—BINOCULARS

from American civilians who wish to answer the call and aid in defense
of British homes.

These arms are being shipped, with the consent of the British Government, to
CIVILIAN COMMITTEE FOR PROTECTION OF HOMES

BIRMINGHAM, ENGLAND

The members of which are Wickham Steed, Edward Hulton, and Lord Davies

YOU CAN AID

by sending any arms or binoculars you can spare to

AMERICAN COMMITTEE FOR
DEFENSE OF BRITISH HOMES

C. Suydam Cutting, *Chairman*

ROOM 100

10 WARREN STREET, NEW YORK. N. Y.

American Rifleman, November 1940

Poster from the "Donate A Gun to a British Home" campaign in early WWII

And, about the Second Amendment

In the *Bill of Rights*, the Second Amendment to the Constitution reads, simply and starkly, "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed." The meaning of these words has been argued endlessly in what some say is tied with abortion

for the title of most heatedly-debated sociological issue in the United States, the matter of private citizen gun ownership.

We continue to hear those who would prohibit this or that or all types of firearms that the Second Amendment speaks only to states' rights and what later became the National Guard. This argument fails on many fronts. First, the men who wrote the *Bill of Rights* had been

around for the Revolution, and knew that a National Guard of the period would have been soldiers loyal to the king and duty-bound to kill their friends, neighbors, and relatives to crush the rebellion. Only a fool could believe that was the goal of these freedom fighters.

Second, the *Bill of Rights* is recognized as one of the most carefully crafted documents in the history of government. An honest reading shows clearly that it speaks to *individual* rights. It boggles the mind to think that the framers would have thrown in a state's rights issue, not to mention putting it nearly at the top of the list.

Third, look at the history behind it. The framers studied the constitutions of the individual colonies when they created the *Bill of Rights*. Many of those colonies expressly mentioned the right to personal self-defense. In the early days of America, there was no organized law enforcement as we know it today. From the time of the Pilgrims on, in some communities citizens were *required* to have guns and ammunition when they went to church, to ward off raids by Native American tribes.

Half a century ago, a visionary named Alan Gottlieb created the Second Amendment Foundation. His plan was to fund legal research and scholarship on this issue, and ultimately, to bring legal challenges to the highest courts to change the laws. From this was born the United States Supreme Court decision in *Heller v. District of Columbia*, affirming that the Second Amendment was, indeed, a guarantee of individual rights. By 2022 we had SCOTUS' decision in *New York State Rifle and Pistol Association v. Bruen*, which held that "may issue" policies of issuing permits to carry a gun in public were unconstitutional and the states had to follow a "shall issue" model, meaning in essence that the permit could not be denied to any adult with a clean criminal record.

At the time of the Revolution, it was common (particularly for travelers) to carry firearms on their person, no permit required. "Permitting" really came into effect after the Civil War when, during Reconstruction, die-hard racists feared freed slaves being armed. Requiring permits, which would be issued by sheriffs elected by the white majority of voters, was the racists' answer.

In the 1970s when Gottlieb founded the Second Amendment Foundation, most states were "may issue" and seven states had no provision at all for honest American men and women to carry guns in public to protect themselves and their families. In most states that did have carry permits, they followed a "may issue" rule which gave the issuing authority total discretion. In many such jurisdictions "may issue" became a code for, "We'll give you the permit if you're white, male, rich, and politically connected." Even before the *Bruen* decision, by 2020 all states had at least some permitting process and most were already "shall issue," meaning the issuing authority was required to grant a permit to any adult applicant with a clean criminal record or show very good cause why they didn't. In the '70s, only one state, Vermont, allowed so-called "Constitutional Carry" and did not require a permit for an adult with a clean record to



Adobe Stock / Mark J. Grenier

Redcoat reenactors with period cannon. Theirs belonged to the king; many of the cannons used by the colonists were privately owned.

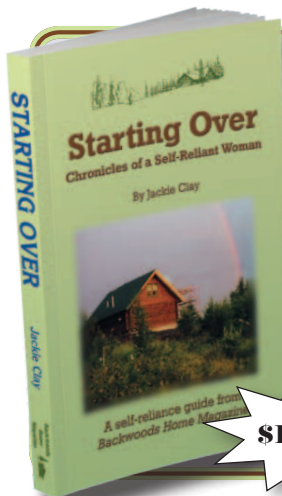
carry a gun concealed in public. At this writing, 29 states follow that Vermont Model.

Then-President Joseph Biden repeatedly claimed that the Second Amendment didn't allow cannons, despite having repeatedly been proven wrong by numerous historians and fact-checkers. The truth is that many of the cannons used by the Colonials were bought and legally owned by private citizens. Indeed, so were whole cannon-equipped *warships*: the Continental Navy was strongly augmented by privateers, privately-owned and heavily-armed vessels

authorized by government-issued letters of marque to attack and seize or sink British ships.

In summation

The Revolution was fought for freedom. The *Bill of Rights* is the very symbol of that freedom. The Second Amendment in particular has been misinterpreted by people with prohibitionist agendas. The gunfire of the War of Independence has long since ceased, but it echoes today in American freedom. Δ



Chronicles of a Self-Reliant Woman

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I Hear America Singing

I hear America singing, the varied carols I hear,
Those of mechanics, each one singing his as it should be blithe and strong,
The carpenter singing his as he measures his plank or beam,
The mason singing his as he makes ready for work, or leaves off work,
The boatman singing what belongs to him in his boat, the deckhand singing on the steamboat deck,
The shoemaker singing as he sits on his bench, the hatter singing as he stands,
The wood-cutter's song, the ploughboy's on his way in the morning, or at noon intermission or at sundown,
The delicious singing of the mother, or of the young wife at work, or of the girl sewing or washing,
Each singing what belongs to him or her and to none else,
The day what belongs to the day—at night the party of young fellows, robust, friendly,
Singing with open mouths their strong melodious songs.

Walt Whitman



Wisdom from The American Porch



By Jim Capossela

Granny Clampett had it made. All she really needed was a comfortable rocking chair, and she liked hers so well that she rocked in it all the way from the Ozarks to Beverly Hills — on top of the truck, no less.

But Granny was an Ozark hillbilly, not a Beverly Hills one, and was never really happy in la-la land. She missed the old wood-framed house she grew up in back on Switchback Mountain, and all the good times she had there.

If you'd been lucky enough to be invited over for dinner back then, you would have fared well, as Granny was very attendant to dietary needs.

"How do you like yer 'possum, Lowell, fallin' off the bones tender or with a little fight left in it?"

To which Lowell answers, "I'm really not hungry."

But it was after dinner when Granny was really in her element. Back then, porch sitting was where all the problems of the world were settled, and when it came to porch repartee, Granny could mix it up with the best of them.

"Elly May done popped the buttons on her shirt again," Granny observes. To which Jed answers, "Elly May carries herself proud, with her shoulders thrown back."

Granny comes back, "It ain't her shoulders that have been poppin' these buttons."

I guess a perceptive mind ran in Granny's family. She quoted her grandpa as saying, "Old violins make the sweetest music ... course ya' have to have the right beau."

Granny wasn't always full of compliments. Says Cousin Pearl one day, "I'll have you know I'm on the sunny side of forty." Says Granny, "Well

move in the shade, you're dryin' up somethin' awful."

Of course somewhat more weighty matters were also considered in the era of porch sitting. Samuel Clemens made his mark on the emerging American scene, and while he could keep a straight face when he had to — his novel *Pudd'nhead Wilson* takes a good jab at slavery, for example — he's best remembered as Mark Twain the humorist. Often beset with financial woes, he'd go on the paid lecture circuit, and it's said that such was his reputation as a teller of outrageous stories that the audience would start to laugh as soon as he stepped out on the stage and folded his arms.

Not only could he string funny words together, he could also take an existing catch phrase and turn it on its ear. "Familiarity breeds contempt, and children," he once observed. One likes to hope that he didn't say this to

a woman with eight children that he'd just been introduced to.

Clemens was born in Florida, Missouri (!) in 1835, in a "very small, two-room cabin" where he lived until age four. After that his family moved to Hannibal, a small frontier town on the Mississippi River. In those early abodes there must have been intelligence, and some thoughtful conversation to prime his imagination and his wit.

"It is good to obey all the rules when you're young, so you'll have the strength to break them when you're old." That attribution sounds like something he was onto fairly early in life, but then there's this killer that sounds like it emerged from a more mature mind: "There is no sadder thing than a young pessimist except for an old optimist." Money troubles might well "breed" this sort of thing.

"Always respect your superiors, if you have any."

"Always obey your parents when they are present."

Those sound like Huck Finn to me, though I'm not sure. And one more good one: "It is better to keep your mouth closed and let people think you're a fool than to open it and remove all doubt."

In continuing with money, there is no shortage of folksy advice about it. I had to include this one from the Anglo-Irish porch, from one of my all-time favorite writers, Jonathan Swift:

"A wise person should have money in his head but not in his heart."

One of America's fine philosophers put this one into the mix: "Too many people spend money they haven't earned to buy things they don't want to impress people they don't like."

That was American actor and social commentator Will Rogers who, like Lincoln and Clemens, was born in the same eventful century. Here are a few more of his diamonds:

"Don't let yesterday use up too much of today."

"Live in such a way that you would not be ashamed to sell your parrot to the town gossip."

"You've got to go out on a limb sometimes because that's where the fruit is."

On my first visit to old Philadelphia, I visited a memorial to Benjamin Franklin, a kind of wall on which all of his accomplishments were listed. It was overwhelming to me that anyone could cram that much meaning into one lifetime; he was our DaVinci. Everybody knows Franklin's "early to bed, early to rise ..." chestnut, but his quotable lines came by the hundreds via his *Poor Richard's Almanac*. Both borrowers and lenders missed this one in the run-up to 2008: "Remember that credit is money."

That great Boston Brahmin and transcendentalist, Ralph Waldo Emerson, was a bit cerebral for an article on folk sayings, but it doesn't get more down to earth than this one: "Money often costs too much." His buddy and one-time housemate Henry David Thoreau was the consummate practitioner of that philosophy. He minced no words in saying that a farm was a bum deal, as you'd be tied down by it your entire life. Better to reserve your time for important things, like studying light patterns along the Concord River. "Our life is frittered away by detail ... Simplicity, simplicity, simplicity!" is his most famous quote, but there are many others. "It is the beauty within us that makes it possible to recognize the beauty around us." If you please, I nominate that one as my favorite in this article.

A Thoreau story I couldn't verify follows. Apparently someone asked him what he was doing out there in the woods, in that little shack by the pond, "Just killing time?" His answer: "As if you could kill time without injuring eternity."

Comic by Wren Everett



Only a few years after Emerson and Thoreau, any hope of a non-materialistic society would evaporate with the coming of the Robber Barons and the concentration of most of the wealth in a very few bank accounts.

Apparently, the following Franklin sentiments weren't enough warning to stop that from happening: "Rather go to bed without dinner than to rise in debt." Or, "Our necessities never equal our wants."

Abraham Lincoln's words seem to continuously forewarn the political tenor of our times.

"I am not bound to win, but I am bound to be true ..."

Lincoln, like Truman, often reflected on leadership and its responsibilities. I'd really like to see a few of these quotes tacked up in the Capitol Rotunda.

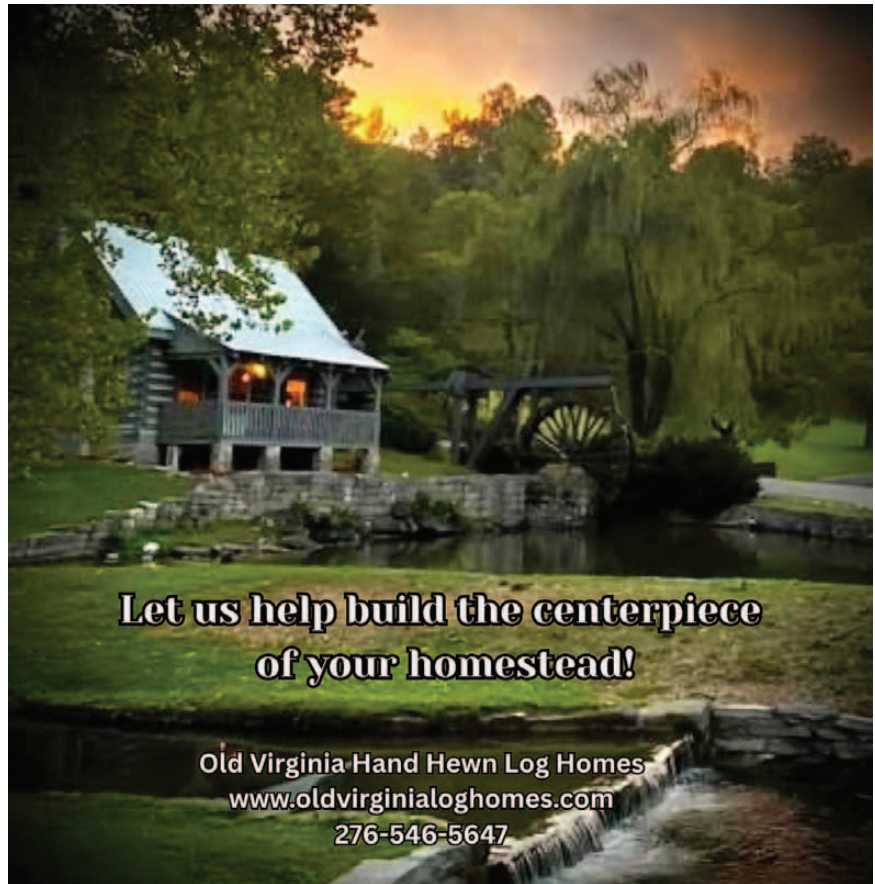
"Be with a leader when he is right. Stay with him when he is still right, but leave him when he is wrong."

"If you want to test a man's character, give him power."

And on this general tack, back to Thoreau one more time: "Rather than love, than money, than fame, give me truth."

The first states I think of when I hear the word "laconic" are Maine and Missouri. Having spent a lot of time in Maine, I can report that most of the porch wisdom emanating from it is on the very dry side; I just couldn't locate any pithy nuggets. Missouri I've only passed through, but it's clear there's something in the air in the "Show-Me" state that sparks a keen wit — and would you not call Harry Truman laconic? But there can be little doubt about his sharp mind and even sharper wit. It may have run in the family. He quoted his grandfather:

"When you see someone praying out loud at the mourning bench, you'd better go home and lock up your smokehouse." Ever since I heard that one I seem to have tempered my emotions when attending a wake.



I long had a misconception about Truman's famous desk placard, "The buck stops here." I always thought this said, more or less, "You can't buy me out." Apparently what he had in mind was more like, "I can't pass on responsibility to someone else. I'm president, I'm responsible." That one has porch stamped all over it.

But the formative years of the thirty-third president were back in Missouri, where he was born in 1884, or just eight years after The Battle of the Little Bighorn. Overcoming early prejudices — he came out of a deeply southern, slave-holding ancestry — he eventually became a kind of blend of country commoner and book-loving intellectual. ("Not all readers are leaders, but all leaders are readers." Lincoln would have agreed.)

Truman said, "My favorite animal is the mule. He has a lot more horse sense than a horse. He knows when to stop eating. And he knows when to stop working."

"I have found the best way to give advice to your children is to find out what they want and then advise them to do it."

Your kids spending too much time in front of screens? "Children nowadays have too many gadgets to fool with and not enough chores," Truman reported. If only he knew what was to come.

One summer day I was sitting on the porch drinking an iced tea when the garbage men pulled up. One waved at me with a big smile and said a few pleasant passing words. This fellow was always like that. The other one had a long face and was clearly looking down to avoid my eyes; he too was always like that. I knew from my contacts in my small town that this man had few friends and wasn't very popular on the highway crew. That's when it came to me:

"A scowl is the original self-fulfilling prophecy." Δ



Buried in BLUEBERRIES

By Patrice Lewis

My first attempt at growing blueberries came in 2003, when we were new to North Idaho. Buoyed by a couple of trips to a blueberry U-pick farm, I came away starry-eyed by the possibility of picking our own fruit from our own bushes.

I purchased 20 potted blueberry plants from the woman who ran the U-pick farm. Naively, I selected a spot near the house to plant these infant bushes and settled them into the ground in mid-spring. Unfortunately, what I failed to take into account was the spot I had chosen had some of the harshest and most unforgiving weeds on our entire 20-acre property, thickly covered with multiple varieties of thistles as well as the ubiquitous tough prairie grasses endemic to our area.

Bottom line, after five years of increasingly desperate and futile attempts to control the weeds around those poor beleaguered blueberry bushes, I callously abandoned them to their fate. I stopped watering, I stopped weeding, and simply ignored them.

Four years later, having learned the benefits of raised beds for our particular gardening challenges, my husband and I created beds dedicated to small fruits (strawberries, raspberries, and blueberries). Before spending the money to buy new blueberry plants, however, I decided to take a machete and a pith helmet and wade into the jungle of my original blueberry patch to see if any of those poor little bushes had survived.



Blueberries: Adobe Stock / Tatyana Sidukova

Young potted blueberries, ready to plant

To my astonishment, 16 out of the original 20 bushes were still alive. They weren't a whole lot bigger than when I planted them, you understand, but they had survived. Impressed with their hardiness, I dug them up and transplanted them into the new blueberry bed.

You never saw a happier and more grateful bunch of blueberry plants than those rescued little souls. They thrived and began producing abundantly, year after year. I averaged about 18 pounds of blueberries over the course of each summer, plenty for our family of four. I canned up the berries and made pies, tarts, and trifles to my heart's content. This experience taught me one very important lesson: Blueberries are very forgiving.

When the time came to sell our homestead and start over on a smaller piece of property, I was sorry to leave those blueberries behind. But it

did underscore the interest in getting blueberries established in our new home without delay. Our move (in late 2020) came at a time of widespread shortages, so when spring came, I was anxious to find plants. From several different sources, I was able to cobble together 30 blueberry bushes (one later died, so 29) of four different varieties.

What followed was the path toward our current blueberry bonanza.

Types of blueberries

Part of a successful blueberry crop is selecting the correct type of berries to grow in your region. While blueberries are self-pollinating, they benefit (with better fruit set, larger berries, and earlier ripening) from the presence of other cultivars for cross-pollination.

There are four major categories of blueberries.

- **Northern highbush:** These grow best in northern climates.

- **Southern highbush:** These do well in Mid-Atlantic locations such as Tennessee, Kentucky, Virginia, North Carolina, as well as on the West Coast.

- **Rabbiteye:** These grow best in the Southeast, as well as the Southern Hemisphere.

- **Lowbush:** These are typically the wild varieties, most common in New England, and have a very intense flavor.

Within these four major categories, people can choose from a wide variety of criteria, including autumn leaf color, fruit size, taste, and ripening time (varieties ripen anywhere from early June through mid-September).

We were looking for a larger fruit size and sweeter taste within the northern highbush category. We purchased 15 Chandler, 6 Toro, 3 Patriot, and 5 Spangler plants.

We kept the plants potted on our porch while we solved a thorny dilemma: where to plant them and how to protect them from the enormous number of deer in our area. After some thought, we constructed a pitched fenced area protected by cattle panels and deer netting (*Self-Reliance Issue #28, Spring 2023*). This has proved very successful.

To set the actual plants in the ground, we used our tractor auger to drill holes about 1 foot deep and 6 inches across. We made 10 rows with three holes per row. We spread the holes 2 feet apart, and the rows 3 feet apart. In retrospect, we should have made the rows about 4 feet apart, but such is life.

Into these holes, we put a generous amount of acidic peat moss, since blueberries prefer acidic soil. Then we settled the plants from their pots into the prepped holes, and patted everything firm. That's as far as we got that first summer.

Crucially, we did not address weed control — and that proved almost

fatal to our infant blueberry bushes. I watered the plants, but the grasses grew so thick and tall around them that the bushes were almost invisible and became stunted because of weed pressure and blocked sunlight. Frankly, it was an embarrassment.

The next summer, I got busy doing what I should have done the year before — weed control — cursing myself for leaving it so long and thus multiplying the amount of work required. A stitch in time saves nine.

My husband weed-whacked the worst of the grasses. Then, tackling about two rows at a time, I got down on my hands and knees and shaved the wild prairie grass down to dirt level using an electric trimmer. Once the weeds were cleared away, I found two of the blueberry plants had died, leaving me with 27 bushes.

Next, I laid out heavy-duty weed cloth around each plant. Then we purchased a length of PVC sewer pipe 8 inches in diameter. My husband sliced this pipe into 4-inch chunks, which we fitted around the plants as collars. The collars helped hold down the weed cloth around the plants.

Then I covered the rest of the area with weed cloth, and anchored it with gravel. Of course, other materials can be used in lieu of gravel, including wood chips, straw, or shredded bark.

The PVC collars serve multiple purposes: They anchor the weed cloth, they prevent the gravel from clogging the blueberry trunks, they make watering a cinch because the collars are easy to target even through thick blueberry vegetation, and they corral and concentrate the water within the collars.

It took about three weeks of working just in the early mornings (before it got too hot) to cover the entire blueberry area with weed cloth and gravel. The results, however, were splendid. With both weeds and deer controlled, the bushes thrived. Considering their rocky start, they were very forgiving and started producing berries.

From those 27 surviving plants, that first summer I harvested a modest one pound of blueberries. That was fine; I knew the bushes were revving up their production.

The second summer, they produced 18 pounds of blueberries. This was



Young plants in the ground



Blueberry plants fenced and weed-proofed



Cattle panels covered with deer netting to keep deer away from blueberry plants

on par with what we harvested in our last home, and to be honest, I would have been perfectly satisfied with this output.

The third summer, the bushes produced 58 pounds of blueberries. Okay, that was getting a bit overwhelming. At the end of the season, I gave 20 pounds of frozen berries to a friend.

I canned up the rest and brought 24 quarts of blueberries to give away to church members. The remainder went into our pantry.

Last year, our fourth summer, we harvested a staggering 120 pounds. And here's the thing: The bushes are still maturing. Blueberries can produce for upwards of 25 years.

Honestly, I never expected these bushes to thrive the way they have. The funny thing is, we have done nothing since installing the weed control. We haven't fertilized, we haven't mulched, we haven't pruned. All we've done is water and keep the weeds away.

By the way — remember those two blueberry plants that “died?” Well, they didn't. After two years, one of them recovered and is now growing lustily. The other is showing a few tiny leaves, and within a few years it too will probably become productive. Blueberry plants have an amazing ability to regrow, so don't be too hasty in uprooting seemingly dead plants.

The benefits of blueberries don't end with the harvest. Come October, they produce some of the most brilliant scarlet leaves imaginable, a real razzle-dazzle. Just beautiful.

Picking tips

After spending untold hours picking blueberries, I can offer a few tips:

- By planting multiple varieties, the harvest (in our case) extends a little over two months, from mid-July through mid-September. Your mileage may vary.
- I'm a fan of the “two bowl” system of picking. A large bowl holds the accumulated harvest. A smaller bowl is what gets filled as you pick. This way, if you drop the smaller bowl, you haven't scattered the entire day's picking.

- Ripe blueberries should be “rolled” off the stem. If you have to pluck, the berry is likely not sufficiently ripe.

- A large umbrella is useful both for comfort (shade), and also for helping determine the nearly ripe from the truly ripe fruit. Dappled sunlight makes it difficult to gauge ripeness.

- I've learned that if I let the picked berries “rest” in a bowl in the kitchen for three or four days, it helps sweeten the harvest. Many of the nearly ripe berries complete their ripening



Stages of blueberries — from the leaf buds in early spring to the razzle-dazzle of the scarlet leaves in fall

during this stage, and fully ripe berries tend to accumulate more sugar.

- When the berries have rested enough, I spread them on a towel, a little at a time, and pick through to remove any blossom ends or stems. Then I bag and freeze the berries. Once the whole harvest is complete, I water bath can the lot and store them in our pantry.

Care and feeding of blueberry plants

I find it comical when I read articles claiming that “Blueberry plants require specific conditions to thrive.” My bushes have survived despite my initial neglect and/or indifference, though it goes without saying that they would have thrived sooner with proper care and feeding.

Blueberries require at least six hours of sunlight per day. In hotter climates, providing shade during the hottest hours of the day will prevent scorching. The soil should be well-drained and not subject to pooling. Since heavy clay soil contributes to waterlogged conditions, make sure

the planting spot has plenty of organic material.

Blueberries require about 1 to 2 inches of water a week, enough to keep them moist but not wet. Direct watering, soaker hoses, or drip irrigation is best. Avoid overhead sprinklers, as this not only wastes water, but contributes to fungal diseases.

These fruits famously thrive under acidic conditions, preferring a soil pH between 4.0 and 5.5. Peat moss lowers pH, which is why we added it to the holes before planting the bushes.

If planting in a container, use a large size (10-plus gallons) and fill with an acidic planting mix, such as half sphagnum peat moss and half shredded pine bark, or half sphagnum peat moss and half potting soil. The same moisture and sunshine requirements apply.

The best time to fertilize blueberry plants is early in the growing season, late March through early April. While a balanced 10-10-10 NPK mix works fine, consider using a fertilizer specifically formulated for acid-loving plants (many people use azalea fertilizer). Avoid using fertilizers too high

in nitrogen, as this will boost leaf growth at the expense of fruit production.

Pruning tips

Pruning is another “essential” blueberry requirement we’ve never practiced, though with this year’s heavy harvest, I can see how pruning will improve some issues. The idea behind proper pruning is to maintain the best shape, increase fruiting, and remove dead wood.

Plants should be pruned in late winter or early spring, before the start of new growth. Make sure your tools are disinfected so you don’t spread disease. Focus on removing dead, damaged, diseased, weak, or spindly branches by making a clean cut just above a growth node.

Pruning can be used to shape the bushes as well. Thinning out the center will allow more sunlight to reach the fruiting branches, which increases fruit size. Of course, don’t remove so many branches that the plant doesn’t have enough leaves to support growth and fruit production.



Blueberry plant voluntarily propagating

Propagating blueberries

Individual blueberry bushes can be pricey. Prices range from \$10 to \$50 apiece (or even as high as \$100 for larger plants), a daunting cost if you want to put in dozens of bushes. However, it's possible to propagate blueberries from cuttings.

New growth cuttings should be taken in late spring or early summer when plant growth is most vigorous. Choose young green (not woody) stems with several leaves attached. Make sure the stem is healthy and shows no sign of disease or damage.

Sterilize the pruning shears with rubbing alcohol before cutting, and make a clean diagonal cut at least 4 inches from the tip of the stem. Remove all but two or three sets of leaves near the top. While considered optional, it's helpful to dip the end of each cutting in powdered rooting hormone, available in most gardening centers; rooting hormone stimulates faster root growth and improves success rates. Immediately plant each cutting into soil or potting mix, making sure at least one-half is above ground level. Cover the plant with clear plastic wrap to create a humid environment.

At this point, keep the soil moist but not wet, and place the cuttings in indirect sunlight for about two months. Once new growth is noticed, the plastic can be removed.

An easier method is to propagate plants from older, more woody cuttings. Wait until the plant is completely dormant (winter) and before the plant has broken bud. Choose first-year wood about ¼ inch in diameter (thickness of a pencil) and trim a 6-inch length. Dip the tip in rooting hormone, if desired. Bury about 2 inches in potting soil in a 1-gallon pot. Keep them in a sheltered indoor location for the rest of the winter. The soil should be kept moist, but not wet.

It will take three to four months for the cutting to develop vigorous roots, at which point they can be transplanted into the garden or into a larger pot.

Keep in mind blueberries will often propagate themselves. I have several new plants that have pushed up through the weed cloth near its parent plant. In a few years, these will become new producers.

Pests and diseases

No discussion of blueberries would be complete without an overview of

what kinds of challenges they face, from both pests and diseases.

The most common pests of blueberries are spider mites, aphids, and whiteflies. All three hunger for blueberry sap and, uncontrolled, can do serious damage. Integrated pest management techniques are recommended for infestations, including removing infested plants, sticky traps, fine netting, natural predators, beneficial insects, pruning infested plants, using resistant varieties, maintaining good sanitation, and insecticides specifically labeled for use on blueberry plants.

The most common diseases of blueberries are powdery mildew, root rot, and leaf spot. All three are fungal and, left untreated, can result in reduced fruit production and death of the plant. Disease management for affected plants is largely the same as for pests, although using blueberry-specific fungicides instead of insecticides.

To trellis or not to trellis

Although blueberries are not vining plants, they still benefit from being trellised or caged to support the plant as it gets taller. Look for options specifically designed for blueberries. Popular designs include teepee trellises (triangular structures that support branches), obelisk trellises (tall, narrow structures that support the main stem), and cage trellises (square or circular structures that support the branches). Branches or stems are clipped or tied to these structures.

To net or not to net

Some people have trouble with birds eating the ripe blueberries. If this is the case, netting the berries is the best option. Rather than netting individual plants, most people build frames or install hoops over which netting can be draped across the rows. Look for "safe" netting that won't entangle and kill birds. Blueberries shouldn't be netted during the pollination phase.

Soil maintenance

Since blueberries thrive in acidic soil, a soil monitoring kit is helpful to determine pH. Ideally, soil should be tested every six to twelve months. Peat moss or elemental sulfur can be used to lower pH; lime can be used to raise it. Try not to over-fertilize the plants, as this can affect soil pH. Applying compost or composted manure will improve and maintain soil structure and fertility.

What to do with so many blueberries?

While harvesting so many blueberries sounds like a nice problem to have, it's still a problem. At the peak of this year's harvest, I was spending four hours at a time, twice a week, harvesting the fruit. As the freezer filled up, it finally occurred to us we were sitting on a cash crop.

Several people suggested we should open our patch to U-pick customers. We refuse to do this for two reasons: liability and damage control. A horde of careless pickers would damage the bushes.



A freezer full of blueberries

Instead, we spread the word that we have “fresh frozen blueberries” for sale at \$5 per pound. As a result, we were able to sell all our surplus harvest, retaining only what we wanted for our own use.

Needless to say, blueberries are endlessly versatile. They can be canned, frozen, freeze-dried, or dehydrated. They can be turned into sauce, syrup, jam, preserves, spreads, fruit leather, and even wine.

My preference is to can blueberries (I'm an avid canner). As a rule of thumb, one quart jar holds about one pound of blueberries. I use a thin syrup (about 10-20 percent sugar), then process in a water bath — 15 minutes for pints, 20 minutes for quarts. If you live more than 1,000 feet above sea level, check your canning manual for additional processing time.

From these canned berries, our favorite uses are pies, tarts, and trifles.

Blueberry pie:

Pastry recipe for double-crust pie:

2 cups flour
½ tsp. salt
⅔ cup shortening or lard
6 to 7 Tbsp. cold water

Filling:

2 qts. canned blueberries
¼ cup flour



Canning blueberries

Mix flour and salt. Cut in lard and mix with a fork while slowly adding water. Roll into a ball. Divide about two-thirds for the lower crust, reserving the other one-third for the upper crust. Roll out crust and insert into pie pan. Drain blueberries and mix in ¼ cup of flour, then add fruit to crust. After filling is added, roll out the upper crust, lay it over the pie, and



Making blueberry pies



Blueberry tarts

pinch the edges. Poke with a fork. Cover edges with foil and bake at 375 F for 25 minutes. Remove the foil and bake for another 25 minutes or until top is golden.

Blueberry tarts:

Puff pastry
1 qt. canned blueberries
Flour
Sugar

Topping:
1 cup flour
1 cup sugar
6 Tbsp. butter or margarine

Cut puff pastry into approximately 3-inch squares. Flatten and enlarge with a rolling pin and tuck each square into a muffin tin.

Drain canned blueberries. Add a bit of flour and a touch of sugar. Spoon the mixture into the muffin tins, filling each about half full.

Top the tarts with “crumbs” made with the flour, sugar, and butter or margarine, blended together. Crumble this mixture over the blueberries. Bake at 350 F for 30 minutes.

Blueberry-cheesecake trifle:

8 oz. cream cheese, softened
8 oz. sour cream
1 (3.4-oz.) package instant vanilla pudding mix, mixed with $\frac{1}{2}$ cup cold milk
1 cup whipping cream, whipped without any added sugar
1 qt. canned blueberries, drained
1 box graham crackers, crushed fine and mixed with $\frac{1}{2}$ cup sugar and $\frac{1}{2}$ cup melted butter

Combine the cream cheese, sour cream, vanilla pudding and milk mixture, and whipping cream.

In a large mixing bowl or 4-quart trifle dish, place alternating layers of graham cracker crumbs, blueberries, and cream mix. Chill and enjoy. Δ

Raspberry Chronicles

By Daniel Bushnell

I started my first raspberry patch as a teenager, sometime in the early 1970s when my mother told me that her favorite berry was the raspberry. For some reason, that statement periodically echoed within my thoughts for the next 55 years. I planted my first patch to surprise her and long after she passed, I continued growing raspberries. In this article I'll point out a few tricks and lessons I've learned that you won't find on the internet or in most books, if any. One more thing you need to know about me: I am frugal, period, full stop.

We used to live in a very wet region of Washington state (Lake Stevens) where we were drenched in about 40 inches of rain per year. I grew raspberries from a patch that was about 24x50 feet with trees on the east and west sides and was able to glean 35 gallons of raspberries a year.

In 2020 I left my patch and moved to Northern Idaho. After building our new home, I started building my shop and planting our new raspberry patch. The plants I grew in Lake Stevens were free to me, so you can only imagine my shock when I went into the nursery to purchase some for my new patch. Well, as you probably already figured, I left the store without a single plant. Instead, my bride placed our needs on our church's Facebook page and on Facebook Marketplace. Meanwhile, I measured a 50x50-foot plot to fence in. Here in Northern Idaho the deer are so plentiful that people think of them as rats. A fence *is* needed! But I didn't want to spend the money to build a traditional fence.



A bounty of raspberries to go in the freezer for making jam later



We like making our jam in the winter when canning can help heat the house.



Raspberries in four out of eight 50-foot rows, March 2025



Raspberry plants three months later, June 2025

I cut some pine trees for posts and some long skinny trees for the railing. I know they won't last forever as they are not pressure treated. I checked out the price of pressure treated posts, and they were more than \$5 *each*. I can't afford that! I needed 62 posts; that would be more than \$300. So far, for three years now, I've only had

to replace three posts. I figure I can slowly replace them as they rot out.

When in Lake Stevens I had plenty of field fencing, so I cut it lengthwise and used it to weave the raspberry canes and hold them up. I started the same thing in Northern Idaho but quickly ran out of fencing. So, I broke down and purchased a 1,500-

foot roll of double stranded wire to weave the canes around.

I've noticed that when the soaker hoses get soil on them, the holes become clogged and water is not distributed evenly. Also, when I go to dig up plants for transplanting, the hose gets in the way. Many times, my shovel cuts the hose. I really don't want to pull the hose up every year since the plants pop up on both sides. So instead, I zip-tied the hose to a wire that is 2-4 inches above the ground.

Everyone and their brother has a set rule for when to transplant raspberries. I think it mainly depends on your climate and how hot it gets. I've transplanted raspberries when it was 103 F. Granted, I had to soak them well and often and I still lost a couple, but not many. One time in Lake Stevens I transplanted some in 99-degree heat and they did just fine. That patch, however, did not get full sun as does my patch in Idaho. I have found that the best time is in the spring, before it gets hot. But that's not a hard and fast rule for me. I never leave them out of the ground overnight, and always plant them on the same day that they're dug up.

When it comes to fertilizing raspberries, I will not budge. I administer as much rabbit manure as I have. It won't burn the plants and seems to be a slow-release type of fertilizer. Those rabbit beans will sit and slowly dissolve. In other words, you will not need to continually fertilize your raspberries. Pour it on every year and watch your raspberry plants thrive. With that said, my sister-in-law uses chicken manure. She doesn't put it in the plant row but puts it in the walkway between the rows. Her raspberries are fantastic! However, her patch started nearly 20 years ago.

Weeds can be a problem. This year I'm experimenting by putting cardboard down in the rows. For the past 13 years since I've retired, I simply get up around 5 or 6 a.m. and weed

by hand. I have one of those fancy Bluetooth thingies that's connected to my phone. I put on the Bible, a story, or sometimes music and just weed for 45 minutes to an hour each day before my bride gets up. I do that for 10 days and the entire patch is done for the year. In Northern Idaho I can simply place the weeds in the walking rows and allow them to compost there. But in Western Washington I had to take the weeds out of the patch. There were so many large slugs that would hide in the mulch then come out at night and eat the raspberries.

I am contemplating putting sawdust in each row. While earning my degree in Agricultural Education, I was taught that sawdust will tie up the nitrogen in the soil. Lately, I have discovered that this may not be *totally* true. If you spread a thin layer of sawdust on top of the ground, it will hold the moisture in the soil and will not deprive the plants of nitrogen. If you mix sawdust or wood chips into the soil, that's another story. If you want to make soil using sawdust or wood chips, add a lot of nitrogen and do it in a compost area.

I have also discovered that in my current climate many of the raspberries will get sunburned. This year I'll be experimenting with sunflowers. I plan to plant a row of tall sunflowers on the south side of my patch. I hope this will give the raspberries a reprieve from direct sun.

One year I planted pumpkins among my raspberries which made it nice for the children at church. They would come over in October and pick pumpkins. It made things more difficult when weeding, but I survived. I'll be planting them again this year. I really enjoy seeing the children's excitement when they find one!



Here's our 15-year-old grandson helping us make raspberry jam.

Most of the time I pick my raspberries every two days. When it's just me, I pick half the patch one day and the other half on another day. It sounds like a lot of work, but it's *nothing* compared to when I raised dairy cows; now *that's* real work. When it comes to raspberries, they can be all picked within four to five weeks. Well, unless you have those raspberries that bear fruit all summer, or those that bear early summer and fall. I must admit, I do have some of those too, though not many.

After I pick the raspberries, I run them into the house, pour them into large bowls of ice water, and allow them to soak. I don't sell raspberries in containers, so I don't worry about them getting soft. After they soak in

very cold water for an hour or two, I swirl them in the bowl to get any dust or critters out. I scoop out the berries, place them in a quart measuring container, then pour them in a strong freezer bag and add water. The water I add is fresh and pure from a well, with no chlorine. The water helps keep the frozen raspberries from getting freezer-burned. Plus, when we make Grandma's famous jam, all that water turns into raspberry juice which I can use when making iced tea.

Many of our 20 grandchildren help us with the canning process. Ever since our grandchildren were 4 years old, they've helped us. It won't be long before we are helping them can their own product. Δ

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Experimenting with dry gardening

By Timothy Major

When we moved to our current property in June of 2022, we knew the existing water well was a low-flow well. This means that while we're not likely in much danger of it running permanently dry, it produces water slowly, and it is easy to over-pump it. Thus, we are simply not able to do much in the way of garden or field crop irrigation. I had already begun to be interested in what is called "dry farming" in the larger agricultural world, but the move to this place necessitated experimentation in it sooner rather than later.

What is dry gardening?

Dry gardening is the small-scale term for dry farming, which essentially means to farm or to garden qualifying crops (with some crops it is not possible to dry farm) without added irrigation. The only water used is

what is in the ground already, which has been gathered and stored there naturally over the winter. The better and less-compacted the garden soil is, the more water it will store. If the garden soil is covered with mulch in the summer, less water will evaporate.

If no mulches are readily available, a dust mulch also works very well. Dust mulching means that instead of allowing the garden soil to dry out hard and crack over the course of the summer, the top inch or so of soil is kept loose by using a rake or hoe to frequently stir up that top layer. This breaks soil capillarity and prevents the moisture in the ground underneath the dust mulch from evaporating as much.

Soil capillarity is the method by which water is pulled through the soil from lower levels up to the surface levels, where plants are able to utilize it. As long as the water at the upper levels is used up, the soil will bring

more water to the surface by capillarity. It's a fascinating process, but not very handy when one is attempting to keep the water in the ground, which is why the dust mulch method is a great solution during hot, dry summers.

The ground will dry out gradually regardless, but at far slower rates than if the ground is allowed to harden and crack. Here in the western Oregon Cascades that happens as soon as one turns one's back on it.

Tips & resources

The book I have found to be most helpful as I started my trial and error in dry gardening is *Water-Wise Gardening* by Steve Solomon. He says it is best to attempt dry farming or gardening with good soil that is three to four feet deep.

We don't have that; our farm is on a fairly steep hillside at the narrow end of a little valley in the foothills of the



A photo of our field garden — the dry gardening method worked out well for us and we had a decent harvest.



Close-up of carrots growing during summer

Cascade Mountains. We have beautiful soil over most of the farm, but about a foot down, it turns to rock. At first you hit loose rocks, then as you dig further it transitions to solid rock in entire slabs. This is not ideal dry gardening ground, and I only found this out after we had purchased the land.

However, as I have observed the ground over the last few years, and as I have grown multiple dry-gardened crops here, I have come to believe that even these rock layers store some water that becomes available for the garden plants to use. Not only do I believe this because some garden

plants have thrived in our thin soil without irrigation all summer long, but also because our land has multiple apple and pear tree seedlings, scrub hawthorn, and more that all grow fast and well all summer on the same kind of ground. They're obviously sourcing water from somewhere!

The last crucial requirement for successful dry farming or gardening is to space plants farther apart than is generally recommended. *Water-Wise Gardening* provides a useful chart of an array of crops with different spacing requirements based on the gardening method used (raised beds or

flat ground) and on how much water will be applied (standard amounts, residual amounts, rainfall only, etc.). Referring to these is fairly essential if one wishes to be at least minimally successful in dry gardening ventures. For example, if cabbage transplants are spaced within six inches of each other in a garden row, each plant has only a diameter of six inches in which to scrounge water before it encounters the next cabbage's roots doing the same thing. Thus, the available soil moisture becomes depleted that much more quickly, the roots don't have a chance to burrow deeply into the ground, and by July the plants are stunted, aphid-infested, and sorry-looking.

If these same cabbage plants were placed a foot or more apart, that then provides each plant a full foot of water scrounging. Their roots are allowed to range farther, dive deeper into the ground, and generally take a better hold on life by the time hot weather arrives. More water is available to each plant throughout the summer because fewer plants are taking up more space.

This does make one's garden appear less productive, and it's true that fewer plants will be grown in the same square footage than if one were heavily irrigating. However, to my mind and for our situation, the results are worth it — productive gardens without accompanying water usage and labor.

Our experience

Over the last three years, as I have been experimenting with the above-mentioned methods on different crops, I have had some stunning failures and some amazing successes.

To illustrate one such success, in 2023 I planted about 100 feet of carrots in our lower garden at the bottom of our property where the ground is less steep. Even so, each row was terraced slightly, having been made that way by the previous owner, who had

grown hemp. (This endeavor was not, as I understand, terribly productive; hemp needs a lot of water to produce well.)

The carrot row had about a foot of good soil before it turned to rock, as did the other rows. In mid-April of 2023, I seeded the entire 100 feet and covered the carrot seeds lightly. While I was still seeding this row, it began to mist and then to rain, for which I was very thankful. This rain was good and solid, which meant I did not even have to water in the carrot seed as I normally would have done.

As fellow Oregonians may remember, 2023 was a very dry spring. It quit raining about the beginning of May. Mother's Day was 95 F in my area. I watched the carrots closely, but did not water them, as they seemed to be doing fine. The rain at seeding helped a lot.

I kept the soil around them as loose as I could over the summer. Despite my best efforts, some cracks still did appear in the row. With a high percentage of clay in the soil, one must be extremely vigilant to keep the top layer loose because cracks will appear seemingly overnight once the spring rains stop and the sun commences evaporation operations!

I began harvesting carrots from this plot in the summer, then continued throughout the fall and all winter long. I frequently dug carrots that were 12-14 inches long, and one inch or more in diameter. This was thrilling to me! I have always struggled to grow carrots at all, let alone good ones, and to grow large, beautiful carrots without even watering them was truly astounding and exciting.

While some parts of this experiment were not ideal, such as the fact that, as mentioned earlier, we have only a foot of good soil as opposed to three or four, and that I did not really put much effort into thinning the carrots (I hate thinning, especially with something as delicious as homegrown



A good carrot grown with the dry gardening method

carrots), it turned out very well overall. I partly attribute this to the goodness of God, and partly to the reason below.

Carrots don't generally germinate as thickly and as easily as do beets or radishes. Thinning would have been a highly imperative task were that the case. The ground was loose and prepared ahead of time, before I needed

to plant the carrot seed, and I planted the carrots at the proper time of year. If I had planted the carrots a month or even a week or two later, they would not have done as well, because they would have missed out on those opportunities of cooler weather and spring rains (particularly that year). Fortunately, that was just in time for dry gardening. Δ

Weeds — not just nuisance plants

By Lisa Nourse

Weeds are the nemesis of nearly every gardener. They compete with your vegetables and flowers, stealing light, water, and nutrients that your more desirable plants need to grow. Weeds seem to spread faster than you can keep up with them, and some are so tenacious that they even thrive in the cracks of the sidewalk and in the gravel drive.

Many people consider weeds unsightly nuisance plants that should be removed. Let's face it; most of us have been trained to believe that a garden should be neat and refined — something pleasant to look at. Neatly cleaned flower beds and vegetable gardens in tidy rows with perfect, weed-free walkways are what most gardeners aspire to.

As irksome as they are, weeds can be beneficial plants if you know what to look for and what to do with them.

Weeds as soil indicators

Although it seems like weeds will just park themselves and grow anywhere, there really is a method to Nature's madness. Certain weeds



Clockwise from bottom left: Creeping buttercup (toxic), dock, lemon balm, and soft rush (only the new shoots are edible, but I would not recommend eating this plant) are all plants that grow in wet or moist soil.

Dock can also occasionally be found in dry soil.



Clockwise from top left: Some weeds that like dry soil are plantain, thistles, and wild fennel.

grow in certain soil conditions. If you know what these weeds are, you can amend your soil accordingly. Or you can be pleasantly surprised to learn that you have rich, fertile soil just by identifying the weeds growing there.

Weeds that grow in **acidic soil** include plantain, dock, red sorrel, oxalis, dandelions, knotweed, mullein, and pearly everlasting. If you see these weeds in your garden, you should consider adding lime to your soil to sweeten it up a bit. Do a soil test to determine just how much lime to add.

Weeds that grow in **alkaline soil** include Queen Anne's lace, chickweed, lamb's quarters, sow thistle, white clover, and chicory. In order to rectify soil that is too alkaline, add any compost that is made up of well-rotted organic matter. You can also add sulfur, or a fertilizer that is specifically formulated to correct alkaline soil.

Weeds that grow in **soil that stays damp** include creeping Charlie, horse tail, creeping buttercup (toxic), pennyroyal (a folk remedy, but no longer recommended due to toxicity), chickweed, dock, violets, sedges, and goldenrod. You can try adding compost to damp soil to improve its drainage; however, this does not always work



if the water table is too high. In this case you might try trenching to drain the water away, but raised beds or mound gardening might be the only answer to being able to grow vegetables or flowers in such an area.

Weeds that grow in **dry, drought-like soil** are thistles, yarrow, mullein, wild mustard, plantain, and pigweed. To amend dry soil that drains too fast,



Stinging nettles indicate nitrogen-rich fertile soil.



Oxalis, often called wood sorrel, grows in acidic soil. It can be found in both moist and dry locations. As its name indicates, it contains oxalate and can contribute to kidney stones if consumed regularly.



If you want bees to pollinate your fruits and vegetables, leave some flowering weeds in the garden to help attract them.

add loads and loads of manure and well-rotted compost.

If you see purslane, common chicory, common groundsel (toxic), lamb's quarters, deadnettle, stinging nettle, or red root pigweed in your garden,

you will know that you have **rich, fertile soil**.

This, of course, is not a complete list, but I believe I have listed enough weeds for you to be able to identify your soil type.

You will notice some of these weeds in more than one category. Just as you might get by with growing a sun-loving plant in a slightly shady area, weeds, too, can cross soil condition barriers and grow in odd places. Dandelions, for instance, will grow just about anywhere, and so will English daisies and hairy bittercress. For this reason, if you are planting a vegetable garden, to truly know how alkaline or acidic your soil is, and what amendments you might need to add, you should do a soil test.

Some weeds such as clover (which adds nitrogen) can improve your soil by adding nutrients as they grow. Other weeds can provide nutrients to the soil when you allow them to decompose and turn them back into the soil of the garden.

If you are not confident about identifying the weeds growing in your garden areas, there are lots of weed identification books specific to region. Your local extension office is also a great resource for identifying the weeds that grow in your area.

Weeds and pollinators

Weeds attract pollinators and other beneficial insects.

Just about any blooming weed will attract bees. If you leave some weeds to bloom in your garden it might encourage more bees to visit your garden and pollinate your vegetable plants. While attracted to most flowering plants, bees are especially attracted to dandelions, goldenrod, henbit, clover, and deadnettle.

If you want to attract butterflies, leave milkweed (or plant it) in your garden. Yarrow is also good for attracting butterflies.

Weeds with bright tubular-shaped flowers such as *Digitalis*, also known as foxglove (toxic), will attract hummingbirds. The hummingbirds are after the nectar of the flower, but some pollen will stick to their beaks and feathers and get transferred to the next flower they visit. Although they



Some weeds such as dandelion and English daisy will grow in all types of soil, whether acidic or alkaline, moist or dry.

do not pollinate as many vegetables as bees do, they are still a big help and are beautiful to watch when you decide to sit down and take a little break from garden chores.

Weeds for eating

Some people will define weeds as “any plant that grows in the wrong place.” And some people — me included — will define weeds as “a possible supplemental food source.” Of course, you *must* be able to properly identify the weeds and know which ones are edible. Some common edible weeds include: deadnettle, dandelion, purslane, sheep sorrel, stinging nettle, lamb’s quarters, cleavers, dock, self-heal, lemon balm, violets, wild garlic, hairy bittercress, pigweed, and chickweed. This is a very short list of a great many edible weeds that grow across the country.

So how exactly do you identify which ones are edible, how do you prepare weeds for eating, and what time of year is best for eating them? This is a large subject and if you are new to eating weeds, it’s a good idea to book a foraging course with someone knowledgeable about this subject. These courses are becoming more common and even in our small coastal town I was able to find a few people offering classes near me. There

are online options for wild foraging classes as well; however, I think it is better to go out with someone that has been foraging for a long time. I believe hands-on learning is best in this situation.

That being said, weeds are generally springtime crops. As the year advances and the weather gets hot, most weeds will no longer be tender enough to be palatable.

Preparing weeds for eating is simple enough — cut the tops, leaving

the root to grow more leaves unless it is the root you are interested in eating. Then wash the leaves (or roots) to remove any dust or bugs.

To cook most weeds, you can simply treat them as any other green that grows in your garden — kale, spinach, Swiss chard, and bok choy are all similar to some of the weeds you will also find growing there. Add your weeds to pasta dishes, soups, casseroles, stir-fries, and omelets for an added boost of nutrition.



Photo by Jackie Clay-Atkinson

Lamb’s quarters is one of the more well-known edible weeds. It likes soil high in nitrogen, grows in all soil types (sand to clay), and prefers alkaline soil.



All parts of the violet are edible. However, it can become invasive and you may want to eliminate it from your garden for that reason.

Many weeds such as young dandelion leaves, purslane, and lamb's quarters can be added to salads.

Weeds such as lemon balm, stinging nettle, fireweed, clover flowers, and pineapple weed can be used to make tea. Chicory root and dandelion root both make good coffee substitutes. Just wash the roots really well, dehydrate them, and then run them through a coffee grinder. Keep in mind that these two weed roots can cause stomach upset if you start out drinking too much all at once. It's best to start with just one cup to see how it affects you. Chicory root, especially, is high in fiber, and although good as a prebiotic, it can cause a little bloating when you first start drinking it. Weeds like deadnettle and purslane can be used to make pesto.

The roots of burdock and Queen Anne's lace can be roasted right along with the carrots and parsnips from your garden. Get them while they are young, though, because as they mature they become tough and woody. Burdock can also be made into a candy. (See Setanta O'Ceallaigh's article in *Backwoods*

Home Magazine Issue #153, May/June 2015.)

Lamb's quarters and stinging nettle are both similar to spinach and can be used in quiche or as a topping on pizza, among other things. (Use gloves when handling stinging nettle before cooking, and don't even try to eat it raw!)

I was recently chatting with Jackie Clay-Atkinson, and she told me that she batters and then deep fries small whole purslane plants. As of this writing, the purslane plants are just coming up in my spring garden, so I will have to wait a bit to try this, but it sounds delicious!

Notes of caution: Never use any weed for food unless you can identify it with *absolute* certainty. Never forage for weeds in areas that have been sprayed with pesticides or any other chemical. Also, do not forage for weeds in lawns or other areas animals may have used as a bathroom.

Weeds as medicine

While a great many weeds can be used as medicine — yarrow, stinging nettle, plantain, self-heal, and chicory are some of the common ones found where I live — I am not going

to get into this category of weed use. I believe the use of weeds as medicine requires a great deal of studying and should not be taken lightly. I have seen too many posts on personal blogs and social media recommending weeds for certain ailments. However, I rarely see caveats regarding the use of said weeds. For instance, some weeds (purslane, dock, lamb's quarters) have a great amount of oxalates that can cause kidney stones if consumed regularly. Other weeds may contain higher amounts of purines and should not be consumed by people afflicted with gout. The use of stinging nettle can lower blood pressure and should not be overly used by people who take blood pressure medication. Long-term stinging nettle use can also adversely affect the kidneys. You get the idea — weeds used medicinally *must* be used with caution. I'm not saying you cannot consume these weeds in moderation as food, I'm just saying for medicinal purposes and daily use, you should do your own research and not rely on something you read on the internet.

If you would like to explore using weeds as medicine, I suggest finding a certified herbalist to guide you. There are also some very good herbal medicine books available. I rely on several and cross-reference them regularly.

Ways to prevent or eliminate weeds

If you are a gardener who prefers to keep all weeds at bay, even after reading about their good qualities, here are some ways to do just that.

Plant densely where you can. Planting densely or using plants that provide a shade canopy, such as squash, cabbage, or corn, can help to control some weeds in the vegetable garden. Planting densely in flower beds and using a ground cover plant goes a long way towards shortening your weed-pulling hours.

Get them while they're small. Use a sharpened hoe or other weeding tool to eradicate the weeds while they are still small. Once they grow bigger, their roots are too long to get with the hoe, and you will have to dig the weeds out or they might pop right back up.

Use mulch. Once you have an area cleaned of all weeds, pile on the mulch. Using an organic mulch like wood chips, bark, straw, or pine needles will be beneficial to your soil when it breaks down. Contrary to popular belief, pine needle mulch does not cause the soil to become more acidic, but if you are worried about this, use it for blueberry and strawberry beds or under rhododendrons and azaleas where a little more acid is not cause for concern.

A good way to get more mileage out of your mulch in the walkways of the garden is to put down plain brown cardboard before piling on the mulch. This will really smother any weeds or weed seeds that are left and prevent them from growing.

One of my chores as a child was to spend one day every week weeding the garden. I was always so disappointed to go out the next week and see just as many weeds as there were the week before. Little did I know that if we had used mulch, a lot of that weeding would not have been necessary.

Cook the weeds. One method I have used for several years now that seems to help in preventing weeds is to cook them. We live in the Pacific Northwest and get a lot of rain. After cleaning up the garden, I allow the rain to fall on it until late November or December (rain adds nitrogen to the soil). Then I cover the whole garden with heavy plastic sheeting (6 mil). When the weather warms up in the spring, it gets really hot under the black plastic. This kills weeds under the plastic and cooks most of the weed seeds in the uppermost layer of soil. If you can avoid tilling the

soil and bringing weed seeds to the surface, this method works quite well.

Use a torch to burn the weeds in areas where the flame won't affect your desirable plants. This works great in gravel driveways, along brick borders, or in the garden walkways. Just be aware that this only burns the top of the weeds and does not eliminate the roots, so this method is one that will have to be repeated periodically.

Boiling water, vinegar, or salt are all natural weed killers but must be used with caution. I've had great luck pouring boiling water on the weeds that pop up in our stone walkway where it is hard to get the weeds out from between the stones.

Using cleaning vinegar (a 45-percent vinegar solution) will dehydrate and kill weeds, but use it with caution as it will kill your vegetables and flowers just as easily as it does the weeds.

I have read that salt can also kill weeds when you sprinkle it on them, but I have not tried this method so cannot attest to its viability.

Chemical herbicides are not a method I use or recommend because I believe these chemicals can cause environmental problems by contaminating the soil and water supply. There is also the potential for human health concerns if not used properly. Chemical herbicides work by penetrating the plant all the way down through the roots. Some deep-rooted weeds or perennials may need more than one application.

I also don't recommend the use of **landscape fabric**. Eventually, dirt and other organic material find their way onto the fabric, which allows weed seeds to germinate. Trying to pull weed roots out of landscape fabric is nearly impossible. It is best to only use landscape fabric under patio stones or bricks. Δ



Although it has pretty little pink flowers, Robert's geranium (AKA "Stinky Bob") is another weed that will become invasive. It has what I consider a very unpleasant odor; if you can get past that, the leaves and flowers are edible.

Adventures in deer fencing

By Patrice Lewis

Over our years of increasingly ambitious gardening efforts, we've developed a grudging respect for deer and their determination to eat everything we plant. Each spring, we barricaded our garden area with more and more security. It often didn't work for long. It's beyond frustrating to go out to the garden some random morning and find all the strawberries or spaghetti squash eaten down to nubbins because the deer managed, yet again, to breach our defenses.

The breaking point came in the summer of 2020 when we were trying to sell the homestead we'd spent 18 years building up. We used for sale by owner. Since we were frequently showing the house and property to prospective buyers, I made sure our half-acre garden (properly fenced with eight-foot fencing) was as perfect as I could make it.

Then one morning, when we were expecting yet more visitors to tour the house and property, I went out to find that every single bed of beans was decimated. Every. Single. Bed. I was so furious I could have wept. Those durn deer had somehow managed to conquer our eight-foot fences. And so the battle continued.

We sold the house and moved to our current property, where we were starting fresh building up much of the homesteading infrastructure we enjoyed in our last location. But this time, since we were starting from scratch with making a garden, we were determined to do it right — including deer-proof fencing. Ten feet high, baby!



Garden fence from the outside — 10½ feet high and deer-proof

Diff'rent strokes

Everyone has an opinion on the best way to keep deer out of a garden. Some suggest repellents. Some erect “double fences.” Some put up physical barriers such as cages or row covers around their veggies. Some plant heavily scented herbs and flowers. Some believe “burglar alarms” such as tin cans strung on wire or wind chimes will work. Some string flashy and reflective items around their space. Some install “obstacle courses” such as piles of firewood around the perimeter of the garden. And of course, some use the classic eight-foot-tall fences on the touching hope deer can't clear them. Many people, including us, experiment with a combination of these solutions and often come away frustrated.

Our experience has shown that deer are both wily and persistent. All the things we've tried over the years have failed at some point. That's why, for what we hope will be our final and permanent garden, we wanted to make sure the space was absolutely immune to deer and elk.

Because we have no plans to move from our new homestead until old age drives us away, we're building infrastructure with an eye toward keeping things easier during our senior years — a “work smarter, not harder” approach. This means doing things right the first time.

Because our soil is full of clay, we knew from the start we would be building raised beds and installing a drip irrigation system. For our first few years, while we focused on other projects, we installed a few raised

beds and covered them with deer netting to protect them from getting eaten. (It didn't work very well.)

After getting our cows, we did fence in the garden space with cattle panels to keep the cows away from the few garden beds we had installed. We were resigned to losing almost everything we were growing to the deer, no matter how firmly we barricaded individual beds.

A nice, tall fence

We were pleased with the strength of the cattle panels we already had installed around the perimeter of the garden space. The new project was a matter of providing a vertical structure to raise the fence to 10 feet in height, using the 50-inch-high cattle panels as the base, with deer netting suspended above.

The netting we chose is plastic deer netting. We purchased a roll 7½ feet wide and 330 feet long with a breaking load of 600 pounds. To be honest, we had never seen this material in action and had no particular expectations that it was any good. But the reviews were positive, so we took a chance with a single roll. We were so impressed, we ordered several more rolls for any projects that might require strong protection.

This deer netting has exceeded our wildest expectations. This stuff is lightweight and flexible, but very strong. It can be cut to size with scissors, but it's strong enough even to resist elk. It has an added advantage that, once it's in place, it's not visu-



My husband built a jig for holding the end caps upside down so they can be filled with epoxy resin. The endcaps were filled with just enough epoxy resin to keep the screw tip of the eye bolt from working its way out.



ally annoying. This is the material we chose to hang above the cattle panels to create our 10-foot barrier.

First we had to string a high cable from which to hang the deer netting. To do that, we needed to extend the T-posts another six feet into the air with a support strong enough to handle the weight of the netting.

While long wooden 2x4s might have worked for this task, we opted to use one of the most underappreciated

and often-free resources no one has ever heard of: well pipes.

When wells are drilled, 21-foot-long galvanized well pipes are connected and lowered into the well hole to the correct length, with the submersible pump at the bottom. When the pump needs to be replaced, the pipes are pulled and sometimes replaced. As a result, well drillers



Using J-B Weld to affix an end cap to a pipe



We threaded the steel cable through the eye bolts at the top of the pipes. Once the pipes were finished, we pulled the cable tight by hand, then affixed the cable to the pipe using hose clamps.



We attached the upright pipes to the T-posts using hose clamps.

are often buried under mounds of discarded pipe. They're sometimes willing to sell those pipes cheaply, or even give them away for free (to avoid paying a disposal fee). Well pipes have a multitude of uses ... including, in this case, a sturdy meth-

od for suspending netting to keep deer out of a garden.

To achieve the desired height of 10-foot fences, we cut the 21-foot well pipes in half. Our intent was to bury one end of the pipe in the ground next to each garden T-post,

then strap the pipe and T-post together for extra strength.

However, one of our concerns was water getting into the pipes from the open top. Rain or melted snow accumulating at the bottom of a buried pipe could easily freeze and crack the metal. For this reason, we decided to cap the top end of each pipe before burying the bottom end in the ground.

We purchased some furniture-grade PVC end caps (designed to be UV-resistant) of the correct size to fit over the ends of the pipe. My husband drilled a tiny hole in the top of each cap and inserted a zinc-coated ¼-inch eye bolt. The eye bolts would allow a thin steel cable to be threaded through. The plan was to have the cable support the deer netting.

To make sure the cap was leakproof and weatherproof, he partly filled each cap with epoxy resin. When the epoxy was dry, he glued the caps to the ends of the well pipes using J-B Weld.

Then it was time to strap the pipes to the T-posts to create the desired height. While we originally planned



to bury one end of the pipe, it wasn't necessary. Instead we merely strapped the pipe to each T-post. Not only did this save a tremendous amount of work, but it actually raised the height of the fence infrastructure to a dazzling 10½ feet. Ha! Let the deer try to jump *that*.

To strap the pipe to the T-post, we started by using a heavy-duty 10-gauge wire. We twisted the wire tight at the bottom, center, and top of each T-post. This didn't work at all — the wire kept snapping when we tried to make it tight enough to support the pipe. We switched to a lighter-gauge wire. While the wire was less likely to snap, it was too difficult to tighten the pipe securely to the T-post. In the end, we bit the bullet and purchased hose clamps (buying them by the box at the auto parts store, which was cheaper than the hardware store). We applied the hose clamps at the bottom and top of each T-post. The hose clamps worked beautifully. They were much faster and easier to attach, and made a stronger and tighter connection. I would recommend skipping wire altogether and just using hose clamps for any similar project.

For the corner posts, we installed two metal braces for strength. The corner poles receive the most pressure, so we wanted to make sure they could handle the weight of the infrastructure.



We used hog rings to clip the netting to the cable and to the cattle panels.



We used metal braces for added strength on the corner posts.

Meanwhile, during the process of raising the pipes into the air, we strung thin 14-gauge braided steel cable through the eye bolts up top. This provided the high wire on which we could fasten the deer netting. We strung one side of the garden at a time.

At the corner poles, we drilled two holes in the pipe at 90-degree angles so we could string the cable through the holes in the pipe instead of through an eye bolt at the top. The reason we strung the cable through the pipe itself at the corners was for strength. The small eye bolts capping



each pole were meant to simply hold the cable in place, but they would not be able to handle the pressure of pulling the cable tight at each corner.

The steel cable was loose as we strapped the pipes in place. Once the pipes were finished, we pulled the cable tight by hand, then affixed the cable to the pipe using hose clamps. We used two hose clamps for this purpose: one to hold it in place, and

then another one after we looped the cable back on itself for extra security.

Because a length of deer netting 100 feet long would be too cumbersome to handle, we cut sections of netting to about 30 feet long — a bit longer than the distance between three upright pipes. We borrowed a tall stepladder from a neighbor for the laborious process of attaching the netting to the overhead cable. I was the ladder-climber and my husband (who

is stronger) was the ladder-holder. At heights like this, we didn't want to risk injury by having the ladder tip over on the sloped and unsteady ground. It was a slow and careful process to fasten the netting to the cable.

At each upright pipe, I wired the netting to the top of the pipe, giving the netting about a six-inch overlap, then clipped the top of the netting to the cable using hog rings. I clipped the netting to the cable at about two- or three-foot intervals. We also used hog rings to fasten the bottom of the netting to the top of the cattle panels.

The envy of the neighbors

The result of this nuclear deer fencing is netting that reaches 10½ feet in height and permanently excludes all deer and elk. Inadvertently, we have become the wonder of the neighborhood, since everyone is fighting a similar battle against deer in their own gardens.

Even now, when logically I know there is no possible way for deer to get into the garden, a small part of me is waiting for the other shoe to drop. I keep anticipating

that one morning I'll find our strawberries decimated or our zucchini eaten down to bare dirt. Needless to say, it hasn't happened.

I love deer and wish them no harm. I just don't want them anywhere near our food plants. Now that they have been permanently banned from our growing space, I can enjoy them even more. Δ

Firewood on a budget

By Pete Cecil

My friends jokingly call me a “wood whore.” Deep down, I think they may be right. I can’t pass up any opportunity to add to my wood pile for future winter heat. If I see a round of wood alongside the road, I’m sure to pick it up. If I see an ad for free firewood on Craigslist or Facebook Marketplace, I consider it a challenge to be the first person to respond and add to my stash of wood.

Securing your own firewood does not need to be an expensive undertaking. While I consider myself to be lucky to have grown up in the logging industry and have the skill set and equipment needed, gathering wood for home heat does not require a huge investment other than time, commitment, and energy.

Free firewood is out there, the trick is learning how to access it. Many times I have firewood delivered to my property for next to nothing, or at best a six-pack of beer as a thank you. A local roof truss plant (now out of business) used to deliver a container with a cord or two of kiln-dried off-cuts every year that were ready to burn. All I had to do was designate a place for them to dump it at their convenience. This saved them the cost of paying a fee at the local landfill. A friend of mine is a hardwood flooring installer. He knows that he can always drop off solid, untreated hardwood flooring scraps at my place. Again, he saves dump fees and room in his dump trailer. Another friend runs a cabinet shop. He saves all of his solid wood off-cuts and calls me when he has a small load ready for pickup.

The local power company knows they can drop off logs or firewood rounds if they are passing by. Many arborists will let you know that they have logs available close to your residence, although you may need to be able to cut and haul the firewood away on short notice. I make sure that I have a rake and broom with me on such trips so that I can keep the site clean and I’ll send the arborist a picture when I’m done. Some arborists will offer to drop off a load of logs or firewood at your home. Be sure to show them that their efforts are appreciated.

Craigslist and Facebook Marketplace are also great sources of firewood. Shortly after a wind event or storm is a good time to score free wood. Many gated communities require that anyone selling a house remove firewood from the property before sale. Often, the material is already bucked, split, and well-seasoned.

A friend owns 60 acres near my home. He allows me to cut a couple of cords each year of dead and downed timber on the property to help mitigate fire danger. Each spring, we talk about his management goals and designate an area that he would like to be thinned. It’s a win-win situation for both of us.

Another source of firewood can be people who are clearing sites to build a shop or house. Last year, I met a guy who was clearing a large site for his shop. Every few days he would have a cord or two of wood bucked into rounds and call me to come and collect it. I was able to drive right up and easily load it.

My buddy Jeff doesn’t have a chainsaw, but he’s willing to lend me a hand with procuring wood when

he’s available. In return, I drop off an occasional load of wood at his place. Again, it’s a win-win situation.

Even if you want to gear up and have access to more wood collecting activities, it doesn’t have to cost an arm and a leg. A good used chainsaw will cost between \$300 and \$600. Plus, you will need to pay for fuel, maintenance, chain sharpening, and safety gear. Be sure you acquire the necessary skills to operate the saw safely.

A cheaper alternative might be a single-person 54-inch hand bucking saw. A good quality vintage bucking saw will cost between \$150 and \$250 and can be sharpened for around \$20 per foot. If you’re careful, you’ll only need one sharpening per year. Wedges, an ax, and a splitting maul can be found used for less than \$100. Although this method requires more physical effort to process your wood, if the saw is sharp and well maintained it is not drudgery and can be an enjoyable effort. If you don’t own a truck, many cars can pull a small trailer to haul wood home. Or recruit a friend with a truck or trailer who also needs wood and share the spoils.

Acquiring firewood on a budget can be as big or small an effort as you care to make. But, don’t forget the community building aspect. I have a friend who often complains that no one drops off firewood at his house! The reason is that he fails to take the time to develop mutually beneficial relationships with local sources that have firewood to dispose of. Consider options such as bartering wood for labor, hay, garden produce, etc. Think outside the box, treat your potential firewood sources well and with respect, and you too can start collecting firewood on a budget. Δ

Adobe Stock / yevgeniy11





Building a bat house

By Pete Cecil

Constructing a bat house offers many benefits to your garden and homestead. Bats are particularly helpful with insect control. A single bat will eat hundreds of insects daily. Bats are an environmentally-friendly alternative to chemical pesticides. Installing bat houses helps bat conservation efforts, especially in regions that have declining bat populations due to habitat loss and rapid urban development.

Ready-made bat houses can be purchased online or at your local wild bird store. However, they are simple to construct and require a minimal amount of carpentry skill and tools. Building them is a great starter project for kids and can be part of a wildlife education learning opportunity. The tools you'll need include a saw, tape measure, marking pencil, straight edge or square, a hammer, and a handful of six-penny nails or two-inch construction screws.

Bat houses should be made out of rough-cut material, which helps the bats to roost. Man-made products such as plywood or chemically treated wood should not be used. I like to build my houses out of rough-cut 1x12-inch ponderosa pine which is readily



Bats: Adobe Stock / Eddy

Back and sides



Front, top, and partitions

available in my area. Most small or portable sawmills will have piles of boards that are not suitable for sale because they contain knots, splits, or are too short. These scraps are the perfect material for constructing bat boxes. A local mill lets me pick through these discard piles for free. Since bat houses are made from short lengths of lumber, I can usually find enough materials to build several houses. If you can't find rough-cut lumber, an alternative is to wrap smooth boards with hardware cloth or window screen material. Each box will require roughly seven lineal feet of lumber.

Bats like a warm house, so you'll want to hang it about 10 feet above the ground facing the sun. Some people paint the house black to help absorb extra heat. The area in front of and below the house should be clear of brush, branches, or obstructions. It may take up to two years for bats to take up residence. It's recommended that you install the house before the beginning of spring. Bats require a water source within a half mile, so if you hang one in your garden be sure to keep a large, wide tub of clean water nearby.

I can build a bat house in about an hour. I can build it faster if I pre-cut the pieces for several houses at a time. Your carpentry does not have to be perfect since bats utilize cavities of varied sizes. I try to space the interior partitions between $\frac{3}{4}$ inch and $1\frac{1}{4}$ inches apart. The houses I build usually have two partitions, creating three compartments. Each compartment will hold up to 50 bats. Some species of bats will migrate to warmer climates in the winter.

Once bats are part of your garden and homestead, you will find them to be quiet, considerate, and hard-working neighbors. They are also fun to watch at dusk during summer evenings. Δ



Showing the two partitions



Hang your bat house about 10 feet above the ground facing the sun.

For more information contact:

Bat Conservation International
500 N Capital of TX Hwy
Bldg 8, Suite 225
Austin, TX 78746, USA
512-327-9721
1-800-538-BATS



Building a round-bale movable platform

By Don Lewis

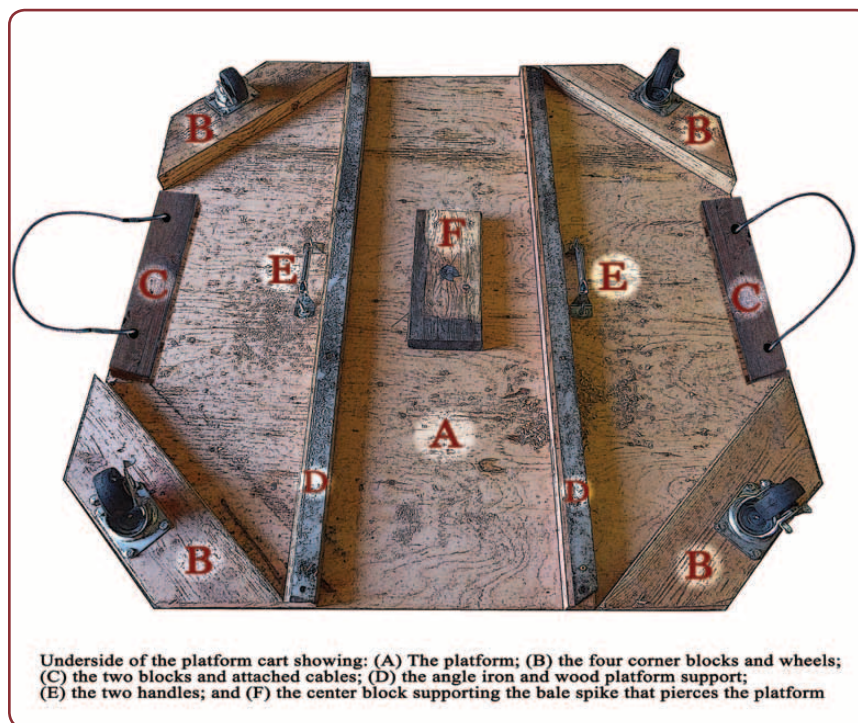
After making the move to our “retirement” farm, we’ve had to make changes in our cattle-handling systems. We reduced our property size from 20 acres down to eight, which meant cutting the number of cattle we keep to just enough animals to provide us with milk and meat.

Through careful management of our limited pasture space, we can graze our cows for six months of each year. As with our old homestead, we don’t have the acreage to cut our own hay, which means we have to buy winter feed. This can be an adventure. We live in an area of large-scale hay production — which is great — but finding our preferred bale sizes isn’t always easy.

Because we’ve reached our “golden years,” we prefer to buy small bales of around 50 pounds for easier lifting; but around here, these smaller bales are considered “boutique” and are hard to find. Usually they must be requested ahead of time and cost more per ton. The less expensive (pound for pound) and more available options are either round bales weighing around 500 pounds, or square bales in the 1,000- to 1,400-pound range.

Because our small tractor can’t lift more than 1,000 pounds, square bales are not an option. Therefore, we’re often compelled to buy the 500-pound round bales.

Most people who feed with round bales use round metal feeders designed to allow the cows to free-feed from a whole bale placed within the feeder. While that works pretty well for large or commercial cattle



Bottom view of cart with legend



Figure 1: 4x4 plywood with trimmed corners

outfits, I dislike this option. Cows notoriously eat more than they need to, and make considerable waste of hay as the cows drag it from the feeder and scatter it on the ground.

When we use round bales, we “unwind” the hay from the bale and place the loose hay into our barn’s interior feed box. This minimizes waste, makes cleanup easier, and gives us better control on how much the animals eat.

The difficulty arises when it comes to barn space. Our barn is multi-use (two shops, a storage room, a work area, and — at the far end — live-stock infrastructure, including the feed box). The result is an interior hallway that is too tight a squeeze for the tractor to transport the bales to the livestock side. Moving a 500-pound bale by hand is too difficult, so I had to come up with a different way to easily move bales around inside the barn.

Our barn has a concrete floor, so my thought was to use the tractor to move a single hay bale to the barn door (where the concrete floor begins), then make a movable platform that could maneuver the bale around the interior of the barn to the feed boxes. This platform needed to be strong enough to support 500 pounds and have wheels so it could be rolled into position. Additionally, the platform needed to keep the bale on its end (not its side) so it could be easily unwound.

I wanted the bale to be centered on the platform, but because I would be using the tractor spikes (attached to the tractor bucket) to carry each bale to the barn door, I decided to attach the platform to the bale itself *before* I tipped the bale off the forks in an upright position. My reasoning for this was that making sure the bale would “land” centered on the platform would be hit or miss unless the platform was already centered and attached to the bale.



Figure 2: Attached 2x6 corner protectors/wheel bases



Figure 3: Spike creation and location of center hole

I began constructing the platform by cutting a 4x4-foot sheet of $\frac{3}{4}$ -inch-thick plywood. I chose to use $\frac{3}{4}$ -inch plywood (typically used in the construction of subflooring) for its strength. I trimmed the corners off the plywood to make maneuvering easier in tight spaces, as well as to make it less likely that I would trip over the exposed corners (Figure 1).

Next I used wood glue and $2\frac{1}{2}$ -inch deck screws to fasten 6-inch-long 2x6 boards at the corners of the plywood to act as supports for the 2-inch free-spinning wheels (Figure 2). Each of these wheels is rated to support 300 pounds. I fastened the wheels to the support blocks with 2-inch lag bolts.

I inset a 12-inch steel timber spike through a 6-inch-long 2x6 board,

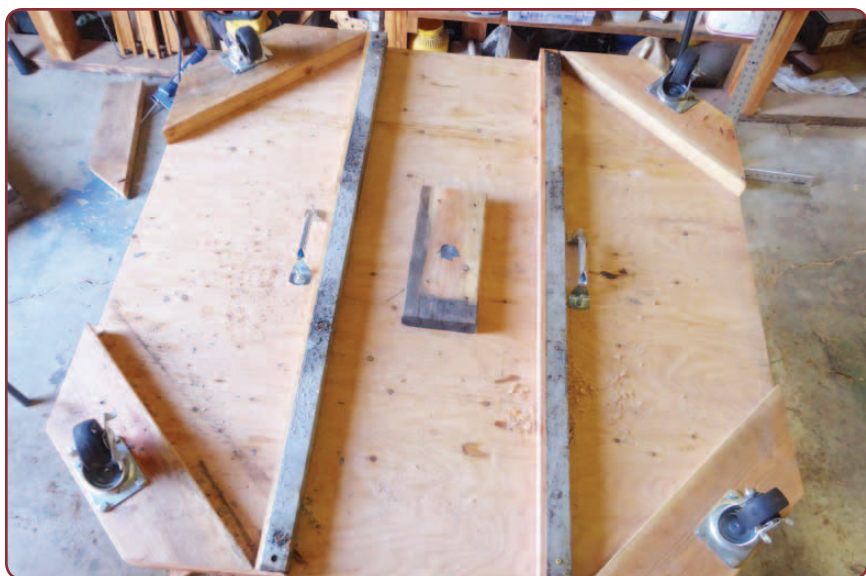


Figure 4: Angle iron supports and metal handles for lifting the cart to position it



gluing it into that board with epoxy, and fastened it to the bottom of the platform with the spike sticking through a hole in the center of the platform (Figure 3). That spike, poking up through the platform, would allow me to “stick” the center of the platform to the center of the round bale.

To increase the support strength of the platform, I bolted two 4-foot lengths of 1-inch angle iron to a couple of 4-foot-long 2x2 boards, which I fastened to the underside of the plywood platform with 2-inch deck screws.

On the underside of the platform, I added two metal handles for lifting the cart and positioning it on the hay bale (Figure 4). I also added 2x2 boards on opposite sides of the platform that I pierced to allow for two wire cable loops. These cables had two uses: One was to provide a place to use twine or rope to secure the platform to the bale when lifting it with the tractor; and the second was to provide handles for pulling the platform and bale through the barn to the feed boxes.

Having completed the platform, it was time to test how well it worked. Using the tractor spikes, I lifted one of the 500-pound bales and moved it to just inside the barn doors where the concrete floor starts. Using the handles on the underside of the platform, I lifted the platform and pushed the center platform spike into the center of the bale. Next I used a piece of twine to temporarily tie the platform to the bale — running the twine from one of the steel cable loops, around the back of the bale, and attaching it tightly to the other steel cable loop on the opposite side. Then, using spikes on the tractor, I lifted the bale and the attached platform into the air. With the tractor, I moved the bale where it needed to be, then slowly tipped the spikes down until the bale and its attached platform slid off and onto



Bale and attached platform ready for placement, then being lowered prior to release

the concrete barn floor, wheels down and bale upright.

After this, I removed the twine and used the cable loop to hand-pull the 500-pound bale through the barn to the feed boxes.

The system worked, but as we moved more bales, I learned not to lift the bale so high with the tractor bucket that the bale slides off the forks prematurely while tipping the bucket and slams the cart to the barn floor. Instead, I start with the bucket lower and raise it and tip it incrementally, keeping the wheels of the cart very close to the floor.

Moving a 500-pound bale into place by platform cart makes things very easy, especially for an older guy like me. In the end, this cart fits into our mantra of “Work smarter, not harder.” As I approach my 70s, I count this mobile platform as a win. Δ



Hay bale on platform ready to roll into place

Do-it-yourself off-grid fridges

By Kathryn Clover

I have lived without a powered fridge or freezer for 20 years and counting.

When I made my first zeer pot 12 years ago, I became aware that I was carrying out an ancient tradition of food cooling and preservation. At the time, I had slung out my defunct gas fridge and was aware of the constraints of the small 3x12-volt battery bank in my home. An electric fridge would use a large portion of my power.

I prefer the non-powered options. No annoying humming, for one! It creates much less of a carbon footprint too. The powered cooling industry creates 10 percent of global CO² — that's more than the aviation industry. Plus, if ever the power grid shuts down, our food and drink will still stay fresh.

Prehistoric and historic “fridges”

Let's first look at how food cooling was done in the time before electricity. This gives us ideas to take forward and even improve on.

Grain pit

One of the earliest food cooling devices was the grain pit. Used since Neolithic times and prolific in the Iron Age, these pits used the cooling shelter of the earth, plus the art and science of lacto-fermentation.

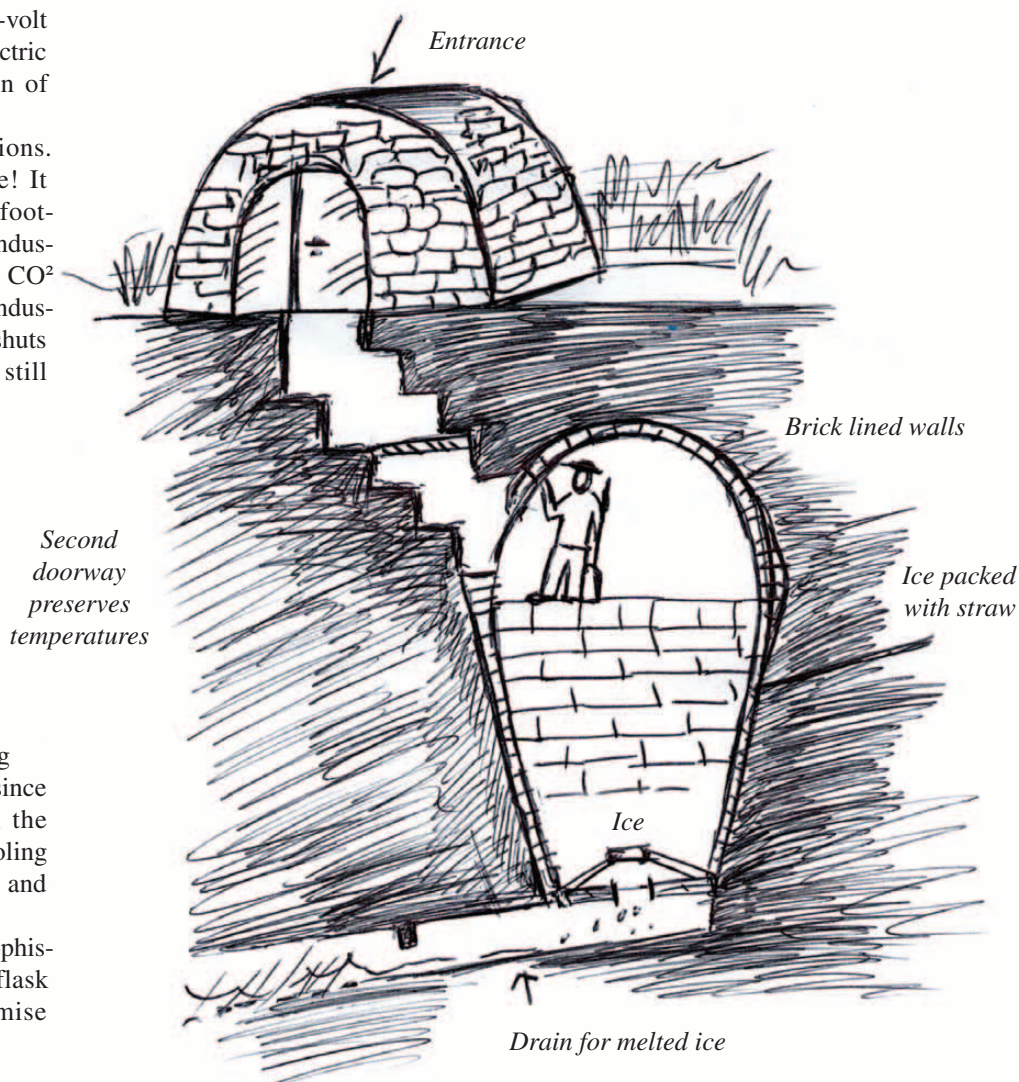
Grain pits were surprisingly sophisticated, often having a pear or flask shape under the earth to minimise

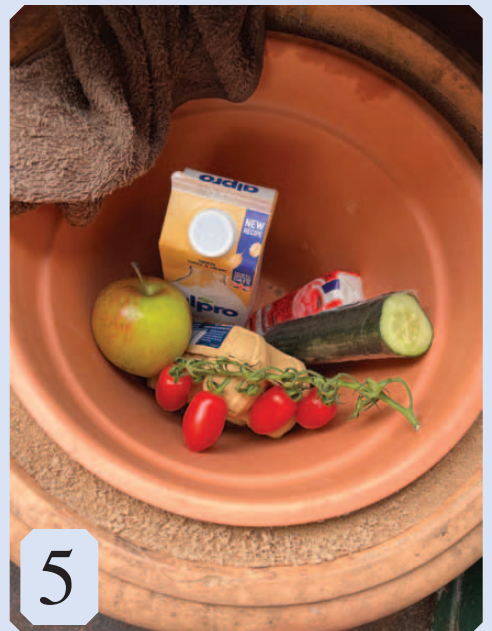
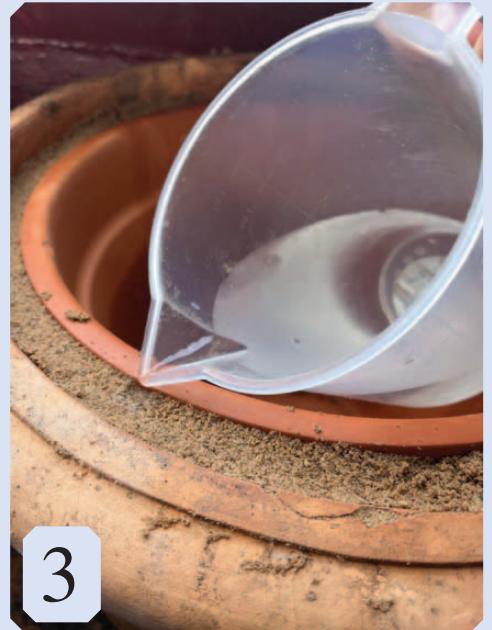
exposure to oxygen. They were usually capped with a substance that sealed the pit when kept wet — dung and clay are two classic examples. Kept away from air, the grains nearest the pit sides would ferment. This produced CO² gas, which preserved the rest of the grain. (Admittedly, this

method is “cheating” a bit, as cooling from the earth was not the sole means of food preservation!)

These grain pits are found today at archaeological digs all over the world. Grain pits are still in use in several places, including Morocco and some other parts of Africa.

Nineteenth century ice house





Zeer pot directions

- 1. Plug the hole in the bottom of the large pot, then fit the smaller pot inside it on a 3cm layer of sand. The top of the smaller pot should be 3cm lower than the top of the big pot.*
- 2. Fill the gap between the pots with sand, poking it down with a wooden spoon to eliminate air spaces.*
- 3. Add water to the sand, holding down the inner pot with your hand so that the sand doesn't build up under it. Add more sand and water as needed.*
- 4. Cover the zeer pot with a damp towel, cloth, or another, shallower terracotta pot.*
- 5. Add food items to be kept cold.*

Ice house

The very first ice house was recorded on a cuneiform tablet in 1780 BC, Mesopotamia. It was commissioned in the town of Terqa by Zimri-Lim, King of Mari. Ice houses were also used by the seventh century BC Chinese.

A typical ice house had a steep stairway leading underground to a deep chamber. This would be heavily

insulated and lined with material such as bricks and straw. It also had drainage underneath to allow meltwater to drain away. Ice kept in this way would last months, even until the next winter.

The golden era of ice houses lasted from 1660 to the nineteenth century. People well off enough to have large gardens often had a brick-

lined ice house built. Ice could be sourced locally during the winter; it was imported from North America or Scandinavia if this wasn't possible.

In eighteenth to nineteenth century New England, a bustling ice trade developed, with ice shipped to the Southern United States. Predictably, ice houses became obsolete once electricity and powered refrigeration were invented.

Root cellar

Root cellars, as the name suggests, were most often used for storing root vegetables like turnips, carrots, and potatoes. They were created by both Europeans and seventeenth- and eighteenth-century American settlers, who realized they were unprepared for the new climates of North America. By the nineteenth century, most United States farmsteads had a root cellar.

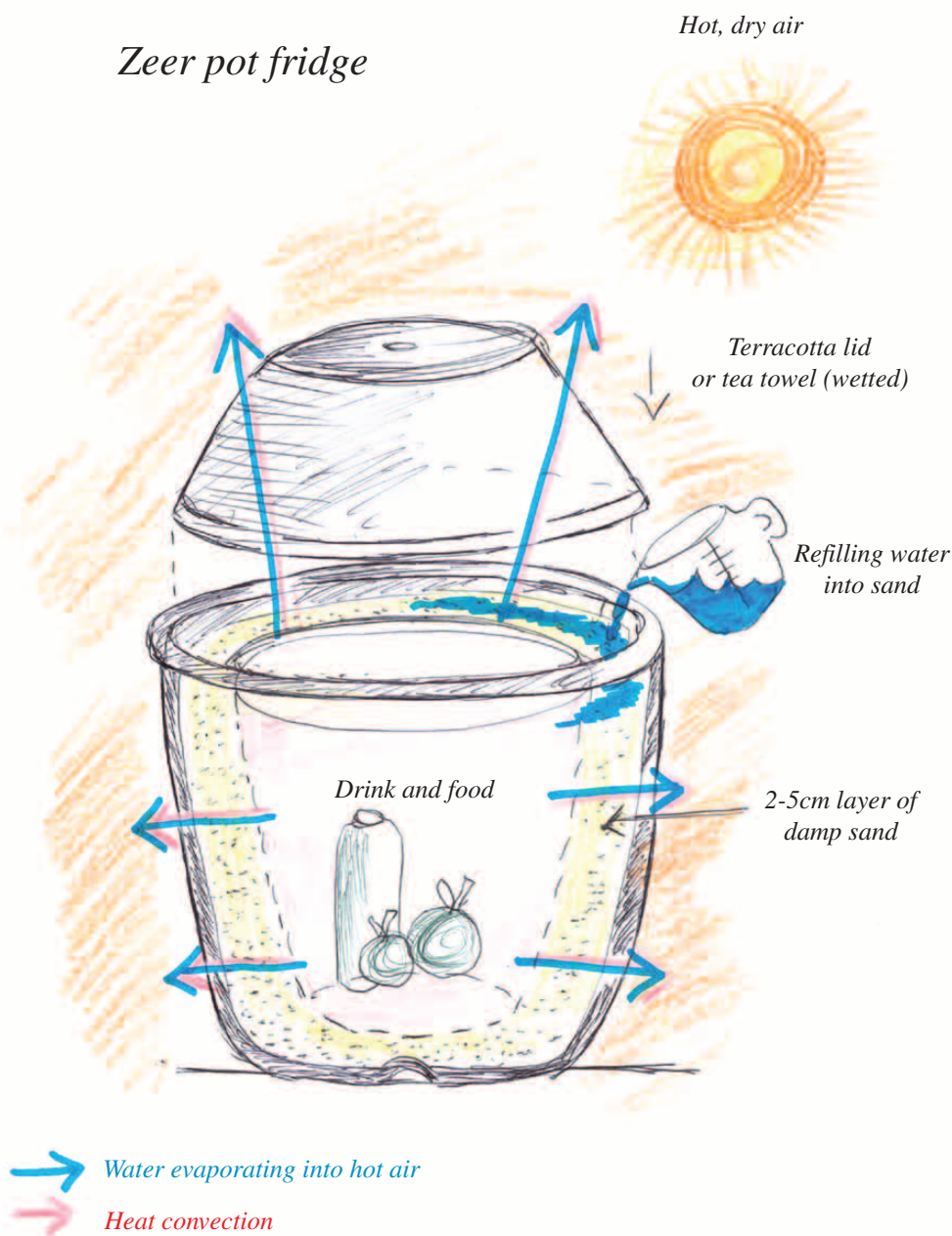
The more stable and lower temperatures underground are a result of the sheltering effect of the dense earth. Reliably cooler temperatures can keep you or your food fresh underground.

Root cellars are constructed of materials like dirt, stone, brick, or even concrete. The temperature is generally kept between 32-40 F.

Humidity is kept high, over 80 percent.

Root cellars are still used now and are enjoying a revival among homesteaders and preppers. Modern plastic root cellars can even be fitted in one piece into the ground with pre-formed steps and shelves.

Zeer pot fridge



Fridge 1: zeer pot

I first heard about zeer pots on the website for the charity “Practical Action.” The zeer pot was invented by Mohammed Bah Abba, a teacher from Nigeria. His clever yet simple design helped African villagers make terracotta “fridges” that work on the principle of convection: *evaporative cooling*.

Evaporative cooling works because when water evaporates, it takes heat with it. So if you create a place where the water evaporates outwards into a hot atmosphere, it will reduce the temperature inside. Simple, yet brilliant. Even better — the hotter and drier the air is outside, the more efficiently your “fridge” will work! Tomatoes and guava that would spoil in two days last 20 days in the zeer pot. Arugula lasts five days instead of just one. Okra lasts 17 days instead of four.

Thus encouraged, it was off to the garden centre to buy the biggest terracotta pot I could find, plus one just 2-3 centimeters less in diameter to place inside it. I also bought two, 20-kilogram sacks of sand. I found an unglazed terracotta pot 80 centimeters in diameter. That was the largest pot that could fit in the space where my fridge used to be. I staggered back to the boat I live on with the lot on a flatbed trolley.

Both pots *must* be unglazed and unpainted. This is because the terracotta must be porous to allow the water to evaporate. So sorry, no fancy shiny pots.

My top tip: Place the large pot directly where you want it to go, or at least very near it. Put the sand and



Both my son (left) and Tom helped dig the ground fridge. We put water into the hole to make it easier to dig.



water in the pot once it's in position. After I finished making my zeer pots, they were very heavy and would have given me a back injury to lift without help!

My first zeer pot was in an old fridge space, but my second I placed in a shed-like area. The zeer pot needs shade and good airflow to work well. This allows air currents to remove the warmth-filled evaporating water. It's actually quite hard to find a place with both shade and good airflow, but a wood shed is a good example.

I first blocked up the drain hole on the bottom of my big pot. I used boat hull repair epoxy, which hardens into a waterproof seal, but try using clay

or cob (clay and straw mixture) if you want to be a purist.

I then put a 3-centimeter layer of play sand on the bottom of my big pot. For something involving food like the zeer pot, I suggest sticking with play sand, river sand, or beach sand. Building sand contains unpleasant contaminants. I then rested the smaller terracotta pot on the sand layer so it was sitting inside my large pot. I made sure the top of my smaller pot was 3 centimeters lower than the top of the big pot. This creates the largest surface area for evaporative cooling.

I then filled the whole space between the two pots with sand. I poked it down to make sure there weren't any air gaps. Slowly, I

poured water into the layer of sand. I watched the sand sink down, and realized I had to add a lot more sand! I finally finished once the sand was completely saturated with water, with a thin layer of water on top.

I did need to hold down the inside pot as I did this, otherwise sand can build up underneath and the inside pot can rise up too high.

It took a lot more water than I thought — almost 15 litres! Once it is full, though, I only need to check how damp the sand is by touching the sand each day when I use the fridge. When it seems a bit dry, I add roughly 1 litre of water. This amount changes depending on how hot it is. The hotter it is, the more water I need to add, as it evaporates more quickly.

I chose a clean hand towel and wetted it. This went over the top of the zeer pot. This helps with evaporative cooling and shade. You can use another, shallower terracotta pot over the top instead if you find one that fits.

Okay, so ... did the zeer pot work?

Yes, my beer, dairy, and vegetables were indeed cooler. About 11 degrees cooler. Not the 20 to 25 degrees cool-

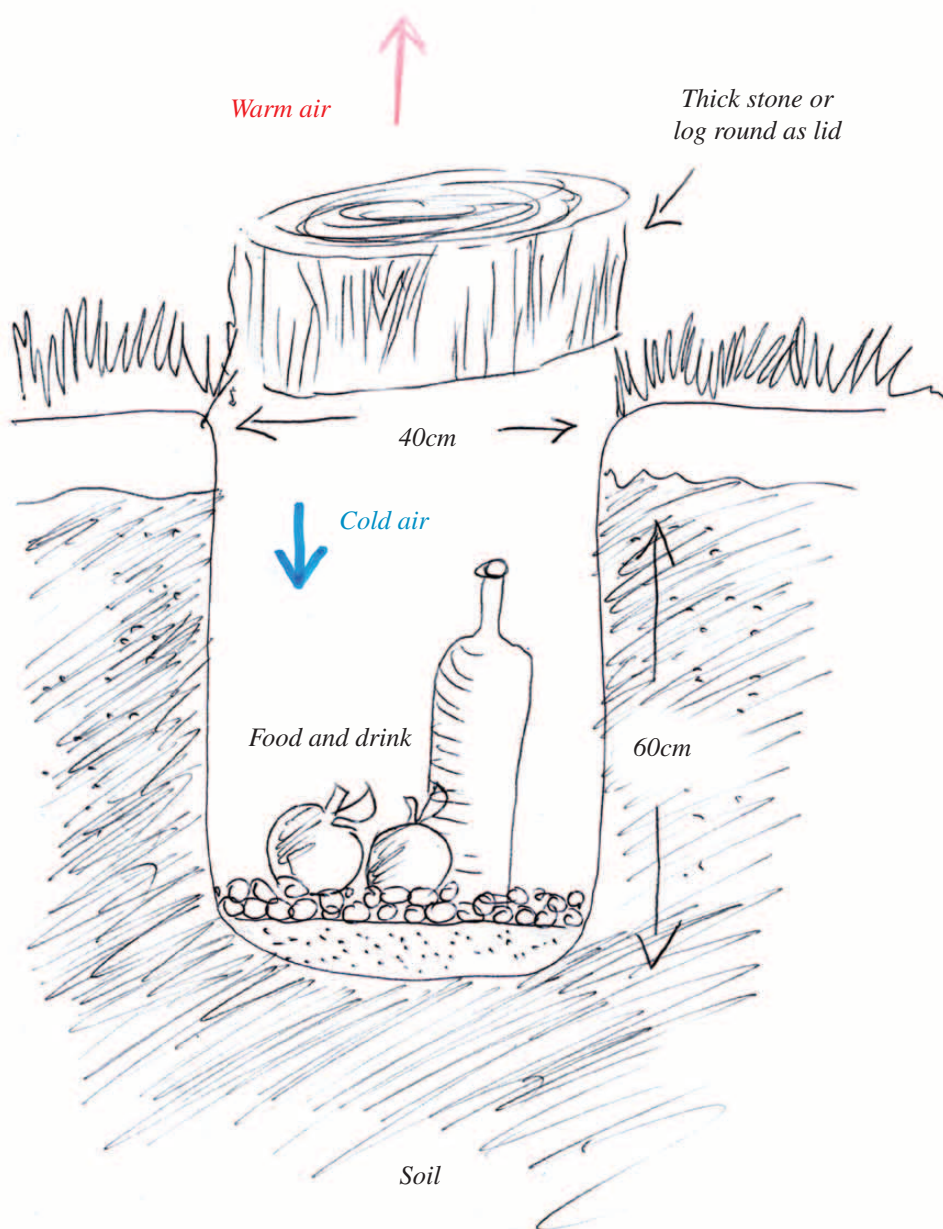
er promised by tests in the Middle East and Africa! This is because the air where I live is quite humid compared to those places. I live near water and in a temperate climate.

I did need to brush sand off my food before eating it (and my beer before drinking it!) Wrapping the food and drink in baking paper or foil before putting them in the ground helped combat this.

So in short, zeer pots work best in hot climates with dry air that the water can evaporate into. My first one still kept my drink cool, and I used it for the next three years until I spilt yoghurt in and it started to smell. I then returned the terracotta to use as garden plant pots.

I have now made a second zeer pot, and it's great for keeping drinks, fruit, and hummus cool on those long hot summer days!

Ground fridge



Do-it-yourself pantry

For my pantry, I got wicker baskets, stacked them with air gaps in between, and put them in the coldest and shadiest place in my home. The airflow and the cool place keeps my vegetables cool and sweet-smelling for several weeks in summer, and a lot longer in winter. When the vegetables do start to spoil, they go dry instead of turning into a foul, stinking mush like in a fridge.

I put my dairy and bread in a wicker basket on a shelf, and my meat and fish in a basket underneath this. The meat and fish I leave in packaging, or this would all be very messy!

Pantries have been used for thousands of years, and many of our grandparents tell us about using them. It's about the strategic positioning of the pantry. The north side of a building is best, away from the sun. The ideal place is on the lowest floor where the ground helps to cool the air. Good ventilation prevents mould and mildew.

I've used the pantry option happily for the last nine years. If the temperature gets really hot, I put my dairy in a bucket of ice and water.

Fridge 2: ground fridge

I discovered the "ground fridge" when on a camping holiday. The campsite was well known for its sustainable designs.

Behind our pitch, there was a small wooden lid set into the ground. It was the size of a pedal bin lid. I lifted it

to find a hole in the ground of the same size. It was lined with plastic on the sides, but was open at the bottom. There was enough space for our drinks and dairy. It kept our drinks surprisingly cool with nothing but the shelter of the earth.

My next project, once we got our garden, was to make our own ground fridge. The trick here is to do this *before* it gets too hot, as once it is hot, one has much less inclination to dig holes in the hard ground!

Sandy soil is ideal, but any type of soil will work. Sandy soil allows heat to transfer away — the same principle as the zeer pot — and allows excess moisture to drain away. You don't want food soaked in flood water. It also helps if it's not so sandy that the hole collapses.

I invited some helpful friends over. We chose a spot off the main path and in semi-shade, though full shade would have been better. Unfortunately, the spots I tried digging in full shade had many tree roots in them.

We dug a hole 70 centimeters deep and 40 centimeters wide on flat land in the garden. We found it was easier to pour a bucket of water into the hole a few hours before digging. This softened the soil and made it easier to dig out. We lined the bottom with 5 centimeters of gravel, then 5 centimeters of sand for drainage. I found a log round that fit in the top of the hole as a heavy lid, keeping out wild animals. Looking back, it would be easier to first choose a lid, then dig the hole width to fit it.

The ground fridge worked well in a range of summer weather. Digging it sideways into raised ground would work better in a very wet climate. The only issues we had were a few minibeasts like slugs, who evaded the heavy lid and clung to my pots of hummus! A better-fitting lid and sides would have sorted this problem out.



Ground fridge — log round is used as a lid

What about solar-powered electric fridges?

Many of my friends use solar-powered electric fridges. The beauty of this is that the hotter it is, the more electricity for cooling you have!

None of the fridges my friends have are directly powered by solar. A 12-volt current runs from solar panels into all the electrical appliances in their homes, including a 12-volt fridge. A 120-volt or 240-volt powered fridge uses more power as you need to use an inverter to convert the power. Some energy is lost when doing this.

Just how efficient are these fridges?

Several people I asked said they had enough power in the summer months, but found it useful to save power by switching the fridge off at night. Or by turning on the fridge when the television goes off and vice versa.

"Last year my fridge ran from solar for 8,722 hours. I supplemented the other 38 hours by running an engine," explains off-grid liveaboard Pete Martin. That's not bad, especially for a cloudy, rainy area!

Conclusion: If you must go electric, a 12-volt fridge indirectly powered by solar through batteries is a good bet.

Which is best — zeer pot or ground fridge?

In my experience, the ground fridge is a better choice in a humid, temperate climate than the zeer pot. It reliably keeps the temperature from 7-15 F colder than the surrounding air on a hot day. On a humid day, the underground temperature stays stable. (Hot air rises and cold air sinks, so this effect helps too.)

In an arid climate, the zeer pot is a better choice. On a hot, dry day at 95 F with 40 percent humidity, it worked much more efficiently, with a temperature difference of 11 F. On a humid day, the cooling effect was just 4 degrees. In a truly arid climate, they can achieve cooling effects of 68 F.

It's amazing how independent from the power grid these cooling choices make us. It's a better choice for the planet, too. With a little thought, it's more than possible to stay cool off the grid!

Kathryn Clover is a Foraging and Wildfood Cookery tutor based in the United Kingdom. Find her on hedgewitchadventures.com, read her foraging blog, and check out her Facebook page 'Hedgewitch Adventures' for past and future events. Δ

Apple pie with a twist

By Lisa Nourse

In 1974, James W. Hartzell created a slogan for GM's Chevrolet line that became one of the most memorable and patriotic commercials of all time. "Baseball, hot dogs, apple pie, and Chevrolet, they go together in the good ol' USA" was a jingle that was intended to meld Chevrolet with everyone's idea of the American dream.

Back then baseball was one of America's favorite sports, hot dogs were standard fare sold at stadiums across the country, apple pies were commonly sold in cafes everywhere (and, of course, made at home), and Chevrolet became known as an all-American brand of car and truck. Although the ad campaign only ran for a couple of years, it was so iconic that it is still remembered today, and many people equate baseball season, hot dogs, and apple pie with American patriotism.

To celebrate this year's Fourth of July, I wanted to create an all-American menu and have a picnic. This would, of course, include apple pie. However, with everything being carried out to the picnic table in the backyard, a pie and all the serving accoutrements seemed like it would be a little unwieldy. I also wanted an apple dessert that would be easier for the grandkids to handle than a slab of pie on a plate. Thinking ahead to the cleanup involved, I realized something that did not require dirtying more dishes would be a good idea too.

Hand pies are great, but an unusual shape for the kids that will be attending the picnic would be fun, so I started experimenting and ended up twisting the recipe!



Twisted apple pies are a great picnic dessert that is easy for kids to handle.

Apple pie twists

Since the filling was not going to be held in a pie plate, I tried a few different crust recipes to find one that would hold up well when twisted. This is the one that worked the best.

Sour cream pie crust:

2 cups all-purpose flour
2 tsp. sugar
1 tsp. salt
 $\frac{3}{4}$ cup unsalted butter, very cold
(Place it in the freezer 20-30 minutes before you begin.)
 $\frac{1}{2}$ cup full-fat sour cream
6-8 Tbsp. ice water

Whisk together the flour, sugar, and salt in a large bowl.

Shred the cold butter over the top of the flour mixture. (I learned a long time ago that partially freezing the butter and shredding it rather than cutting it into cubes makes it much easier to incorporate into the flour mixture.) Use a fork to work the butter into the flour mixture.

Add the sour cream and use the fork to mix it into the butter and flour mixture.

Add 5 tablespoons of the ice water, working it in with the fork. If the dough is still a little dry, add more water 1 tablespoon at a time until you have a workable dough.



After placing the apple filling on the first layer of dough, position the second layer on top. A pizza cutter works much better than a knife for making clean cuts.

Using your hands, form the dough into a ball. Do not overwork the dough.

Divide the dough into two equal portions. Wrap each portion tightly in plastic wrap and refrigerate for at least one hour to allow the dough to firm up and the gluten to relax.

When ready to make your twisted pies, remove the dough from the refrigerator and let it sit for 10 minutes before rolling out on a lightly floured surface.

Twisted apple pie filling:

This is more filling than needed for one batch of pie dough. You can double the dough recipe or do as I did, and use the extra in a basic muffin recipe to make apple muffins.

2 cups apples, diced very fine or shredded

¼-½ cup brown sugar (depending on how sweet you like it)

1 tsp. cinnamon

1 Tbsp. cornstarch

½ cup water

Cinnamon sugar, optional

Combine all ingredients except cinnamon sugar in a small saucepan and simmer for 7-10 minutes until thickened and apples are soft.

Putting it all together

Preheat your oven to 375 F and cover a baking sheet with culinary parchment paper.

On a lightly-floured surface, roll out each portion of crust into equal rectangles about ⅛ inch thick.

On one layer of dough, smooth out a thin layer of the apple pie filling. Then gently lift the other layer and place it evenly on top of the filling.

Even up irregularities on the edges and cut into 1-inch strips. (I found that a pizza cutter works better than a knife to get nice, even cuts.)



Tessa had the brilliant idea of using the sticks from her cake pop kit as a way to hold the twisted pies without getting her hands sticky. The sticks go in after the pies have cooled.

Gently lift each strip of pie and carefully twist it until you have three or four twists in it, then lay it on the parchment covered baking sheet. Sprinkle with cinnamon sugar if you wish. Place the baking sheet on the middle rack in the oven and bake for 25-30 minutes until golden brown. Δ



Twisted apple pies fresh out of the oven

In search of the perfect strawberry shortcake

By Jim Capossela

Hot dogs, baseball, and apple pie ... I propose that we add strawberry shortcake to that celebrated American iconolatry. It's impossible to say when and where the fantastic temptation of strawberry shortcake was first plopped down in front of a keenly anticipating diner, but many authorities see this mesmerizing dessert as distinctly American. I set out to not only determine the perfect version of this treat, but to see what other American cooks have thought about it. And note which cooks did the most to help popularize it.

Designing the perfect strawberry shortcake

In aiming for the best possible recipe, I saw three distinct challenges: What is the perfect base, in this case, the shortcake itself; how should the berries be prepared; and what do I need to know about the perfect topping? All this led me down a rabbit hole of deliciousness and a diet-defeating cascade of calories.

As for the historical background, where would one start? I turned first to James Beard, who reigned supreme as America's food authority in the mid-twentieth century and who was a bona fide expert in contrast to the dilettantish spectacle of celebrity chefdom that followed him for a few decades. Then too, he gave us not just solid recipes but a very nice historical foundation. The first book I pulled off the shelf was *James Beard's American Cookery*, a prodigious hardcover that is as much his-



When you're throwing a little party for a small number of people, making up a few plates of strawberry shortcake is less time consuming than baking a cake.

torical as it is culinary. He offers little background on the strawberry shortcake and doesn't directly put forth a recipe, only a variation. But this was by no means a dead end. First, he does speak authoritatively on shortcake, and I'll get back to that shortly. He also frequently mentions a "Miss Leslie" which allowed me to easily figure out that the person attached to that name was actually Eliza Leslie. Having attained that knowledge, I happily came across a reference that said, specifically, that she had helped to popularize strawberry shortcake in the nineteenth century! My inquiry was cooking, you might say. I'll

get back to both Mr. Beard and Miss Leslie.

I venture that when wheat cultivation came into being, someone pretty quickly figured out that you could excite the gluten in the resulting flour by adding a liquid to end up with something approximating bread. How long could it have taken before someone cut some fat into that mixture, while also tossing in a little salt? With these likelihoods in mind, it's easy to speculate that shortcake or at least its biscuit predecessor goes back a long ways. But strawberry shortcake is widely perceived as American in origin. It seems to have started as strawberry cake with icing and eventually

evolved into the treat we're discussing here. I've seen more than one reference that credits Eliza Leslie as the originator of the dish. She lived from 1787 to 1858 and was a very influential cookbook author in those times. I sent away for two reproduction copies of her books. The first to arrive in the mail was *Seventy-Five Receipts for Pastry, Cakes, and Sweetmeats*, first published in 1828. (Receipt is a quaint and now archaic term for recipe.) It has no reference to shortcake but it does have three biscuit recipes, of great relevance to this discussion. A few days later, a much more substantial softcover appeared on the porch: *Miss Leslie's Directions for Cookery* with the original publication date of 1837. Again, the index did not show strawberry shortcake but it did specify a shortcake recipe. I turned to it. I was astonished that it contained only flour, butter, and water — no milk, no eggs, no leavening, no sugar, not even salt. It's not like these things didn't exist on the frontier. In the preceding recipe, for a Sally Lunn bread, she asks for "two tablespoonfuls of the best fresh yeast." In the "receipt" that follows the one for shortcake, she calls for "three table-spoonfuls of the best brewers yeast" (using yeast as a byproduct of beer and wine making is an ancient idea, and still practiced today). She also uses "loaf sugar" and salt with abundance in her books. I don't know what to make of her austere shortcake recipe.

I note that her dough is rolled and cut, like a majority of biscuits and like some shortcakes. You'll see ahead that I employ the not-too-uncommon free-form approach in forming the shortcakes.

While the information in both books was interesting, it didn't move the needle much closer to my perceptions of an ideal strawberry shortcake. Maybe I just didn't order the right book, as she wrote others.



On the right are the California strawberries common in the marketplace. Next to them are the smaller ones that I bought from a small-scale local farm. I only buy strawberries from small farms in season, as I find them altogether superior to the large and often pasty supermarket examples.

Other cooks worth mentioning

Now a look at the most famous of the early American Cookbooks, *The Boston Cooking-School Cook Book*, also known as *The Fannie Farmer Cookbook* (Fannie Merritt Farmer lived from 1857-1915). This book is about as common in American kitchens as a spatula, and it went through countless editions and printings well into the twentieth century. It lived a vivid life on my mother's small Formica kitchen table. I currently own a hardcover facsimile of the original 1896 edition. It gives testimony to the fact that strawberry shortcake was already well entrenched as a popular American dessert by the late nineteenth century. She puts forth three recipes labelled strawberry shortcake. In the first two, her ratio of flour to fat is very similar to the authors already cited; that relationship will be central in this discussion. The third recipe she labels "Rich Strawberry Shortcake." This one was of great interest to me. Here,

she uses about 3½ tablespoons of fat per cup of flour, considerably richer than other recipes I examined. About a third of that fat is lard, a fat very common in the nineteenth century (rendered chicken fat was also very popular in early times and I have seen it cited in antique dessert formulations). It was significant that she asks for only one egg in the "Rich" recipe. As for the liquid, it's milk in all three. The sugar content gets steadily higher from the first recipe to the third.

In the 1930s and '40s, Wise Publishing put forth a series of one-volume encyclopedias on various subjects. I have the one on fishing and also the one on cooking. For their strawberry shortcake recipe, they simply recommend baking powder biscuits. In *The Lily Wallace New American Cook Book* (1941), Ms. Wallace recommends two tablespoons of shortening per cup of flour. She uses no egg but does ask for a tablespoon of sugar for each cup of flour. This recipe had the highest percentage of baking powder that I

came across: 2½ teaspoons per cup of flour.

It was interesting to me that these last two references ask for milk, not buttermilk, leaving me to wonder whether there really was a time when buttermilk held sway, or whether it came into general use later on.

The layer of strawberry shortcake that seemed the most mysterious and the most variable was indeed the bottom one, and that will continue to be my main focus here. Since shortcake is clearly an evolution of the biscuit, I looked at and tried a number of biscuit recipes, in each case tweaking them to try and move them closer to my developing idea of the perfect shortcake. This was scary to me, since I've never made great biscuits and am not at all sure that anyone living north of the Mason-Dixon Line has the DNA to make great biscuits, but I dove into it. I found that all the ingredients matter, but I came back again and again to that question of the best proportions between the fat and the flour. It's another simplifica-

tion, but there are two main types of biscuits: those made with buttermilk or just plain milk, and those made with cream. The word is that ones made with cream are a lot easier as they provide some of the fat and the liquid all in one; I'd used cream in scones but never in biscuits. I tried a few somewhat enriched editions of buttermilk biscuits but failed to land exactly where I wanted to be with either the flavor, the texture, or other aspects of the concoction. It was time, I thought, to turn to one more highly respected source.

The index of Irma S. Rombauer's monumental *Joy of Cooking* is many pages long, longer than most of the small cookbooks in my collection. She first published the cookbook privately in 1931, and it has probably never been out of print. Her book is as relevant and as much used today as it no doubt was upon its release. Luckily, there was that shortcake recipe on page 584. Witty and highly educated, Ms. Rombauer labels her recipe "Fluffy Biscuits or Shortcake

Dough." She gives the home cook a little leeway here, in that she recommends one to two tablespoons of butter per cup of flour. She offers the baker another choice: cake flour or all-purpose flour, without specifying a preference. In both biscuit and shortcake recipes I examined, cake flour was often used in part. Ms. Rombauer asks for no eggs, but she does toss in a rather reserved single tablespoon of sugar with the two cups of flour.

Let me get back to James Beard. In the book already cited, he first offers a standard recipe that he labels "Baking Powder Biscuits." In it, he uses milk rather than buttermilk, and uses a ratio of two tablespoons of "shortening" — he doesn't specify fat type — to a cup of flour, to put him in perfect sync with Ms. Rombauer at the higher end of her scale. Then, in the "variations" section of the page, he goes on to say how to turn this into a shortcake: "Add two to three tablespoons of sugar and substitute evaporated milk or heavy cream for the milk." The addition of the heavy cream, of course, makes his version richer, and it is also sweeter. In American cooking history, the proportion of sugar used in so many dishes steadily increases over time. Alas, we're all hooked on the stuff.

The recipe

All this was grist for the mill, and it eventually led to a shortcake recipe that took ideas from many sources but was really my own since no recipe I saw or tried was exactly duplicated. I am very confident that you'll like the end result of this process. You can see that I settled on three tablespoons of fat (butter) per cup of flour, and while I'd love to try this with part lard I haven't yet done so.

The penultimate test here skipped the egg; I thought something was missing. I believe that adding that one egg pulled the whole thing together.



Here are my free-formed shortcakes ready to go into the oven. Make sure the sides touch so they don't start to get too hard on the edges — not too unwelcome with biscuits, but less desirable with shortcakes.



This shortcake batch has just come out of the oven. I like the assembled dish best when the cakes have cooled but are still just a bit warm.

Immediately move your cakes to wire racks so the bottoms don't start to harden from the heat of the hot pan.

Jim's cream-style shortcake:

1¾ cups all-purpose flour
¾ cup cake flour (plain, no additives)
4 tsp. baking powder
1 tsp. salt
5 Tbsp. granulated sugar
7½ Tbsp. cold unsalted butter
1 large egg, lightly beaten (see note)
About ¾ cup cold heavy cream

1. To a medium bowl, add the dry ingredients and whisk to combine smoothly. Many cooks advise sifting these items together. Preheat your oven to 425 F. Grease and flour your baking pan.

2. Cut the butter into eight pieces and cut them into the flour mixture with a handheld pastry blender. Some use a food processor — I don't like the result.

3. Add the egg and a half cup of heavy cream and stir with a wooden spoon. Add more cream as needed to achieve a sticky dough that just barely holds together. Don't overwork the dough. The mixing should take just two minutes or so.

4. Without rolling or kneading, snatch golf ball-sized pieces of the dough with floured hands and place

them with sides touching in your baking pan. If you've formed nine or ten cakes you will have made them the size I recommend. Too small and they get too firm around the edges and bottom.

Note: If you use an extra large or jumbo egg, use just about three-fourths of it.

A look at some variations

I was once served this dessert with angel food cake as the base. I didn't care for it. Too airy. I've never made or been given strawberry shortcake served on birthday-type cake, though people often have leftovers of these rich cakes and I would think that either a yellow or white cake would be a good base for the dessert. I'd actually opt for a sponge cake, if some were left over. As many shoppers know, in the supermarket you

can buy what are sometimes called "Dessert Shells," which are really sponge cakes with little depressions in the middle. I examined these at the store. The put-offish list of ingredients would preclude my ever using these shells in any preparation.

One more thought would be pound cake, that melt-in-your-mouth dense cake that everyone loves. It should work well.

But shortcake remains my number one pick for the base. I like the comparative solidness that serves to complement the other two very soft components.

Preparing the berries

You can just slice the berries and be done with it, but even this simple step in the process is worth a little print.

How much fruit do you need? I stemmed and hulled a pint of



strawberries grown locally. After this they weighed 9¼ ounces. When sliced, the yield was 2⅓ cups. This proved to be just right for four servings of strawberry shortcake, though I could have squeezed a fifth serving out of it. Now, on to the next step.

To macerate is to toss the berries with sugar and let stand a while. With most recipes I looked at, water was not added, but I did add three tablespoons of cold water as I like a bit of syrup in the bowl. It helps to soften the berries somewhat — extremely useful if you have that harder super-market fruit — and I also like to drizzle a little of the syrup over the shortcake which, again, has a softening effect and lets you take up a forkful more handily. Finally, I added three tablespoons of granulated sugar, stirred, and then covered the bowl first with plastic wrap then aluminum foil. This double wrapping can help prevent the fruit from picking up unwanted smells from the fridge.

Most cooks will say that you should macerate the fruit for at least an hour. That's not enough. I always let the berries sit overnight in the refrigerator. I like them pretty soft for this dessert. Even without water the sugar

will draw out a fair amount of moisture, but my added water increases the liquid you end up with in the bowl. Overnight, this liquid becomes incredibly flavorful. Go ahead, try and resist drinking it. The berries are now ready for assembling your treat.

I have no problem adding a bit of spirits to the berry mixture, by the way. Keep it modest, say a tablespoon. Strawberry liqueurs do exist but are not commonly seen. Try the more readily available Framboise, based on raspberry.

Your shortcake topping

Whipped cream is the nearly universal top layer for strawberry shortcake. But does it have to be? Could my concern with presenting not just the best recipe but the most traditional preclude everything else?

After several tests employing whipped cream, I became restless. Ice cream, frozen yoghurt, crème fraîche, clotted cream, and even sour cream danced like sugarplums in my overly sugared brain, and I had to make them go away.

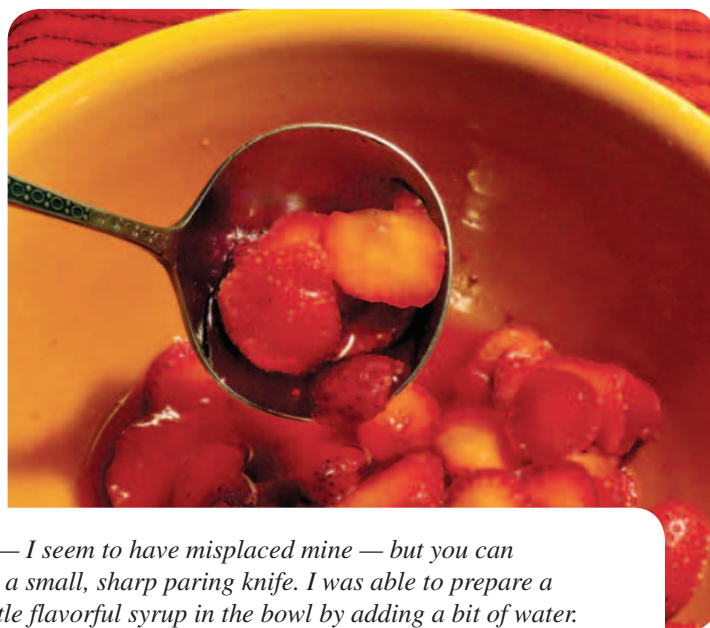
The thing about making shortcakes is that you're never going to bake just two or three of them. With one

shortcake per diner, what of the other eight or nine in the batch? No harm whatsoever in making them breakfast fare on the rich side, but if you find yourself testing recipes you have the extra materials to work with.

I make my own ice cream, and the dish was wonderful, just different, with cold but softened vanilla ice cream. I also tried frozen yoghurt and that just didn't do it for me. It's like climbing into a Porsche in dirty overalls. Sour cream dolloped onto a small bowl of berries or other fruit is a real treat, but didn't seem right here. I also passed on the crème fraîche that I sometimes adorn fruit with. I did buy a small container of clotted cream, that endearing dairy food with the uppity British air, and found it to be a sensational, if expensive, topping. Clotting is what will happen to your arteries if you consume enough of this tremendously rich, opulent product.

But then it would be fair to ask, "What is the perfect topping for the perfect strawberry shortcake?"

For me, it was whipped cream all the way. For all my tweaking, this just couldn't be improved upon. Sweeten the cream a little as desired. Δ



There is a special hulling tool for strawberries — I seem to have misplaced mine — but you can both hull and slice your berries in short order with a small, sharp paring knife. I was able to prepare a pint of strawberries in just 10 minutes. I aim for a little flavorful syrup in the bowl by adding a bit of water.

Lenie in the kitchen: Onion “pye”

By Ilene Duffy

As our country reaches its 250th birthday, I’m wondering what our founding fathers would think about the technological advancements we take for granted. Cars, electricity, cell phones, telescopes sending pictures of outer space back to earth, computers, rocketships going to the moon ... with people on board! I can imagine the heads of wise, forward thinkers such as Washington, Adams, Jefferson, Paine, Hamilton, and Hancock simply spinning in disbelief.

They would have a hard time envisioning our world today, but with first person historical accounts and museums, we can at least imagine how they lived in the late 18th century. To see for myself, I hope to visit the George Washington Presidential Library at Mount Vernon. It’s located just south of Alexandria, Virginia on the west side of the Potomac River.

To prepare before traveling there, I’ve been perusing the extensive website at mountvernon.org. There is so much to do on the estate that it will take a full day, if not more, in order to see the mansion, tombs, farm, gardens, library, and of course my husband Dave will want to see the distillery. With all the walking and sightseeing, I’m sure we’ll be hungry so we’ll want to enjoy lunch at the Mount Vernon Inn Restaurant. With a sneak peek at the menu, I’ve already got my heart set on trying Colonial cornbread, a bowl of their soup of the day, and splurge on a piece of Mount Vernon cherry pie. Yum! Too bad it’s 3,000 miles away, or I’d be there already.

To honor our early leaders, I wanted to bake something that would have been at least close to what was really eaten back in 1776. So I typed “recipes” in the search bar and

*Sing a song of sixpence,
A pocket full of rye.
Four and twenty blackbirds,
Baked in a pie.*

*When the pie was opened,
The birds began to sing:
Wasn’t that a dainty dish,
To set before the king?*

found many that have been adapted from historical cookbooks used by Martha Washington and other women from the 18th century. It didn’t take me long to find a recipe using basic ingredients to try. I love making pies so was glad to find a main dish recipe using potatoes, onions, and apples which are sliced paper thin and enclosed in pie crusts. In a video, an employee of the Mount Vernon estate dressed in 1700s clothing showed how to make this pye. (Why “pye?” Standardization of spelling hadn’t taken place until the late 18th or early 19th centuries, so pie was spelled pye or sometimes pey, while the thick crusts were called coffins.)

The original recipe didn’t include meat, but I thought the addition of pork would be nice since it pairs so well with apples. Mount Vernon’s recipe used nutmeg and mace, but I just used salt, pepper, and dried Italian seasoning. Is my version fit for a king or president? Maybe not, but I think Martha would have approved.



This “pye” is simple to make with basic ingredients. An added dash of hot sauce is a modern-day luxury.

Onion pye

Pastry for a 10-inch two-crust pie

1 Tbsp. olive oil

3 Tbsp. butter, divided

1 lb. mild Italian bulk pork sausage

2 small to medium potatoes, peeled and sliced paper thin

2 small onions, peeled and sliced paper thin

1 large apple, peeled and sliced very thin

4 eggs

4 Tbsp. water

Salt, pepper, Italian seasoning

Preheat oven to 350 F.

In a medium frying pan, heat olive oil and 1 tablespoon of the butter over medium heat, then add sausage and cook while breaking up the pieces. Turn the heat down so it doesn’t brown too quickly. While the pork is cooking, slice the potatoes, onions, and apples and place them in individual bowls. In another bowl, gently whisk the eggs and water together.

Place one of the crusts in the bottom of a large 10-inch pie pan. (I used my largest pie pan, which was a good thing since after adding all the ingredients it was really full!) Cut the remaining 2 tablespoons of butter into small chunks and spread them on the crust. Layer half of the potatoes, onions, apples, and sausage on top of the butter. Shake a little salt, pepper, and Italian seasoning on top. Layer the remaining potatoes, onions, apples, and sausage, and again add a bit of salt, pepper, and Italian seasoning. Very slowly pour the egg over the pie fillings. Add the top crust, pinching the edges. Poke a few vent holes. Bake for about 1 hour and 20 minutes. Δ

HARDTACK IN THE PANTRY

By H. Joe Huff

No doubt, you've heard of hardtack before. Indigenous peoples, Roman legionnaires, sailors, and soldiers from virtually every branch of military have been provided with (forced to eat?) hardtack throughout history. However, you may have never seen or eaten any yourself, much less whipped up a batch of it in your kitchen to store for emergencies.

You could say hardtack is *the original recipe*. With guesstimates going back as far as the beginning of agriculture some 10,000 years ago, it didn't take much imagination to mash and grind emmer wheat berries between two rocks into flour, add a little water, form into patties, then bake (tossed on dying embers of a fire) until very dry and hard as a proverbial rock. Voilà, hardtack!

Storing hardtack

People quickly learned if you kept it dry and away from insects, it would last for a very long time and provide some belly-filling nourishment when other foods were not available. But ... violate these two rules and bad juju was sure to follow. Get it damp and it would quickly mold. Worse yet was a moniker Civil War soldiers gave hardtack in regards to frequent insect infestations: "worm castles." Weevils were dealt with by soaking hardtack in coffee then scooping them out with a (probably dirty) finger as they floated to the surface. But maggots created a definite throw-away-and-be-hungry situation!

Thank GOD for plastic bags. Today we can eliminate these problems with

modern containers and packaging. Properly prepared hardtack stored in a dark, dry environment in plastic bags can last for months if not years. In fact, by using special Mylar bags with oxygen absorbers, *plain* hardtack can last for decades. Recipes with other additives like cheese, honey, or dried fruit — not as long. But certainly for many months.

Whether stored in a locker for emergencies or bouncing around inside a pack for a snack or meal, hardtack has been around for the long haul ... for centuries. Some samples from the Civil War and earlier are still being displayed in museums. Moreover, these pieces still look good!

Gnaw safely

Hardtack has a reputation for being virtually tasteless. If you plan to make it with plain old bleached white flour and no flavor enhancers, save yourself the time and trouble of making it. Instead, go to your nearest construction site, find a chunk of scrap

drywall, and gnaw on that a while. It will have a similar taste and texture for comparison, although hardtack is probably harder. But fear not, my recipes are actually quite tasty and nutritious.

Eating hardtack is an art in itself. Unless you were raised by a pack of hyenas or happen to be one of those people who opens beer bottles with your teeth, you can't just bite into a piece of hardtack and munch it down. Chomp into hardtack as if it is a Moon Pie and there is a strong chance of shattering multiple teeth. This in turn is likely to result in your dentist wringing his hands like a fly, counting in his head how many crowns he's going to install, and visualizing how he'll soon be sport fishing in the Bahamas thanks to your money. Yeah, they don't call it *hardtack* for nothing.

The best way to eat hardtack is to first smash it into smaller pieces. Use a sturdy bread board, lay a towel over the hardtack so pieces don't fly all



Ingredients and three different kinds of hardtack: plain, cheese, and dried fruit



Rolling out the dough

over your kitchen, then whack it with something hard and heavy. A rolling pin, handle of a heavy butter knife, ball peen hammer, whatever. Outside, unleash your savage primal self and bash it between two smooth rocks while it's still inside a heavy freezer bag. You want pieces $\frac{1}{2}$ inch or smaller.

For breakfast, you can put the pieces in your hot coffee or tea and allow them to soften over a period of several minutes before munching them down. The sweet variety recipe with dried fruit is great for breakfast. At lunchtime, warm or hot water with a little bouillon and soaked plain or smoky cheese hardtack is satisfying. Dinner can become a very filling meal when you simply add hardtack pieces to whatever you're cooking. Hardtack swells up like a sea sponge when cooked in liquid and can extend any meal.

You can also eat *very* small hardtack chunks dry while on the move outdoors. Anytime your stomach starts to rumble, just pop in a small piece of hardtack and let your drool soften it before chewing. Eating in this fashion, it takes me about 20 minutes to devour a 3-inch-diameter smashed up hardtack piece.

Civil War soldiers used to fry salt pork (when they were lucky enough to have it) then throw hardtack in with it. Of course, back then they

didn't have things to worry about like saturated fat, cholesterol, and having coronary bypass surgery. Now we do, so I will personally pass on that method!

Recipes

The recipes are pretty straightforward. Mix all ingredients together in a bowl. Add as little water as possible to get dough that is neither sticky nor crumbly. Start with a little less than $\frac{3}{4}$ cup of water, then add a tablespoon or less water at a time until you get very dense dough. Get your paws right in the bowl, then squeeze and knead until all remaining crumbs in the bowl adhere to the dough ball.

Roll it out on a lightly floured board and rolling pin to about $\frac{1}{4}$ -inch thickness. Frankly, this dough is so dense that you may find yourself unable to roll it out that thin. That's ok, after you cut out individual pieces just roll *them* out so they are a uniform $\frac{1}{4}$ -inch thick. Then place them on a cookie sheet with or without parchment paper and punch a bunch of holes in each piece with a fork.

At my elevation of 4,500 feet, I cook them at 325 F for 30 minutes, flip them over, and cook for another 30 minutes. You may have to adjust cooking temperatures and times where you are. The important thing is to make sure they are thoroughly cooked — dry and brittle, not soft

in the center. To test, remove them from the oven, let them cool completely, and then whack them with a hard implement. If they bounce, they are not done. Put them back in the oven for another 10 to 20 minutes and check again. When they shatter into many pieces after being whacked, they are done. Enjoy!

Plain hardtack:

- 2 cups stone-ground whole wheat flour
- $\frac{1}{2}$ cup regular wheat bran (not baker's wheat bran)
- 2 tsp. salt (or 1 Tbsp. nutritional yeast if you prefer)
- $\frac{3}{4}$ cup plus water

Shelf life: almost indefinitely when properly prepared and stored in Mylar bags with oxygen absorbers.

Smoky cheese hardtack:

- 2 cups stone-ground whole wheat flour
- $\frac{1}{2}$ cup regular wheat bran (not baker's wheat bran)
- 1 tsp. salt (or $\frac{1}{2}$ Tbsp. nutritional yeast if you prefer)
- $\frac{1}{2}$ cup powdered cheddar cheese
- 2 tsp. smoked paprika
- $\frac{3}{4}$ cup plus water

Shelf life: 4-8 months, longer kept in fridge, or over a year frozen.

Sweet dried fruit hardtack:

- 2 cups stone-ground whole wheat flour
- $\frac{1}{2}$ cup regular wheat bran (not baker's wheat bran)
- $\frac{1}{2}$ cup dried fruit, like cherries, cranberries, or apricots, chopped
- 3 Tbsp. honey (Add and stir in warm water to help melt.)
- 2 tsp. cinnamon
- $\frac{1}{2}$ tsp. nutmeg
- $\frac{3}{4}$ cup plus water

Shelf life: 4-6 months refrigerated, 8-12 months frozen. Δ

Country Moments

Submit your photo: countrymoments@backwoodshome.com

There is no payment for Country Moments photos.



*Owen and his best buddies Chips and Queso
Jason Keeny, Stillwater, Oklahoma*



*My 13-year-old daughter Gracie's gift was this cart and harness.
She has been training her goat for a year.
Dustin and Amy Noel*



*Granddaughter Liesel's first harvest
Bob Halstead, Norwalk, Connecticut*



*Elsie and her new flock of Hy-Line Browns
Becca Williams, Winfield, Missouri*



*Julia and Nola, our lovely little farmhouse helpers
Joseph and Lori Feher, Pennsburg, Pennsylvania*



*Corn shucking day is everyone's job!
Kim Christman, NE Montana*



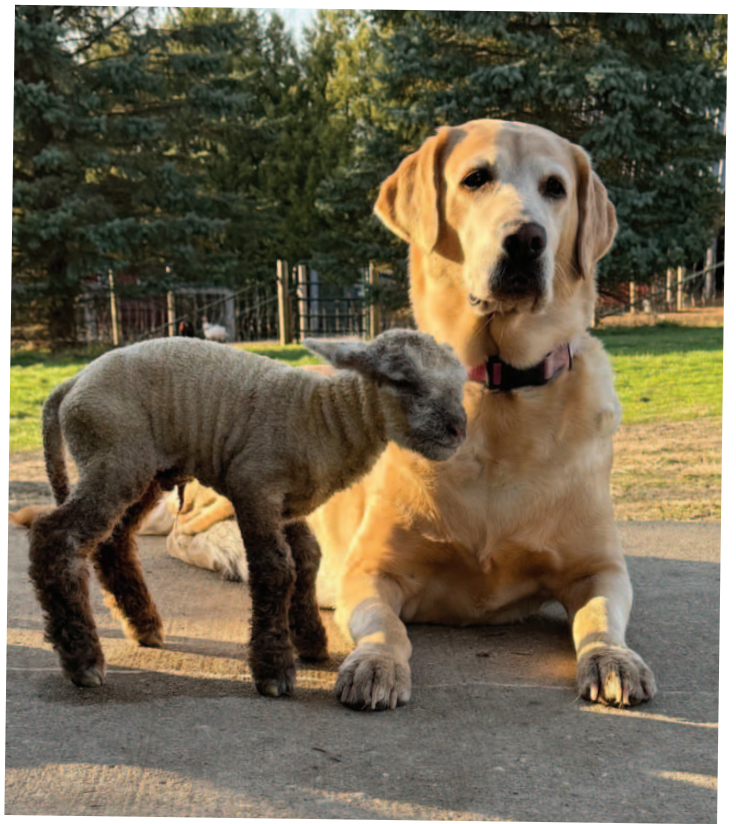
*Our daughter is teaching one of our laying hens what she should be doing.
Samantha Boettcher, Tucson, Arizona*



*The carrot my 3-year-old son Matthew is holding was really that big! I didn't think it was ready to be pulled, so I kept it in the dirt. Boy, were we surprised when he helped me pull it out!
Cory and Laura Shipman, Arcadia, Oklahoma*



*My grandson Colson checking on the herd
Karen Thomas, Springfield, Kentucky*



*Motherly Daisy is taking care of the newborn babydoll ram.
Kristi and Jason Skinner, Iowa*



*Robert loving on his new baby Shadow
Clara Kulwicki, Georgetown, Indiana*



*Goldie taking her goat Sunny for a spin while Dad chaperones
Chelsea H, Jackson, Michigan*



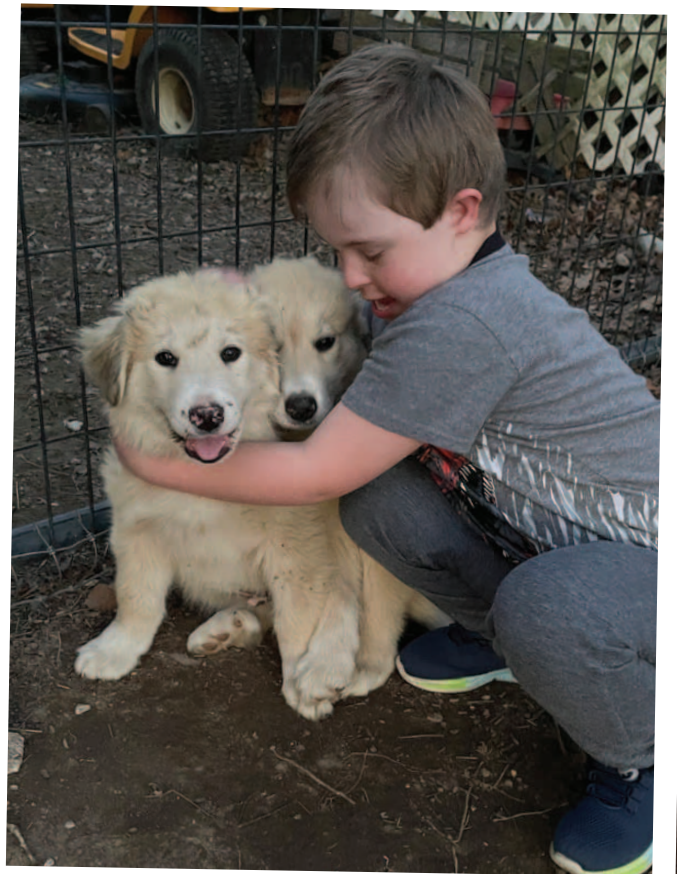
*Cowboy chicken!
Woods Family Farm, Manchester, Washington*



*Murphy and Cooper doing their farm chores
Park Hills, Missouri*



*Emma and her Uncle James getting ready for the spring crop
Sarah Switzer, Olive Branch, Mississippi*



*New puppies and big responsibilities: Farm life through his eyes
is something special. (Down syndrome awareness)
Rebecca Wynaht*

Kids' corner

By Lisa Nourse, with help
from Tessa Nourse

One of my best childhood memories is going to my grandmother's house with my brothers and sisters and being served "special" summer drinks after a hot afternoon of playing with the cousins or helping Grandma and Grandpa with chores. These drinks were always served ice cold in either pint-size canning jars or colorful aluminum tumblers.

Now that I have my own grandchildren, I can say that I believe it was just as much fun for Grandma to make those drinks as it was for us to receive them. When my grandchildren were younger, I enjoyed making drinks for them. Now that they are older, they like to make their own drinks, so I make sure there are always a variety of ingredients ready for them to use. During the summer there are always lots of berries available in the berry garden, and most of our summer drinks include some type of fruit and lots of berries.

My granddaughter Tessa and I have put together some of our favorite drink recipes for you to try. We had a lot of fun recreating the drinks in order to take photos. Except for the Berry-lemon iced tea, none of these recipes require cooking, but a few of them do require the use of a blender. If you do not have experience using a blender, you can ask a parent or an older sibling to help you.

If you do not have a berry garden or fruit trees and you want to make these fruity drinks, maybe a trip to a farmers market would be fun. You could

Cool, refreshing summer drinks



Tessa's fruity nectar

pick out a variety of fruit and berries, then when you get home, wash and freeze them for use throughout the summer. You can also find a large variety of fruit and berries in the frozen section of the supermarket. This works out fine, because the frozen fruit guarantees a cold drink.

Mango lassi:

A lassi is a thick, creamy drink similar to a smoothie. The lassi origi-

nated in India and usually has a base of yogurt mixed with water or milk. A lassi can be salty and savory, or sweet. A sweet lassi usually has fruit added. If you do not add too much sugar, a lassi is a very healthy drink.

The amount of ingredients in this recipe is for one person. Double, triple, or quadruple your ingredients for more people.

Mango lassi



1 mango, peeled, deseeded, and cut into ½-inch squares (or you can use enough frozen mango chunks to equal one mango)
1 cup plain yogurt
¼ cup whole milk
2 tsp. honey or sugar (or a little more if you like)
¼ tsp. cardamom powder (optional)

Blend all ingredients until a little frothy and there are no chunks of mango left. You can use a regular blender for larger amounts, but an immersion blender works better for smaller amounts.

Easy homemade lemonade:

I believe lemonade truly is the most refreshing summer drink. But since you can find lemons at the store all year round, you can make this drink any time you like.

6 lemons
1 cup white sugar
6 cups water

Juice the lemons. This should give you about 1 cup of lemon juice. If it

is not quite enough, juice one more lemon.

Combine the lemon juice, sugar, and water in a large pitcher or a half-gallon canning jar. Mix until all of the sugar dissolves. Taste and add more water or sugar as needed. Place in the refrigerator until cold. You can serve this with ice and a slice of lemon in each glass.

Note: The sugar will dissolve more easily if you use warm water.

Tessa's fruity nectar:

A variety of berries and fruits such as pineapple chunks, grapes cut in half, orange slices, lemon slices, strawberries, blueberries, raspberries, etc.

Homemade lemonade
Water
Honey or sugar (optional)

Cut up your chosen fruit and put it in a half-gallon jar or pitcher.

Pour lemonade over the fruit until the jar is half full. Fill the jar the rest of the way up with water. Leave in the refrigerator overnight so the flavors are extracted from the fruit.

Lemonade-strawberry frizzle



Orange sparkler

Stir to blend flavors, then pour over ice in a glass and serve.

Note: If the nectar is not sweet enough, you can add a little honey or sugar.

Lemonade-strawberry frizzle:

These ingredients are enough to make two glasses of this drink. Double the recipe for four glasses.

Ice cubes
1 cup puréed strawberries
Club soda, 7Up, or other clear fizzy drink
2 cups homemade lemonade
Lemons, sliced

Place a few ice cubes in the bottom of each glass.

Wash and remove the tops from two big handfuls of strawberries. Make the strawberry purée by blending the strawberries in a blender. Pour enough strawberry purée into each glass to cover the ice cubes.

Fill the glass halfway with whatever fizzy drink you have chosen and fill the rest of the glass with the



Kiwi-lime water

lemonade. Add a couple of lemon slices to each glass and enjoy!

Orange sparkler:

This is a super simple drink that works well if you are in a hurry and don't want to take the time to fuss with a fancier drink.

Ice cubes
1 cup orange juice
1 cup soda water or other clear fizzy drink
Mandarin orange slices

Place a few ice cubes in a glass. Add orange juice and fizzy drink. Then add a few mandarin orange slices.

Note: You can make this drink with berries as well by using mixed berry juice and frozen berries.

Berry-lemon iced tea:

1 cup brewed tea (can be black tea or raspberry tea)
Honey or sugar (optional)
Ice cubes
½ cup frozen berries of your choice
2 Tbsp. lemon juice, freshly squeezed

Brew the tea and let it cool. (We usually brew a large amount at a time to keep in the refrigerator.) If you like your iced tea a little sweeter, you can add a little sugar or honey when brewing it.

Add a few ice cubes to a glass. Pour the tea into the glass. Add frozen berries and lemon juice.

Kiwi-lime water:

This drink is very refreshing on a hot day. It does not include sugar, which makes it a healthier option.

3 kiwis, peeled and sliced
1 lime, sliced
2 qts. water
Juice of 1 lime

Place sliced kiwis and sliced lime in a pitcher. Add water and lime juice. Chill overnight for best flavor.

Orange creamsicle shake:

1 cup orange juice
2 cups vanilla ice cream
½ cup milk or half-and-half
1 tsp. vanilla extract
Mandarin orange slices (for garnish)
Whipped cream (for garnish)

Freeze the orange juice in an ice cube tray.

Once the orange juice is frozen, put the frozen cubes, ice cream, milk, and vanilla extract into a blender. Blend until it reaches a smooth consistency. You might have to stop the blender a few times to scrape down the sides. Pour into one large glass or two small glasses and top with mandarin orange slices and whipped cream.

Note: If you pour orange soda over the milkshake, you get a creamsicle float!

A good thing to remember is that since most of these drinks have sugar in them, it's nice to save them for "special" occasions and not to consume them every day.

You might notice that most of the drinks in this article are served in pint-size canning jars and mixed in



Berry-lemon iced tea

half-gallon canning jars. These are my grandmother's jars that I inherited. So today, more than 50 years later, I am still drinking out of the same jars that I did as a child at my grandmother's house. That makes having one of these drinks all the more special to me! Δ



Orange creamsicle shake

Backwoods Coloring Page

Art by Wren Everett



Soda pop and The Fourth of July

By Tom Kovach

My parents, Joseph and Mary Kovach, came to America as teenagers — my dad in 1912 and my mom in 1922. They were both born when their native Hungary was part of the Austro-Hungarian Empire. During World War II, their former homeland was under fascism as the country allied with Nazi Germany. After World War II, it came under communist control. They knew they came to a great country that offered freedom other Hungarians never enjoyed while under either royalty, fascism, or communism. The Fourth of July as a celebration was greatly appreciated and enjoyed by my folks.

Being the youngest of 10 children, I wasn't around for those early Fourth of July celebrations, but I sure knew what they were about when I got old enough to know what was going on.

My parents eventually arrived in North-Central Minnesota and settled down on a farm. Our family farm provided plenty of food: milk from our dairy herd, eggs from our chickens, and meat from the cows, pigs, sheep, chickens, and geese. Plus we had a huge vegetable garden. But while we always had enough to eat, we didn't have the money for any luxuries. My parents sold vegetables to the local

schools and grocery stores. We sold milk and eggs. And even before chainsaws were known to us, Dad cut firewood for sale using an axe and a hand saw — on top of the wood he cut to keep our house warm and our cookstove cooking.

This “extra” money provided us children with shoes, clothing, sugar, tea, coffee, and other little odds and ends like tools. But the folks always had something for special occasions like birthdays, Christmas, and the Fourth of July. And the Fourth meant having the treat of soda pop!

At 80 years old, I am the last of the 10 of us children my parents had. I remember talking to one of my older sisters some years back when she asked me: “You were the youngest, but do you remember the soda Mom and Dad bought us on the Fourth of July?”

Do I ever! Back in the late '40s and '50s, when I was a kid, things like soda pop, candy, and ice cream were a treat — things we didn't have every day. Heck, we didn't even have electricity — or a fridge for that matter — until I was about 10 years old! But we had soda pop on the Fourth of July.

Dad would drive into one of the neighboring small towns and buy a variety of soda pop. He'd mix it up. I think orange and grape were my favorites back then. Since we didn't

have a fridge, we'd cool the pop in milk buckets filled with cold water from the hand pump. (We didn't have running water in the house.) The deep well produced good, clean, very cold water. These buckets we put in the root cellar under the house where we stored our home-canned goods, fruits, and root vegetables. It had a dirt floor and the stone walls kept the cellar quite cool, even in the summer months.

It probably didn't keep the soda pop as cold as a fridge, and there was no ice. But we didn't care. It was cold enough for me! What a treat on the Fourth of July! I always sipped my pop slowly to make it last as long as I could. Maybe it got a little warm by the time I was done, but that didn't matter.

As I grew older, I learned that the Fourth of July was about more than just having the treat of some soda pop. My parents were always thankful for the life and opportunity America gave them. They came to Minnesota for a new start. And they succeeded! They both felt that the Fourth of July really had meaning.

But you know what? For me the Fourth of July still brings back memories of those cherished soda pops we got. And I guess that's okay too. Δ



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the *gee-whiz!* page

By O.E. MacDougal

1776 and all that

Some trivia from when our nation was born

Since the dawn of civilization, and until the middle of the twentieth century, disease has killed more soldiers during wartime than combat has. One of the worst killers was smallpox. In the close quarters of military camps, smallpox could bring an army to its knees before the first sword was drawn or the first shot was fired.

When he was just 19, and long before he would command the Continental Army, George Washington survived a bout of smallpox. When he became the Commander-in-Chief of the Army, he was well aware of the danger the disease posed. So, in the winter of 1777, he made the decision to inoculate his entire army.

This is one of history's earliest attempts to shield an army against its deadliest enemy: disease. He established inoculation sites at Morristown, New Jersey, Philadelphia, Pennsylvania, and Alexandria, Virginia, and the following year he had the rest of his army inoculated as they wintered at Valley Forge, Pennsylvania.

The mass inoculations had to be conducted in secret because troops were often incapacitated for several days after the inoculations, a condition he knew the British commanders would take advantage of. As a result of his decision, smallpox infection rates fell from 17 percent to 1 percent in the American units. This gave the Americans a distinct advantage over the British troops (who were usual-



Wikimedia Commons / John Singleton Copley

Paul Revere's fame comes primarily from Henry Wadsworth Longfellow's dramatic poem, "Paul Revere's Ride."

ly not inoculated) when they faced them on the battlefield. This is a factor that seems to often be overlooked by many historians when they analyze why Americans won the war against what was then the most powerful country in the world.

~~~~~  
Though we celebrate Paul Revere's midnight ride, April 18-19, 1775, he actually didn't make the full ride. He got as far as Lexington but was stopped by a British patrol before he could reach Concord. The British seized the horse he rode (it wasn't even his, it was borrowed), and he had to walk back to Lexington where, in the morning, he witnessed the battle that began the Revolutionary War.

~~~~~  
Approximately 5,000 to 7,000 black Americans fought on the side of the colonists in the Revolutionary War. They served in the Continental Army, the Navy, and in colonial militias. There were a few segregated units, but most served in integrated units.

However, it's also estimated that 10,000 to 12,000 — and some say as many as 20,000 — black Americans served with the British forces, and as many as 100,000 others fled to the protection of the British hoping for freedom.

By the terms of Article 7 of the Treaty of Paris, which ended the war, the British could not "... [carry] away any Negroes or other Property of the American inhabitants ..."

Some British commanders, most notably Lord Cornwallis who made the final surrender at Yorktown, Virginia, despite promises of freedom for having helped them, took some of the black Loyalists who had served in his army but left thousands of others to be recaptured.

On the other hand, Sir Guy Carleton, the British Commander-in-Chief of New York City, though *not* an abolitionist, refused to surrender thousands of the former slaves. He considered it dishonorable not to keep the promises of freedom Britain had made to the 3,000 or so who had fought under his command for England. Many of these former slaves were relocated to England, Nova Scotia, or the Caribbean.

The original name of the Boston Tea Party (December 16, 1773) was "The Destruction of the Tea." That name stuck for almost 50 years, until around 1820, when the catchier name, "Boston Tea Party," caught on. It's been called that ever since.

~~~~~

There was a second Boston Tea Party. It took place on the night of March 7, 1774, less than three months after the first one. This time, about 60 colonists disguised as Mohawk Indians returned to Griffin's Wharf, boarded a ship named *Fortune*, and dumped about 30 chests into the harbor.

~~~~~

The American Revolution marked the first recorded attempt to use a submarine to sink an enemy ship. It occurred in New York Harbor on September 7, 1776. Sergeant Ezra Lee, a volunteer from the Continental Army, piloted a submersible craft, *Turtle*. The idea was to attach a time bomb to the hull of the British flagship *HMS Eagle* and sink it. Lee failed in his attempt to secure the bomb to the hull and the mission failed.

Eighty-eight years would pass before another submersible, the Confederate's *H.L. Hunley* and its eight-man crew, successfully blew up the Union's *USS Housatonic* in Charleston Harbor in South Carolina during the Civil War. However, the *Hunley* also sank with its crew shortly after the attack, possibly a victim of the same explosion that sank the *Housatonic*.

~~~~~

George Washington insisted on a one-quart-per-man ration of spruce beer or hard cider for his troops.

The guys who fought for our independence did it while fueled by alcohol. (Where do I enlist?)

~~~~~



Wikimedia Commons / Americastudio

This monument, dedicated to Benedict Arnold, celebrates his heroism and importance to the patriots' cause in the Battle of Saratoga. Later, he would betray his country. For that reason, his name appears nowhere on the monument.

Eight of the first nine United States presidents were born before the United States declared its independence from Great Britain, which means *all eight* were born as citizens of Great Britain. It would be 60 years before an American-born president was elected. That was Martin Van Buren, the eighth President of the United States, born in 1782 in Kinderhook, New York.

For this reason, Article II, Section 1 of the Constitution of the United States says: "No Person except a natural born Citizen, or a Citizen of the United States, at the time of the Adoption of this Constitution, shall be eligible to the Office of President ..."

~~~~~

The first country to recognize the United States as an independent and sovereign nation was Morocco, on

December 20, 1777, when Sultan Mohammed ben Abdallah established diplomatic ties between the two nations.

~~~~~

Benedict Arnold's name has become synonymous with treachery, treason, and betrayal. Yet, there is a monument dedicated to him on the site in the Saratoga National Historical Park, where the second Battle of Saratoga took place. It notes his heroic, though disobedient, charge against British forces which turned the tide of battle. Arnold's left leg was broken by a British musket ball during the charge, and the break was further exacerbated when his horse was shot out from under him and fell on the same leg. The wound left him with a limp for the rest of his life. But the charge he led against British lines was crucial to winning the battle, one of the most important victories for the Americans during the War for Independence. The monument is a simple sculpture depicting a boot, a sword, two epaulets depicting his rank, and a plaque that reads:

In memory of the most brilliant soldier of the Continental Army who was desperately wounded on this spot, the sally port of Burgoyne's great [western] redoubt 7th October 1777 winning for his countrymen the decisive battle of the American Revolution and for himself the rank of Major General.

The unusual thing about this monument is that nowhere is his name mentioned. But this stop is one of the most popular in the park.

~~~~~

Through his great-great-grandfather, John Lathrop, Benedict Arnold is related to as many as six United States presidents including Ulysses S. Grant, Theodore Roosevelt, Franklin D. Roosevelt, Gerald Ford, George H. W. Bush, and George W. Bush. Δ



# Ask Jackie

If you have a question about rural living, send it in to Jackie and she'll try to answer it. Questions will only be answered in this column. Email your question to [jackie@backwoodshome.com](mailto:jackie@backwoodshome.com).

— Editors

## Raspberries not ripening

*I am having a huge problem with my raspberries. They seem to have stalled. They have been covered in green berries for more than a month but the berries have not grown, nor ripened. No bugs. I mega fertilized a week ago and only the black raspberries are starting to turn. But they bloomed late. I'm thinking it was the really bad heat we had. Is there anything I can do to salvage this year's crop? Some of the raspberries produce right up until a hard freeze. But nothing is putting out new flowers. Advice please.*

Mary R.  
Suamico, Wisconsin

There are a few reasons raspberries fail to ripen. The most common is uneven watering. If you mainly depend on rain to water your raspberries, this may be your problem. In Minnesota I know we have had a very dry spring and early summer. This has made our own raspberry patch stall in ripening. Because of our seed business and how much time we spend planting, we have not hauled hoses out to water it like we usually do.

Raspberries like a relatively acidic soil. You might do a soil test and not only test for pH, but also fertility. Although you said you mega fertilized your plants, they may need a regular intake of fertilizer. We add rotted manure along our plants every

two years or so to keep them happy. If your pH is off, adding peat moss to the soil around them will help.

I hope you will soon get a bountiful harvest! — Jackie

## Canning tomato juice

*I canned tomato juice in a pressure canner today. I did not boil the juice before putting it in the canner, 11 pounds pressure for 15 minutes. When I took it out, it is all curdled at the top with a lot of water at the bottom. Is this safe? I've never seen this before. They all sealed. Thank you so much for your help.*

James Bechtol  
Berkeley Springs, West Virginia

It's best to boil your tomatoes and juice prior to canning it because as you found out, it will separate after cooling. It will be fine, however. Just shake the jar well and it will mix together. Did you run the tomatoes through a sieve before putting in the jars? If not, the curdled look may just be lumps of tomato.

— Jackie

## Pickling banana peppers

*How can I pickle and water bath my banana peppers and keep them crisp? My first batch was soft and not ideal at all.*

Tina MacInnes  
Houston, Texas

Two ways to help keep your banana peppers from getting soft while pickling are to use Pickle Crisp in your recipe and to minimally process them. I don't blanch them before putting them in to water bath for 10 minutes. The longer they are processed, the softer they get. I prepare the peppers, then boil the brine and quickly pour it



Jackie Clay-Atkinson

very hot over the peppers and quickly get them into the water bath canner. This way, they stay quite crisp and nice. Also, pickle them right after you pick them. If they sit around in the fridge, they won't be as crisp when you get around to pickling them.

— Jackie

## Onion relish

*In regards to the person wanting things to do with onions: I make an onion relish and then water bath like pickles. Saves many tears!*

Bonnie Miller  
Farmland, Indiana

Wow, do I ever do a lot with onions! For those of you who may not have a recipe for onion relish, here's one of our favorites:

### Onion relish:

2½ lbs. onions (You can use either red or white, even a mix if you'd like.)  
1½ cups vinegar  
1 cup sugar  
1 tsp. salt  
½ tsp. mustard seed

Chop or thinly slice onions. Put in a saucepan with water to cover and simmer five minutes. Drain.

Add rest of ingredients in a large saucepan and heat to boiling, stir-



ring well. Add onions. Heat to boiling, then ladle onions into half-pint canning jars, leaving ½ inch of headspace. Ladle hot vinegar mix over onions, leaving ½ inch of headspace. Remove any bubbles. Wipe rims of jars clean with a damp cloth. Put hot, previously simmered lids on the jars and tighten the rings without force. Process in a boiling water bath for 10 minutes. Remember to adjust the time to suit your altitude if you live above 1,000 feet. Consult your canning book for directions.

I also dehydrate a lot of onions to use in various recipes, making some into onion powder as well by whizzing some of the dry onions in my blender. Very useful! — Jackie

## Growing pumpkins in a cold climate

*I have a question, I tried to grow pumpkins this year. I live in northern Idaho so I planted them in a greenhouse. Because they were in a greenhouse I was going to have to pollinate them by hand. So I watched some videos on how to do it. I did what the videos said and all seemed fine until they got to about the size of a tennis ball. Then they rotted. I got lots of the small ones but as soon as they got that size they rotted. If you could explain this it would be much appreciated! Also I have a book that I recommend that goes with the article you wrote called "Here's how to winter garden no matter where you live" (Backwoods Home Magazine Jan/Feb/Mar 2026.) The book is called Four-Season Harvest by Eliot Coleman. I recommend it to anyone interested in gardening in the winter in any climate. Thank you for answering our questions!*

**Ivan Patterson**  
Sandpoint, Idaho

We live just south of Canada and grow our pumpkins outside with great success. I wouldn't recommend growing them in a greenhouse or hoop

house as the moisture often causes fungal infections and rotting fruit. Did you get blossom end rot? This shows up about the size you describe, with the blossom end getting black and the fruit rotting on the vine. If so, this can be remedied by regular watering so the plants are able to absorb calcium from the soil.

Yes, I have the book *Four-Season Harvest* and it is quite good. There is no way we, here in Northern Minnesota, can grow outside all four seasons, no matter how much we'd like to. There's too much heavy snow and way below zero weather to deal with. Even in the greenhouse, heating it costs more than the produce we get.

— Jackie

## Raising chickens, goats, and acquiring tools

*How much space should a full-grown chicken have in either square feet and cubic feet for up to six laying hens?*

*What brands of goats are easy to take care of for a beginning homesteader?*

*Where can I find second-hand tools and attachments to work in the garden or for firewood cutting?*

**Lee Henderson**  
Warren, Maine

As a rough estimate, six laying hens should have a coop that's about 20 square feet and an outside yard that's at least 100 square feet. Obviously bigger is usually better for their happiness.

Any breed or cross breeds of goats are easy to take care of. For a beginner wanting milk and dairy products, I'd suggest getting a milking doe who is producing milk. The owner can teach you to milk before you take her home. This will make it much easier and enjoyable for both of you. I'd suggest getting a book on dairy goats to read up on before purchasing your goat so you'll know what her needs

are and how to successfully fence her in.

A couple of places we find second-hand homestead tools are local auctions, Facebook Marketplace, and the nearest city's Craigslist Farm and Garden. — Jackie

## Storing maple syrup

*Other than getting moldy, will the high sugar content of an open bottle of commercial maple syrup keep it from going bad if left unrefrigerated?*

**Dennis and Karen Withner**  
Custer, Washington

I've always had opened bottles of maple syrup in the cupboard and it's never gone bad. I suppose it's possible, but mine never have and they don't always get eaten up right away. I tend to forget they're in there!

— Jackie

## Canning without sugar

*I have a question about canning recipes that call for cane sugar. Is it possible for the sugar to either be omitted altogether or replaced with raw honey?*

**Kayla**  
Marseilles, Illinois

It's not a good idea to eliminate sugar when canning foods such as fruits, which require it to maintain taste and protect the fruit from losing color and texture. However, you certainly can eliminate sugar entirely when canning fruit juices, when desired. For other canned recipes, you may substitute ¾ cup honey for each 1 cup of sugar required. When canning jams or jellies, you may substitute honey for sugar but you do need to use pectin to set the gel.

— Jackie

## Cast iron pan bowing

*I have several sizes and styles of cast iron cookware but lately two of my medium skillets have started bowing on the bottoms so don't rest*



well on my stove or transfer heat like they should. Unfortunately I have a flat top electric stove. What's the best way to straighten them out? I'm afraid of cracking them if I use a hammer and some wooden 2x4s.

**Roger Huber**  
Huntsville, Arkansas

I've never had cast iron do that before but I'm thinking you could heat them red hot in a metal-worker's forge and use a flat piece of iron across them and lightly pound them flat again. I've burned my cast iron to remove debris and accumulation, and also had it welded when I dropped a frying pan and it cracked. Both were very successful. I'm thinking heating and flattening yours should work.

— Jackie

## Leggy tomatoes

*I am getting ready to start my heirloom tomatoes from seed. How do I keep them from growing long, spindly stems after they emerge? I had it happen with Herman Queens in the past and had a heck of a time getting them strengthened up before hardening.*

**Matthew Novosel**  
Deep Creek Lake, Maryland

Tomatoes and other seedlings get leggy like that because they aren't getting enough light. Often folks either hold the artificial lights too high above the seedlings or they are too far from a sunny window. Artificial lights should only be a couple inches above the seedling trays, not a foot or more. If growing out in a sunny window, they need to be very close to the window, and even then they must be turned around daily or even twice a day to keep them growing straight, as they lean toward the sunlight.

When our seedlings germinate, I immediately get them into strong light. Waiting even a day or two results in leggy seedlings. I hope these tips help you. — Jackie

## Wood-burning stove

*I'm a newbie to Backwoods Home and am loving my first edition. My question is this: I have used a wood-burning stove in combination with an oil furnace to heat my house for years. I'm getting ready to possibly build a small house and I am looking for the most efficient wood-burning or wood/pellet burning stove to heat the house. It's really hard to find good information on this. Any suggestions?*

**Teri**  
Bentleyville, Pennsylvania

Truthfully, most decent, modern wood stoves will heat your house with ease, provided you burn good, dry wood and open up the drafts every morning to make sure the stovepipe doesn't get coated with creosote. We've pretty much stuck with modestly priced stoves, rather than the high-end, pretty stoves, and have never had trouble. Because you've already become used to burning wood, I don't think it'll matter much what brand stove you buy. Just buy one sized to suit your needs. There's no use in buying a large-capacity stove when you have a small house or you'll just end up dampering it down, which causes creosote buildup, no matter what wood you use.

I kind of snicker when folks say they're going to build a tiny house and heat it with a little wood stove. Yep, the stove is sized for the tiny house. But a tiny stove can only burn so much wood at a time and in cold weather, you end up stuffing wood in the stove 24/7 just to keep warm.

Our favorite wood stove over the years was a Fisher Grandma Bear. But as our insurance company requires a UL listed wood stove, we can't use one here. — Jackie

## New to homesteading

*We bought our property in August of 2025 and are brand new to homesteading! My husband is working full-time and going back to school so*

*it's mostly just the kids and me right now. I have my garden mapped out, I think, but really I'm just looking for advice. My mother suggested I reach out to you since you understand the area we're in! Also, my father-in-law blessed us with chickens so we are learning on the fly! We have 22 acres, mostly wooded.*

**Jackie**  
Cook, Minnesota

Welcome to the area! One of the most important things to consider when going to start a garden is determining how much sunlight is available in the spot you've tentatively decided on. Nearly all garden crops need plenty of sunshine to thrive and produce well. Greens will do fine with a little shade, but the others will appreciate plenty of sun. Next is soil fertility. If possible, till in about a foot of rotted manure after an initial tilling to discover and remove any roots or rocks. We had truckloads. But we started gardening in basically a gravel pit! Don't get discouraged with your soil. Any soil can be improved with time and work. None of our five acres of gardens had ideal soil. Some soil was simply horrible white clay while other areas were full of rocks. I'm talking about tons of rocks! Now, obviously, they've all become productive and much easier to till. You have chickens so you have access to at least some manure, which you can work in this spring.

You live in an area with lots of deer. They *will* eat your garden produce. So, the only cure for that is to fence the garden. We fence with 6-foot-high, 2x4-inch welded wire fence hung on 8-foot T-posts (Menard's). If you can't afford that, usually several strings of electric wire, about a foot apart, up 6 feet, will do until you can get the welded wire. I've tried everything, and I mean *everything* else, from peeing around the edges of the garden, pinwheels, predator urine,



you name it. Fencing is the only thing that works.

I'd also recommend picking up a copy of my book, *Growing and Canning Your Own Food*, available through *Self-Reliance* and *Backwoods Home Magazine*. You're also very welcome to come out to our homestead and see how we do things and ask all the questions you want. Just email me to make sure we're home, which we usually are, and I'll give directions. Google doesn't know where we live. — Jackie

## Moles or voles?

*How can we get control of moles? We live on three acres and we treat the yard and around the barn with Grub control. This seemed to work for a while, but this fall/winter there are runs around buildings, around bushes, and even at end of our land where there have never been any before. We do have farm ground one side and pasture on the other side.*

*Patti Patterson  
Saint Charles, Iowa*

Are you sure they're moles, not voles? Moles' runs are below ground, although not deep, ending in a big hump of fresh dirt. Voles, commonly called field mice, are fat mice with a short tail. Their runs are above ground, usually in the dry grass, ending in a nest of grass. Moles only cause cosmetic damage to chiefly lawns as they burrow for grubs. Voles, on the other hand, cause a lot of damage to trees by girdling the bark in the winter and eating garden produce in the summer, such as melons, squash, sweet potatoes, carrots, etc.

To get rid of moles, one of the best methods is to use beneficial nematodes, sprayed on the grass, which only affects the grubs under the soil. No grubs; no moles. They simply move on. With voles, it's harder as there are often hundreds of them coming in from fields in cycles. Some years you have lots, and some

hardly any. A good cat or two will help a lot. Screening fruit and valuable young trees also helps. Trapping works quite well, using peanut butter or sunflower seeds as bait on a snap trap. — Jackie

## Lard and tallow differences

*Annie's article on lard (BHM, Issue #203, Jan/Feb/Mar 2026) was very informative. But I'm a beef cattle rancher! I don't raise pigs. I would like to know the difference in the beef and pork fats and how to use them. Also, Wagyu fat is supposed to be a bit different; if you could comment on that I would appreciate it. I bet I'm not the only one wondering about this.*

*Trisha Davis  
Temple, Texas*

The way we do beef tallow (we're beef ranchers too!) is to first run the fat through a meat grinder. We have an electric model we use to grind venison and beef, among other things. I choose my fat well, not picking up

any with blood or quite a bit of meat mixed in. Then, I put the ground fat in a turkey roasting pan and stick it in the oven at about 250 F. Don't heap up the fat or when it melts, it may run over and cause a fire or stinky smoke. Once in a while, break up the clumps with a spoon. When most of the fat has melted, while still hot, strain it off through cheesecloth. I immediately pour it into canning jars, leaving about ½ inch of headspace. Wipe the rims of the jars clean with a damp cloth. If you use a canning funnel, you won't get grease on the rims of the jars. Immediately put on hot, previously simmered lids and screw down the rings snugly but without force. That's it. The tallow will remain good for many months in a cool, dark place.

I use my tallow mainly for frying, as opposed to lard for baking and also other recipes. Tallow is wonderful for frying potatoes especially. You'll love it. — Jackie

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# Why have my chickens stopped laying in the summer?

By Sarah Flanagan

**M**ost of us have heard about chickens taking a break from laying eggs during the winter, but have you ever had chickens that just suddenly stopped during the summer? Summer is normally the highest point of egg production for chickens because they need the sunlight. But sometimes chickens can stop laying eggs in the summer anyway. If you've gone out to your nesting box to find no eggs for a few days, here are a few reasons why this could be happening.

## **They're molting.**

Chickens molt once a year and usually this is during the summer. They are getting rid of extra feathers they had during the winter so they can keep cool during the heat of the summer. Molting takes a lot of energy, and sometimes chickens don't have enough left for egg production. If you've noticed a bunch of feathers all over your coop, your chickens are probably molting.

Try adding some apple cider vinegar into their water supply daily for extra nutrition and adding some extra protein into their food, like mealworms. This can help them get through the molting and start back with egg production.

## **They're overheated.**

Chickens don't like to be overly hot, especially over their own body temperature of about 104 F. That means they won't drink really warm water. If chickens get too overheated, they may not only stop egg production because they don't have the strength, but they can die as well.

If it's extremely hot where you live or maybe you're going through a heat wave, try adding some ice cubes to their water during the hottest part of the day. Bring them fresh, cool water in the morning and afternoon. You can even bring them cool treats like watermelon. I bring the entire thing out, cut in half with the rind attached. This will help them cool down and get the water intake they need. Plus it's mentally stimulating for them to try and get all the watermelon off the rind. Another suggestion to keep them cool is to put a baby pool in their enclosure so they can stand in the cool water.

## **They might be broody.**

At any time during the year, you can get a broody hen that might give up on laying eggs to start sitting on some. If some of your hens are continually sitting on eggs or even sitting in the nesting box for the majority of the day, they probably have gone broody. This means they are sitting on the eggs to get them to hatch. When this happens, chickens stop laying eggs for the time being.

If you have no roosters around your chickens and you still have a broody hen, you can gently remove her

from the eggs daily when you come to collect them. This happened to me a few summers back when I didn't have a rooster yet. One of my hens would go and sit on everyone's eggs all day long. And since there was no rooster, the eggs weren't fertilized so she didn't need to be sitting on them. To help her along, every day when I went to get the eggs, I would gently remove her from the nesting box and bring her to the food and water. Eventually after a week or so she got the idea, especially since I kept collecting the eggs daily so she had nothing to sit on.

If you do have a rooster around your chickens, then being broody is just a part of having chickens! If you have a broody hen, give her a separate water and food dish near her and just give her space. After the incubation period, you'll have some new chicks and she will eventually start to lay eggs again.

## **They might be stressed.**

Chickens can be stressed by a lot of different things. A few things include predators, new additions to the flock, and moving their coop. Chickens love routine and it takes them time to get used to any new changes.

With new additions to your flock and moving the coop, these just take time for the chickens to get used to the change. Normally within a few days, you should start seeing eggs again. Predators are a more complicated problem





because you would need to find the predator and remove it before your chickens feel safe again. One way to do this is by setting up cameras and motion detecting lights near your coop. There are some wonderful cameras that you can even set up inside your coop so you can monitor the situation and see how to catch the predator.

#### **They might be sick.**

Chickens can get sick at any time of the year so it's always a good idea to watch them closely. If you notice your chickens constantly scratching or itching, or their comb has gone pale, they might have some parasites like lice or mites. Another symptom would be if you see your chickens walking around with their beaks open because they can't breathe through their nostrils. This might mean they have a respiratory problem like a cold.

If you notice any of these symptoms, medication and immediate attention is required. Chickens can go downhill fast if they are sick and not taken care of. The first step would be to isolate the affected chicken from the rest of the flock to stop the spread. The next step would be to figure out what is wrong with your chicken based on its symptoms. If you aren't sure what kind of medication to give your chicken, you can always call a farm animal veterinarian or even an avian veterinarian. I have personally had luck with my local farm supply store.

#### **Your chickens are getting older.**

Chickens naturally decrease their egg production each year of their life. For example, Rhode Island Reds typically lay 200 eggs in their first year. By their second year, they might only lay 170. The number always keeps going down for the life of the chicken.

If you aren't hatching your own chicks each year to add to your flock, try to buy a few new chicks each year to add in. That way as the older chickens continue to age, you will always have a continual supply of



Adobe Stock / Bob

*A molting chicken is unlikely to lay as many eggs, if any at all.*

eggs because you will have younger chickens each year.

#### **They might not be getting enough protein.**

Chickens typically need about 20 grams of protein daily to lay eggs, so make sure to check what they are eating. If you're giving your chickens a good layer crumble or pellet and they are still having trouble, there are things you can add to the feed.

Sometimes layer crumble just isn't enough for some chickens. Try adding in some high-protein items to their feed like black sunflower seeds or mealworms. Mine particularly like mealworms the best. If you don't let your chickens free range, you might always need a mealworm supplement. If you can, letting your chickens free range is the best way for them to find protein because they constantly look for bugs.

#### **They might just need a break!**

Laying an egg each day is hard work for chickens. Imagine giving birth every day! During parts of the

year, chickens do take breaks because their bodies need it. If your chicken breed lays 200 eggs a year, then typically for 165 days spread throughout the year, they will need to take a break.

Some people try to force their chickens to lay more eggs by putting lamps in their coop to replicate the sun, but I don't recommend this. It will make your chickens stop laying at an earlier age because their bodies are being overworked. If you let your chickens have a break, it will keep them healthier in the long run.

No matter what reason your chickens might have stopped laying eggs during the summer for, if you use these tips you should start to see eggs again soon.

Sarah Flanagan lives on a small homestead in the North Georgia Mountains. When she isn't homeschooling her daughter, she is probably playing with her menagerie of animals or writing children's books under the name Katherine Bartlett. You can follow her author site at [katherinebartlettbooks.weebly.com](http://katherinebartlettbooks.weebly.com) and her Instagram, @kbwhiskey. Δ



# Deworming poultry the natural way

By Dawn Lamoureux-Crocker

If you keep a homestead flock, you are bound to encounter parasites at some point. Generally, a healthy chicken with a strong immune system can handle a moderate worm load. But once worms establish themselves in the chicken's digestive tract, they can quickly sap the chicken of vital nutrients and cause the bird discomfort.

No matter if your hens are free-roaming or kept in a coop, if not cared for properly they can get worms or other parasitic infestations. Once an infestation has begun, it may progress to a more serious problem that the hen's body cannot manage on its own.

Some tell-tale signs that your flock might be experiencing a worm infestation may include:

- Foamy or extremely watery poop that may also include worms
- Pale wattles and comb
- Dirty vent area
- Lethargy
- Weight loss
- Dirty, ruffled feathers

## Prevention is critical

It goes without saying that "prevention is better than cure." Given limited treatment options for poultry and the cost to rebuild your flock, prevention is critical. Keeping your coop clean is essential to keeping your flock healthy and worm-free. Ensuring adequate space, proper ventilation, and dry, absorbent bedding fosters an unwelcome environment for pests.

Proper and balanced nutrition is vital to your flock's overall health and the ability to resist or fight parasites. Chickens require a balanced diet of



*Lola, our 5-year-old Dominique hen*

feed, greens, grains, and protein, as well as access to fresh, clean water. I also provide my flock with a monthly regimen of natural deworming solutions to keep them at their very best. I use these natural methods for preventative measures as well as emergent situations within our flock here at Starboard Farm.

## Pumpkin seeds

Cucurbitacin is a compound found in the plant family *Cucurbitaceae*. The *Cucurbitaceae* family includes pumpkins, gourds, and squash. Cucurbitacin is a compound found within pumpkin seeds and is usually effective in paralyzing worms, thus





*Ingredients for garlic and apple cider vinegar solution*



*A pot of pumpkin seed (cucurbitacin) solution cooling*

releasing their hold on the membranes of the host's digestive system and allowing the host to pass the worm.

This is an easy task if I'm feeding pumpkin seeds to my sheep but not as easy when feeding to my hens. To treat my hens, I boil one cup of seeds in roughly five cups of water for 30 minutes. I then allow the water to cool and feed this solution directly to my flock of 35 birds. Larger flocks will require a larger batch. Realistically, I do this in late summer and fall when my pumpkin patch is overflowing. However, fresh, organic pumpkins and squash at the store will yield the same result throughout the year.

Pumpkin seed oil is another method I have used successfully. I use this when treating my entire farm, as it's safe for sheep, chickens, ducks, and geese. Simply add it into a small

amount of chicken feed to make sure they are getting a sufficient amount. Hens enjoy eating fresh fruit and vegetables from the garden, so if you have pumpkins to spare, you can cut one in half and let them enjoy this healthy treat.

### **Nasturtiums**

I tend to grow an obnoxious amount of nasturtiums around the farm. Not only are these colorful flowers a visual delight draping from pots and window boxes, they are a pest deterrent in the garden and a natural dewormer for your flock. The entire plant is edible, including the seeds. I feed nasturtiums to my chickens throughout the summer and fall. Nasturtiums not only help fight parasites but also add variety to their healthy diet with the benefits of high levels of vitamins A and C.

### **Diatomaceous earth**

Diatomaceous earth is already a popular powder among homesteaders. Many use it in their coops and runs to assist chickens in ridding themselves of external mites and lice, but did you know it also works in getting rid of internal parasites? Add a cup of food-grade diatomaceous earth to your flock's food and the hens happily eat it. Feed diatomaceous earth outside the coop or in the run to reduce any possible inhalation by the chickens or yourself.

### **Garlic and apple cider vinegar**

Garlic and apple cider vinegar have both gained popularity as solutions for parasites, gut health, and antimicrobial situations in your flock. Pair the two together and create a super preventative solution. Take six cloves





*The Sunny Side Girls enjoying a snack of fresh pumpkin and nasturtium plants from the garden*

of garlic and crush them well. Place them in a muslin bag with a draw-string and hang inside a water bucket. Add a cup of apple cider vinegar that includes the mother (an accumulation of beneficial bacteria and yeast, appearing as floating, clumping strands) to the bucket. Fill the bucket with fresh water and let your flock drink this for two to three days, then discard. The crushed garlic releases allicin into the water, which inhibits the growth of worms but also helps deter external pests like mites and lice. The addition of apple cider vinegar with its mild antiseptic capabilities and its low pH may acidify the digestive tract of the hens and discourage the worms from continuing to thrive and multiply in their hosts.

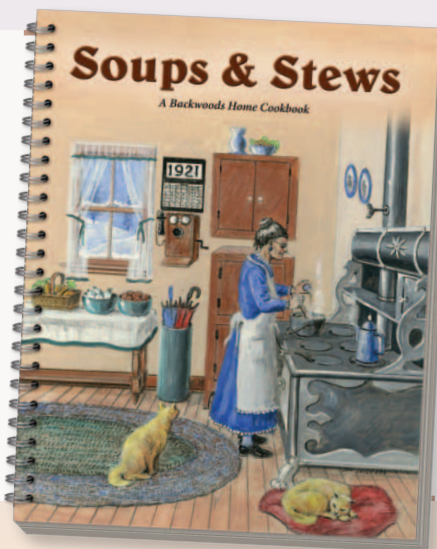
### When prevention fails

I want to conclude that these methods I have shared are not 100 percent guaranteed treatments, and despite your best efforts there may come a time when worms still persist. If nothing has improved with any of the above remedies and your flock continues to decline, then do not hesitate to use a chemical treatment or consult your vet.

Dawn is the owner of Starboard Farm located in Machiasport, Maine. To learn more about her farm and recently published cookbook *Starboard Sampler* — a collection of traditional Downeast Maine recipes — please visit [instagram.com/starboard\\_farm](https://www.instagram.com/starboard_farm).  
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# A beginner's guide to keeping sheep on the homestead

By Dawn Lamoureux-Crocker

**T**here is an overwhelming selection of books, magazines, and websites that reiterate basic information about selecting, purchasing, housing, feeding, breeding, and keeping sheep healthy. The information is, for the most part, accurate and, well ... generic, but lacks much in the way of a “true-to-life” first-hand experience. I’m not here to deter or encourage you from taking the plunge into sheep ownership, but simply to share my personal, 20-plus-years’ experience of keeping sheep — honest and unvarnished — and leave the rest in your hands if you choose to follow through.

Know first and foremost, you *will* encounter some disasters in your career as a new sheep owner. I learned many painful lessons because I didn’t take the time to do my research. I wasn’t realistic about my goals, and chose to ignore valuable advice from those who had far greater experience than I. When I am approached by anyone who has romantic notions of keeping sheep, I share a few of my pearls of wisdom with them.

## Don’t give up your day job

If I had a dollar for every time I rolled my eyes when it was suggested that keeping a few sheep on the back lawn would offset the price of a power lawnmower or landscaping bill ... I’d be a rich woman. COVID flushed out a plethora of folks who wanted to escape city life, buy a plot



Cloud: Adobe Stock / Lucas

*The flock at Starboard Farm*

of land, add some sheep (or other livestock), and pursue a living spinning wool, dyeing it with locally foraged plants and selling to the local market for an extraordinary price. I may sound cynical, but after 20 years of farming I only recently retired from a full-time teaching position. I kept my grip on reality and built my farm while I continued to work off-site. I was fortunate enough to retire earlier than my colleagues and I now write about my experiences for magazines, host in-person workshops at the farm, and have published two books that have greatly offset the continuing cost of running things.

## Get some experience under your belt

If nothing else, this is the most important of my “pearls” and if you ignore anything else I share with you, do not ignore this. When just starting out I chose to turn a deaf ear to this very bit of advice from an experienced shepherdess, and I paid dearly in the end. If you are able, find yourself a sheep mentor for the first two to five years. Finding someone with experience who would be willing to guide you through the best and worst times of raising sheep is absolute money in the bank. After my initial sheep-owning disaster, I regrouped and contacted my friend Jessika who



owned a dairy farm a few towns over. Living in rural Maine, we are seriously short on vet service, and critically short on large animal vet service. If you keep livestock, you must be prepared to handle almost 95 percent of your own vetting. Jessica talked me through some of the worst situations — malpresentation of a lamb, setting a broken leg, bloat, a cast ram, vaccinating, castrating, and culling (the last being the most difficult situation I've ever faced).

Keeping sheep is a serious commitment and before you get sheep of your own, it is wise to spend time with your mentor and their flock if possible and learn first-hand what a book will never show you. Once, at 10 p.m. on a bitter cold February night, one of my ewes had a massive ram lamb stuck breech. There was no vet to call, but I relied on what I learned from my mentor on how to reposition that lamb and pull him out safely. If not for that prior experience I would have lost not only the lamb, but the ewe as well. If you are unable to find a mentor then I highly recommend you establish a solid relationship with a vet who is willing to come to you.

## Don't be cheap

Buy good-quality stock. Don't be tempted to save money by purchasing old, or "rescue" sheep until you have enough experience that you could handle them with little stress. My initial disaster resulted in my purchase of several "affordable" bottle lambs from a farm that had little experience and was quite new to sheeping. I reared those lambs with the blissful notion that as elder sheep they would be wonderfully tame and I could allow them to just free-range on our property. Boy was I wrong. Despite bottle feeding and daily handling, Timmy, the wethered ram, took any and all opportunities to sneak up and headbutt anyone and anything. Once he began a daily assault of the mail lady's delivery car, I knew I had a serious problem. When he finally knocked a visitor down, it was time to make a difficult decision.

Whatever breed you decide to keep, make certain you acquire from an experienced breeder and you are given the opportunity to see what you are buying, where they are raised, and how they have been kept. Quality stock from reputable sources will pay

dividends in multiple ways. The old saying "You get what you pay for" is very applicable in this situation.

## Good fences make good neighbors

If you already keep livestock, the wisdom of this quote pinched from a line written by my favorite poet Robert Frost will be instantly understood: Good fences *do* make good neighbors, and good neighbors matter. Sheep have ingrained in their very being the traditionalist belief that the grass *is* always greener on the other side. It's not a matter of *if* but of *when*. If sheep can get out they will, and never at a convenient time. A good fence will keep animals in, keep predators out, and allow you to rotate or preserve grazing areas.

The right sort of fencing for the job is crucial, as I found out early on. The fence between the ram enclosure and ewe enclosure is by far the sturdiest, most often-checked section of fencing here at Starboard Farm. In the first year, we initially installed 5-foot galvanized wire fencing with 2½x4-inch holes that sectioned off areas of the property that needed clearing. Galvanized fencing was within our budget at the time until the more permanent wood fencing could be purchased. Imagine our surprise when all of the ewes ended up pregnant the following spring. That galvanized fencing may have separated the rams from the ewes ... but it doesn't stop love. If there's a will ... there's a way!

If you know someone who knows about fencing, I urge you to consult them. If not, you'll be digging deep into your bank account to hire a professional.

## Feeding and watering

Whether you raise your sheep for meat, wool, or pleasure, they obviously must be fed and watered. You can easily keep four to five sheep on an acre of very good pasture from



Annie and her lambs



late May to November here in Maine. Depending on your location this time frame may have to be adjusted. From November to early May they are fed hay and grain when the ewes are in lamb.

Being aware of the pasture foliage available and understanding the carrying capacity of your land is critical if you are going to pursue this as a long-term venture. If you have goals of breeding you must also factor in future lambs that may stay on. I began with six acres of densely wooded land and six sheep. Over the course of 10 years using the silvopasture methodology, I now pasture 17 sheep full-time with separate pens for rams and ewes. I understand what the land can accommodate and take into account drought conditions we have been experiencing the last few years. The nutritional requirements for sheep will vary throughout the year, but if you are breeding, the highest requirements will be during late pregnancy and lactation. Having access to fresh, clean water is a must as sheep will drink a gallon or more of water each day.

## Shelter

Shelter for sheep does not have to be fancy. Oftentimes a three-sided run is all they require to get out of rough weather. My flock has a barn and is only penned in at night due to coyotes in the area. There are two areas inside the barn sectioned off for ease of setting up lambing pens in spring. Sheep are not keen to be locked in. Even during the worst snowstorms you will often find most of my flock laying outside letting the snow accumulate on their backs, rather than being in the comfort and sanctuary of the barn. In warmer climates I have seen portable carports erected in fields to shade from the sun and rain.

Historically, sheep were once raised by the thousands on the islands just offshore here in Machiasport. Some of the islands still have remnants of



*The boys of Starboard Farm — Ollie, Otis, and Wee Duncan*

old wood sheds that offered relief from the driving ocean wind and rain, but for the most part the sheep grew fat and happy on island pasture and had little to no protection throughout the year.

## Shearing

Shearing takes place in early spring at Starboard Farm. Ewes in lamb will get a quick “spiff up” around their bottoms just before lambing. Once lambing is over in May everyone gets their yearly haircut.

The first few years I hired a professional shearer who came to the farm and sheared and trimmed hooves in a few hours’ time at a reasonable price.

As with everything in life, prices go up and one must economize. I learned to blade shear, and now shear my own sheep. The benefits of this are that I can do it on my own time, do a few sheep at a time, and shear the wool I need to use in the hugel beds, to line garden paths, or to compost. Shearing is darn tough work though, and being middle-aged I know I will eventually need a proper shearer.

## Lambing

For me, lambing is the most exciting and satisfying part of keeping sheep. I cannot possibly write all that needs to be said about lambing in this article, so this is a very



brief summary of a much greater part of your sheep venture. If anything goes wrong with lambing it can be extremely distressing for you and the sheep. Again, I cannot stress enough that you have experience under your belt or someone with experience ready to lend a hand. Lambs, much like human babies, arrive when they are ready, and never on time.

My suggestion in this area is to make certain you know how to handle situations such as breech births, uterine prolapses, clearing airways in lambs, and how to deal with very large lambs that will need to be pulled out. Understand how to deal with hypothermia in lambs, what to do in the event the ewe dies in birth and you are suddenly faced with an

orphan lamb, and prepare for situations that may sadly require the humane dispatch of either. In 20-plus years I have lost four lambs, each one in a different situation that prepared me for the next event if it should happen again. I have never had a vet present or had to call one, mainly because there wasn't one available in our area. I relied on my sheep mentor and understood what would need to be done. My flock is small enough that I have a good gauge on when my ewes will go into labor. A good first sign is when they go off their food or separate themselves from the flock. Annie, my 7-year-old ewe, can always be found standing alone with that glazed "deer in the headlights" look about her face and oftentimes

swaying her hips. I know then that it's time to move her to the lambing paddock. Sometimes there's no warning at all. I've gone out in the morning and fed everyone only to return 30 minutes later to find twin lambs bleating and their mother Noodle still stuffing her face!

## Ailments and elder care

I swear that sheep spend their entire existence either looking for ways to escape or creating new and inconvenient ways to die. There are a number of illnesses that could appear quite suddenly in sheep and for this reason I recommend you visit your sheep daily and look for any problems. Sheep will not come to you when they feel ill. They are far more likely to once again separate themselves from the main flock and hide, so it is wise to count your sheep each day and make certain they are all there. I have found that the majority of sheep ailments here at Starboard Farm center around pregnant ewes and newborn lambs. If you decide to keep sheep but not breed them, you may find you're far less likely to encounter as many ailments. This is yet another topic that I could write an entire book on and only briefly touch on here. Following are some important preventative treatments that may help alleviate more serious problems down the road.

- Treat your sheep for worms. Barber pole worm is a harmful parasite that burdens the sheep by feeding on their blood. If the worm load is great and the issue is not caught and treated in time, your sheep will surely die, often without warning. I routinely do an eye check for worm load. To do this I gently pull down the lower eyelid of my sheep. If it's pale pink or white then I immediately treat it for worms. This indicates anemia and potential barber pole worm infestation. I use ivermectin dosed orally. My ewes receive it shortly after lambing and the lambs receive it around



*Making new friends — newborn lamb meeting last season's lambs*



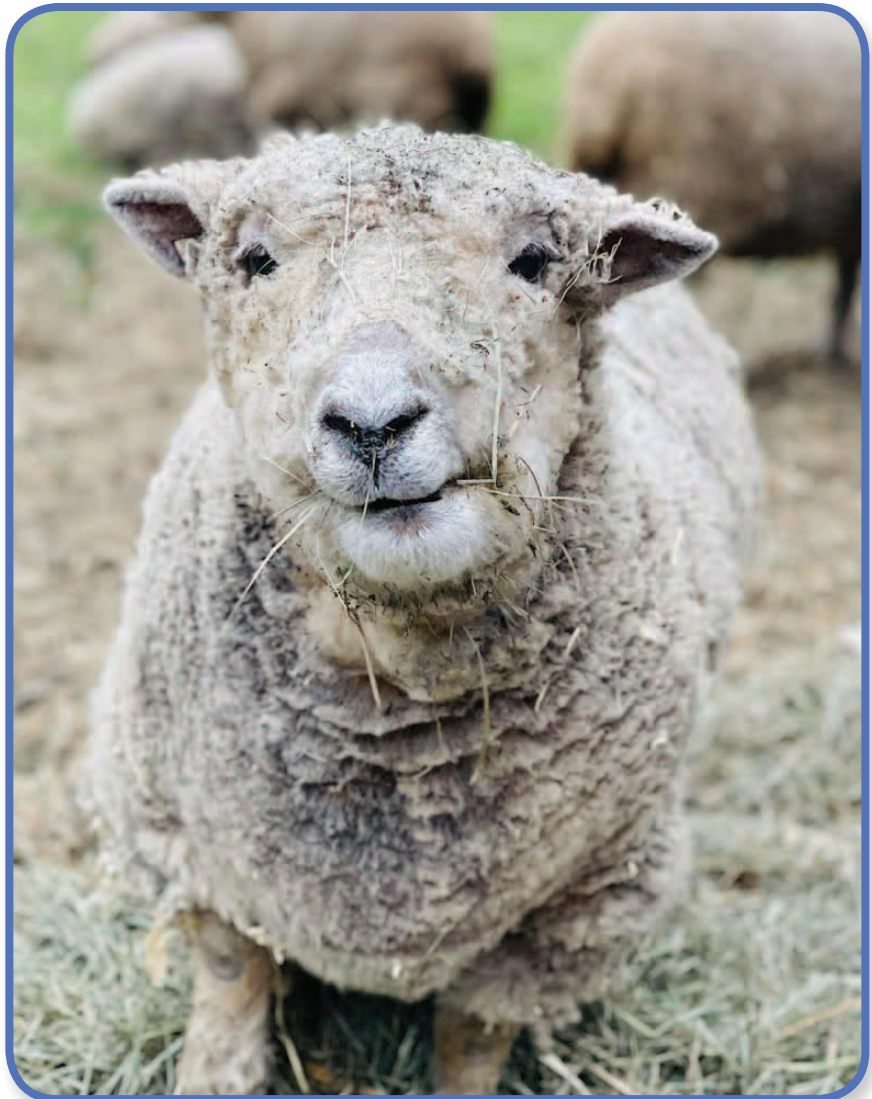
six to eight weeks old. Keep in mind sheep eat where they poop so worms are inevitable, even with good pasture rotation. Keep an ample supply of ivermectin on hand as time is of the essence in treatment.

- Vaccinate your flock. This is an important and inexpensive “health insurance” against diseases that will commonly affect sheep. I vaccinate my flock with CDT, which provides a three-way protection against *Clostridium perfringens* types C and D (often called overeating disease) and *Clostridium tetani* (tetanus). I vaccinate my adults yearly and lambs from vaccinated dams 30 days after birth. There are additional vaccinations for sheep, but that should be a discussion with your vet depending on the prevalence of certain diseases in your area.

- Keep a first aid and lambing box dedicated to your sheep. It will be a lifesaver. Not having to dig around looking for what you need in a possible emergency situation saves time. Here is an example of some items I keep in my lambing box:

- Disposable rubber gloves
- Lube gel
- Clean, sharp scissors for cutting umbilical cord
- Lamb Saver gel for weak lambs
- Pull-EZE lamb puller
- Iodine to disinfect the umbilical cord
- Old, clean towels to dry off lamb

Last, but certainly not least, is elder care in your flock. I breed my sheep for their lambs to sell and wool to spin. Therefore, this allows ewes and rams who have served me well to live out their very best lives at Starboard Farm. After all, they have earned it. My oldest ram thus far has lived to be 13. Oskar was my prize ram. He and I had



Oona — Grand Dame of Starboard Farm at 13½ years old

our differences but he sired the most beautiful lambs and so I often overlooked his shortcomings.

Know that you may very well have sheep upwards of 15 years or more. Unless you’re in the meat camp ... and then that’s a different story. My current old ladies are 13½, 12, and 11 years old. I’ve just recently discovered that Oona, at 13½ years, has lost all of her teeth and elder care has begun. Once elderly sheep have lost their teeth, they can rapidly decline due to nutritional reasons. For now, she is still grazing fresh grass and eating fine-cut hay and supplemental

grain. She is active and still gets up and down with relative ease. If at any point I feel she is suffering, then I will do what’s best for her.

If after reading this you are still determined to add sheep to your homestead, I wish you the very best in your future sheep endeavors and hope this article has given you a little insight into the joyful world of sheep ownership.

Dawn is the owner of Starboard Farm located in Machiasport, Maine. To learn more about her farm and cookbook, *Starboard Sampler* — a collection of traditional Downeast Maine recipes — please visit [instagram.com/starboard\\_farm](https://www.instagram.com/starboard_farm). Δ





# Homestead Humbles & Fumbles

## Deworming sheep the hard way

By Sandy Davis

**T**he other day, I went to a friend's house to help her deworm her sheep. At the time, it sounded like a simple job. In reality, it turned into a full-body workout with consequences.

My friend, who is good-hearted but overly optimistic, does not have a catch pen or chute. That's a problem. They are things you don't think you need until you do. Without them, you're left chasing animals and hoping for the best, which is not much of a plan when the animals outweigh you and have "four-wheel drive."

Sheep may not be known for their intelligence, but they do have an uncanny ability to recognize trouble. The moment they saw me holding a drench gun, they knew something was up. For those unfamiliar, a drench gun is a large syringe with a long tube

used to deliver liquid medicine by mouth. It works well, once you actually have hold of the animal.

The first sheep was easy. She had been bottle-raised and still believed humans were trustworthy. Catching her was more like offering a treat to a Golden Retriever, which gave me just enough confidence to think the rest might go the same way.

They did not.

The rest of the flock scattered the moment I stepped toward them. One by one, I managed to catch and treat them, but it took time, patience, and more energy than I had planned on using that day. By the time I got through half of them, I was already reconsidering my definition of "helping a friend."

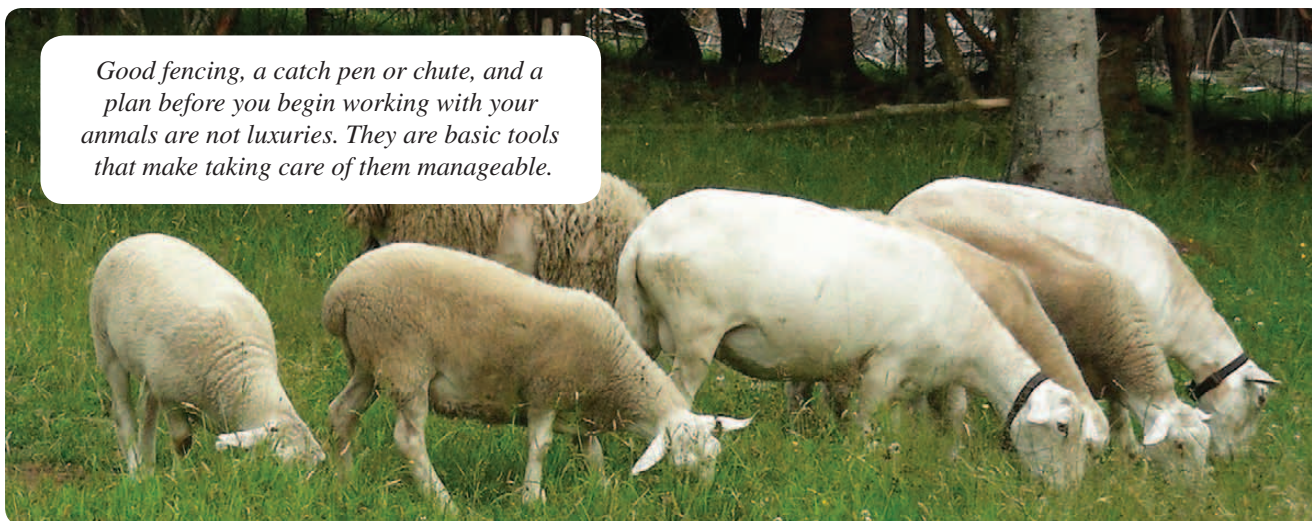
The last one, the boss ewe, was large, strong, and completely unimpressed with anything I had to offer.

She kept her distance and watched everything I did, always staying just out of reach. No matter where I moved, she adjusted, keeping a safe gap between us. It would seem she'd done this before and knew exactly how it worked.

I tried tempting her with grain, which is usually a reliable method. I scattered a small amount near my feet and waited. The other sheep came over immediately, pushing and crowding like they hadn't eaten in weeks. Eventually, the boss ewe edged closer, drawn in by curiosity and the promise of sweet feed.

When she got within reach, I made my move. I dropped the bucket and grabbed hold of her fleece with both hands. She took off, and what followed was less of a controlled restraint and more of a rodeo. She zigged, zagged, and ran full speed,

*Good fencing, a catch pen or chute, and a plan before you begin working with your animals are not luxuries. They are basic tools that make taking care of them manageable.*





while I held on and tried to keep my footing. The rest of the flock joined in the confusion, running alongside us as if they were part of the event. It didn't take long before I realized I was no longer in charge of the situation. I was just along for the ride.

After what felt like far too long, she finally stopped and dropped to the ground, exhausted. I was just as tired. There I was, still on top of her, panting and covered in dust. Did I mention her size? She was far bigger than I had any business wrestling. Trying to hold her down felt like doing a five-point restraint on a Shetland pony.

My friend came over, secured a rope around the ewe, and calmly said, "Okay, I've got her."

Getting back on my feet was another matter. I'm not as young as I used to be, and after that effort, I wasn't moving quickly. It took a few tries and more than a little determination, but eventually I got upright and finished the job.

Looking back, the entire situation could have been avoided with better preparation. A simple catch pen or proper handling setup would have made the process quicker, safer, and far less stressful for both the sheep and the people involved.

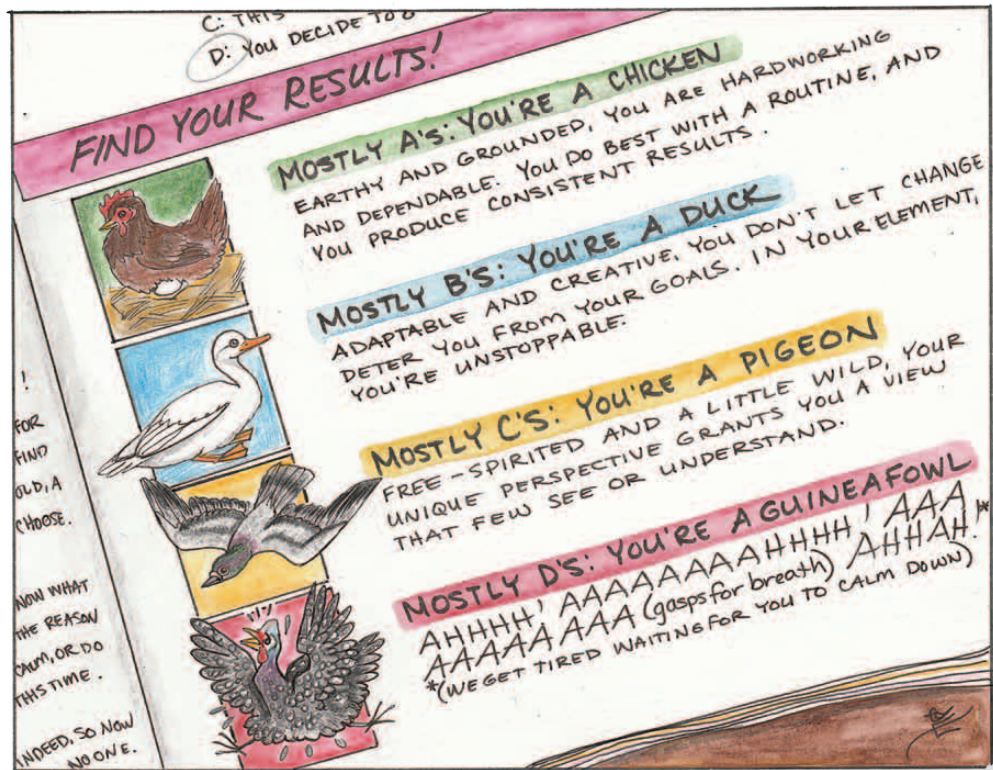
If there's a lesson in all of this, it's that working live-stock without the right setup usually means doing things the hard way. And with animals the size and strength of sheep, the hard way often turns into the painful way. Good fencing, a catch pen or chute, and a plan before you begin are not luxuries.

They are basic tools that make the work manageable.

Sheep may not be the brightest animals, but they are strong, quick, and determined when they want to be. Underestimating that is a mistake you usually make only once. As for me, I came away sore, tired, and a little wiser. The next time someone asks me to help deworm sheep, my first

question will not be "When?" but "Do you have a catch pen?"

Sandy Davis is a writer and homesteader in northern New Hampshire, where no two days — and no two animals — are ever quite the same. Her stories are drawn from real life on the homestead, where things don't always go as planned but make for a good story anyway. She is the author of *Between the Fenceposts: Tales of Mud, Mayhem, and Manure*. More stories can be found at [sandy-davisauthor.com](http://sandy-davisauthor.com). Δ



Comic by Wren Everett





## THE IRREVERENT JOKE PAGE

(Believing it is important for people to be able to laugh at themselves, this is a continuing feature in *Backwoods Home Magazine*. We invite readers to submit any jokes you'd like to share to [editor@backwoodshome.com](mailto:editor@backwoodshome.com). There is no payment for jokes used.)

I was abducted by aliens last night. They made me brush my teeth, comb my hair, straighten my clothes, and eat vegetables. Turns out I was on the Mother ship.

An Englishman, Welshman, and Scotsman were captured during the war and were sentenced to be shot as spies. When asked if they had any last requests the Welshman asked to hear a recording of a Welsh male voice choir. The Scotsman asked to hear a recording of bagpipes playing "Scotland the Brave." The Englishman rolled his eyes and asked, "Could you shoot me first?"

**An actual joke told in England during World War II when American troops arrived to help fight: "The trouble with the Yanks is they're overpaid, oversexed, and over here."**

A politician, accompanied by a news crew with TV cameras and reporters as well as his entourage visited an isolated Indian tribe out West. He interviewed the chief of the tribe and asked him if there was any way he could help the tribe.

The chief said, "We have three urgent problems that need immediate attention."

The politician asked, "What are they?"

The chief said, "The first problem is that we have a medical center here but no doctor."

The politician said, "I can take care of that!"

He faced the reporters and TV cameras, took out his cell phone, and made a call. He spoke for a minute then hung up, turned to the chief, smiled and said, "I've used my influence. There will be a doctor to staff your medical center by the end of the week."

There was some applause from his entourage.

"What's the second problem?" he asked.

The chief said, "There's a mining company nearby that has poisoned the water my people have been drinking for thousands of years. Now we have to ship in bottled water, and it is not only extremely expensive, it is also not ecofriendly."

Without hesitation the politician faced the cameras, took out his cell phone, and made another call. He spoke for a minute, then hung up.

"I've pulled some strings," he said to the cheers of the news crew and his followers. "The mining operation is now shut down, and the company owners are going to have to build you a water purification plant that will be operational within a month. What's your third problem?"

The chief said, "We have no cell phone reception up here."

**What makes police laugh the most?  
Telling a woman she has the right  
to remain silent.**



# Solar-powered weather station

By Jeffrey R. Yago, P.E.

If you live close to a major city that has its own local television station and regular weather forecasts, your local weather updates should be fairly accurate. However, for those of us living in more rural parts of the country, our local weather forecasts are sometimes about as accurate as asking a Magic 8 Ball. The problem is the National Weather Service (NWS) only operates a total of 122 actual weather monitoring stations for the entire United States. While California and Texas each have six reporting stations, and Florida has 10, most of the other states typically have only a single weather reporting station. Since the most accurate local weather forecasts will be based on actual local weather data, the forecasting based on real weather data readings will be the most accurate for the area nearest a specific weather station.

So where do all the weather forecasts come from for the thousands of cities and rural areas that do not have a nearby weather station? In reality, when you check on the internet or with your cellphone to find your local weather forecast, it is generated instantly by an automated computer system operated by the NWS, which combines the reporting data from two or more weather stations the system identifies as being closest to your location. This automated system then estimates the most likely weather forecast for your location based on averaging the readings from these other distant weather reporting locations. This means you could actually be hundreds of miles away from these NWS weather stations, and sep-



*My recently installed VEVOR home weather station*

arated by a large body of water, long mountain range, or hundreds of miles of rugged wilderness. Any of these geographic barriers can significantly affect the accuracy of the forecast for your local area.

Accurate weather forecasting requires a large database of both current and historical weather data for a specific location, plus the most recent hourly measurements supplied from all reporting stations. While images from weather satellites help forecasters identify major storms developing

across the country, these are more for long-range forecasting and not normally used to predict daily weather conditions. Comparing the weather data from adjoining area reporting stations helps identify an approaching weather front or storm that may be hours away. However, this still may not help you to know your own local forecast if you live far from these reporting stations. For example, you hear on your local radio station that there is a 40 percent chance of rain tomorrow. What this really means is



*Calibrated rain catch funnel*



*Rain collecting alternating paddles*

a computer is estimating 40 percent of the area served by the local radio station will experience rain, which means 60 percent will not. Since the radio station's signal could reach anywhere within hundreds of square

miles of surface area, there is no way for you to know which area you live in. This is a win-win for whoever is making up the local weather forecast since who knows in which area you are located!

The weather monitoring carried out at all regional airports is done primarily to advise pilots of current landing and takeoff conditions. Information concerning approaching storm fronts is also available from their weather radar systems which is also used to advise pilots what to expect along their planned routes. This airport weather information can be included in the weather forecasting supplied from the National Weather Service. However, since most regional airports are located near major metropolitan areas, this current weather information does not always benefit those of us living in more rural areas who just want to know what the weather forecast will be for tomorrow!

For a commuter, tomorrow's weather forecast indicating it will be sunny and warm is not the end of the world if a fast-moving front instead brings in a heavy rainstorm. However, this type of totally wrong weather forecast can be extremely costly to a farmer who has hundreds of acres of hay cut and drying in the field. Hearing the sunny forecast, he decides to put off baling hay for another day, and now all his cut hay is soaking wet.

## **Your own weather station**

If you need more accurate weather forecasts for your specific rural location, one of the best solutions is setting up your own weather station. Years ago, a homeowner could note the outside temperature with a thermometer and measure the rainfall using a calibrated glass jar. Unfortunately, this required going outside to take these readings which was time consuming, and forgetting to empty the glass rain gauge could cause it to freeze and break in winter conditions. Fortunately, there are now many different weather stations available for the homeowner that automatically record all kinds of weather data, which are then displayed on an indoor display screen. This indoor graphic display screen receives the



weather data being transmitted from the nearby outdoor measuring station.

Not only are these systems capable of measuring all kinds of weather data, but this data is stored in the indoor display unit. This allows for viewing the more recent readings which helps identify weather trends. Storing historic data can significantly improve any system's weather forecasting. For example, most weather readings shown on the display also include an "arrow" that is either pointing straight across, pointing up, or pointing down, indicating if the current reading has been trending stable, going up, or going down in the past few hours.

Weather stations that measure rainfall no longer use a fixed container to collect rainwater which had to be manually emptied. New rain gauges use a small calibrated funnel to direct rainwater onto two small "paddles" that alternate up and down, much like a kid's teeter-totter. Since each side is the shape of a small spoon, as soon as the upper spoon collects rain and tilts down from the weight, the collected rainwater drains out. This causes the now-empty lower spoon to raise back up, allowing the rainwater from the funnel to be diverted to the opposite-side spoon which is in the up position.

The size of the funnel and spoons and the amount of rainwater they each measure are all calibrated to a fixed volume of rainwater. The metering system just basically counts the number of times per hour, per day, and per week the arm reverses spoon positions and then converts this counting into inches of rainfall information.

## System costs and features

Most of the residential weather stations sold today measure and record both indoor and outdoor temperature, humidity, and barometric pressure. Slightly more expensive units add wind speed and wind direction



*Some weather stations include a built-in solar panel to keep the internal battery fully charged.*

measurements. Models that include a solar panel to keep their internal battery charged can also utilize the same solar panel to measure and display solar radiation, ultraviolet light levels, and cloud cover readings on the display. At the most basic level of personal weather stations currently on the market, expect to spend between \$100 and \$150 depending on materials and if a solar charger is included. Most weather stations now utilize wireless Bluetooth communication technology between the outdoor and indoor unit, and no longer require any direct hard wiring, so the installation is easy.

Weather stations costing between \$200 and \$300 typically add additional communication features not usually found in lower-cost systems. These communication features can include the ability to connect to a home's internet router to send weather alerts to your cellphone or email when you are not home, and also communicate with identical weather stations in adjoining outside areas using a shared internet link. This interconnected communication improves early storm warning capability as these more

expensive systems can display both the current data for that unit plus data being sent from these interconnected systems.

Weather stations in the \$600 to \$1,000 price range are usually intended for a more professional level of weather monitoring and can include many different optional sensor devices. These can include ground moisture sensors which allow for frost forecast capability and current ground moisture readings. These higher-priced weather stations are also made using much more durable materials which are also better protected from corrosion.

I am located in a more remote mountainous area and am hundreds of miles away from a large city. I have found the weather reports provided for my location are almost always wrong, especially since I am on top of a 3,000-foot mountain range which is typically 10 degrees colder than the surrounding valleys below. In fact, there are many days when I can look down on rain storms passing below me and raining on the valleys, while it's sunny and blue sky at my elevation above these clouds.



*Bubble level built into one arm of the outdoor unit*

When I finally decided to purchase my own weather station, I realized I probably would not need a high-end model costing hundreds of dollars. However, I also did not want to buy a cheaply-made unit since the winds we typically experience on this mountaintop can damage smaller items left outdoors. I finally picked the VEVOR model #YT60231 which regularly sells for \$159, but I found it on sale for \$85. This definitely fit my budget! At this price I expected to receive a box full of parts that required days of assembly, but was very surprised

when I removed an almost fully-assembled unit from the box. Only the wind speed and wind direction arms were packaged separately in the box due to their small size, but these were easily attached using a small screwdriver that was included with the instructions.

### **Outdoor unit**

The round ball adapter attached to the bottom of the outdoor unit allows tilting and rotating the outdoor unit in any position before locking down

with the included screws. Attached to this round ball is a metal pipe clamp mount that also includes the required stainless steel screws. This pipe clamp is designed to firmly attach the outdoor unit to the top of a metal pole with a 1-inch outside diameter. However, this same mount includes a metal base that allows for mounting on a flat surface using four screws if a vertical pipe support is not possible at your location.

Probably the most critical requirement when mounting the outdoor unit is to make sure it is as level as possible, but this is fairly easy since a bubble level is built into the top of the unit. The support arm with the bubble level includes an arrow showing that this part of the outdoor unit must face north. The wind speed and wind direction measurements will be the most accurate if the outdoor unit is located above ground-level and away from any nearby structures or trees. Fortunately, I already had an unused 10-foot-tall metal pole attached to my upper-level deck, thanks to a prior wind sock installation that had long since blown away. This outdoor weather measuring unit easily attached to the top of this existing pole using the included pipe clamp.

### **Indoor display**

The indoor display unit is about the size of a small book and requires no installation. It includes batteries to keep the system memory active during power outages. The display illuminated immediately when plugged into a nearby 120-volt wall outlet. As soon as this indoor display unit powered up for the first time, it started “searching” for signals from the outdoor unit which began sending and receiving data without any programming required. After this Bluetooth communication link is established, there are a few settings that do need to be adjusted manually, but these are fairly simple to complete. These include deciding if you want the tem-



perature to be displayed in Fahrenheit or Celsius; wind speed in miles per hour, meters per second, kilometers per hour or knots; the current day, month, and year; and which of the possible time zones your home is located in. You can also select if you want rainfall amounts to be displayed in daily, weekly, or monthly values.

The National Institute of Standards and Technology (NIST) broadcast over the radio a time code signal multiple times each day from the atomic clock they maintain in Boulder, Colorado, which keeps nearly perfect time. The time code transmission from this radio station is used by businesses, news organizations, along with military and government agencies all over the country to synchronize their clocks to the same exact time.

My weather station includes a receiver function which connects automatically with the national atomic clock radio broadcasts several times at night to adjust the internal clock as needed. While this internal clock automatically switches to and from daylight savings time, it still requires you to select which time zone applies to your location. Setting the correct date and time zone guarantees the system display is showing the correct phases of the moon.

A small area of the indoor display screen is labeled "forecast," which displays graphic symbols to make it easy to quickly determine the current forecast. These show one of six images including sunny, partly cloudy, cloudy, rain, storms, and snowy conditions. The indoor display has several push buttons across the bottom which allow you to change any of the displayed values from their current reading to maximum and minimum readings since they were last zeroed out. Other buttons allow you to switch the displayed temperatures to wind chill, heat index, or dew point values, plus setting a high and low limit setpoint alarm for any of the



*The indoor digital display screen*

displayed values. For example, an unusually low or high outdoor temperature, wind overspeed, or other readings can be used to signal an alarm condition.

## Conclusion

When first researching which weather station I was going to buy, I also found several recent articles about farmers and ranchers that relied heavily on their personal weather stations to increase operational efficiencies and to avoid costly weather-related mistakes. This included an orchard manager who received an early frost warning about to impact his hundreds of ripe fruit trees.

Farmers have saved vegetable crops ready to harvest from freeze damage thanks to an early alarm. Ranchers have saved large numbers of chickens, turkeys, and even newborn cattle thanks to an early warning that very high outdoor temperatures and high solar ultraviolet radiation was expected. Knowing actual rainfall amounts and recent rainfall history for their specific location has allowed farmers

to delay or move up irrigation schedules, which not only improves crop production but can also save significant water usage.

While all of the display values, controls, and metered data described in this article pertain to my specific weather station, I found most of the other brands sold in this same price range provide almost the same exact weather metering and data collection, but may have a slightly different overall design and mounting requirements.

If you live in a more rural area of the country, I am convinced you will find that having your own weather station will offer many benefits you have never even considered, even if you initially just wanted to know the current time and outdoor temperature!

Jeffrey Yago is a licensed professional engineer with more than fifty years' experience working in the energy and emergency power field, and author of three books including his most recent books, *Lights On* and *The ABCs of EMP*. He is a feature writer for *Backwoods Home Magazine* and *Self-Reliance*, and is a frequent speaker at numerous national preparedness events. Δ

# The real scoop on going off-grid

By Jackie Clay-Atkinson

**W**ith everything going on in the world today, plus the economy in such a turmoil, a whole lot of folks are seriously considering going off-grid. Some of the perks include living simply, growing your own food, heating with your own wood, privacy, safety, and reducing indebtedness.

I can talk about this subject through real life experience. I've lived off-grid a whole lot more of my life than I spent hooked up to the grid. From remote mountains in Montana, to our current homestead here in Northern Minnesota — I've literally been there, done that. We started out pretty broke, with less than \$10,000 a year in income and a baby. Now, we're far from rich, but comfortably living with many more improvements.

Our homesteads didn't just come about by accident or impulse, but rather from intense research and traveling to various properties. I even did the Greyhound route, complete with some guys smoking dope in the back of the bus all night. (I said I was broke!) I've lived the whole journey, from lighting with candles and kerosene lamps, to solar arrays and plenty of storage batteries.

So, if you're serious about beginning your own off-grid life, I've got some tips for you.

## Looking for what you want

Okay, this subject is very personal. You can be off-grid right next to a small town or on the top of a mountain. Obviously, the more remote you are the more private you'll be, and you'll often be safer from a variety



*Both of our off-grid Montana mountain homesteads were quite remote. Remember if choosing remote, you'll deal with challenges, mostly by yourself.*



of threats (usually human). That said, many people are not comfortable living with the day-to-day challenges found in doing so. Yes, we lived eight miles from a tiny town with no stores, no gas stations, no stop signs. It was surrounded by national forest land for miles. Beautiful view! But we were snowed in for seven months out of the year. No, you couldn't plow out as there was no place to plow the snow to, due to the trees along the trail.

We had to make sure all our needs were in place before winter set in, including hay for the horses, feed for the chickens, groceries for us, kerosene for lights, propane for the fridge and one gas light, and gas for the snowmobile, our only transportation. Of course, as I had a toddler (son, David), we had to have a good supply of first aid and medications. Just in case. (He was never sick!)

My late husband, Bob, and I were fine being isolated, both summer and winter, keeping busy with chores and having fun with David. But many people seem to need outside contact, lots of close friends plus activities outside the home. It's a serious consideration. Just how isolated do you really want to be?

I don't mind winter at all, obviously, living in Montana and Northern Minnesota. But some folks are horrified to see temperatures drop down to minus 35 F or even colder. With snow. Lots of snow. Yep, I love to walk the beaches. But I need to have four seasons, where some people can't even think about it. Be sure before you get lured into cheaper land somewhere.

Right now, with land prices skyrocketing, a lot of potential off-grid-ders are moving or thinking about moving to the Southwest desert or at least more arid locations. Land is cheaper there: Utah, Arizona, parts of New Mexico, and Texas. But the reality of living there is tough. Water is a huge issue, with some wells going down 3,000 feet and well drillers



*This is our remote mountain cabin in Montana the first winter we were there. Not a thing of beauty, but it was a start ... and paid for.*

charging a lot per foot. Then, you've got the reality of growing food there. Yes, you can catch rainwater from your cabin or house's roof. But, hey, it's the desert and it doesn't rain all that often. With the summer heat and wind, your garden will soak up lots of water to even survive. Yes, in many areas, there are water trucks that will bring water to you for a charge. But many people moving to these locations are doing so to become less dependent on outside services, not more.

And if you're planning on having even minimal livestock, say a goat or two, you'll need pasture to feed these critters. The desert has no pasture. I've been places where it takes 100 acres to feed one cow ... a very thin cow, at that.

When you live off-grid, you're depending on solar panels and/or a generator for your power. You won't be running an air conditioner. We lived in the remote high plains of New Mexico on a small ranch. Yes, it was on-grid, but we were broke and

there was no air conditioner. Plainly speaking, it was hot. Very hot.

Yes, the mountains are beautiful, and we loved living there, but know that the prices in nearly all mountainous areas have skyrocketed. Much of the mountainous West is out of the price range of most homesteaders. (You can't buy just a couple of acres.)

In most areas, a 30-acre parcel is available, but know that it's in a remote subdivided old ranch, bought by investors and split up into parcels for resale. You will usually have neighbors, even if the land is expensive. And you won't be able to choose your neighbors. That's one reason we left — too little land and too many undesirable neighbors.

Hey, I had to go to court to testify in a murder case that happened right across the valley from us! Is that undesirable enough?

In some parts of the West, there are mining claims for sale in the mountains. We lived on one, surrounded by National Forest. But also know they are often in very steep locations. This

means very tiny, relatively flat building spots and gardening can be a huge impossibility.

We are all now pretty aware of flood danger, due to the flash floods in Texas and other parts of the country recently. We always kept that in mind when looking at land. If it had a cabin or house on it, was there any possibility of flooding? That's one reason our house sits up on a pretty tall ridge, overlooking our creek and beaver ponds, instead of being built closer.

Make a written list of what you need and another of what you want. I can guarantee you'll never find the perfect spot for your new homestead. But you can find what you *need*, as well as some of your wants.

For instance, we first needed a good location, then the availability of water, lack of neighbors, pasture for the horses and goats, area for gardens, availability of firewood, and distance from any larger cities by at least an hour. We also wanted some pines, wildlife, a pretty view, and relative access to medical facilities since we knew we'd be helping Mom and Dad as they were elderly.

We got all our needs and most of our wants. We did choose 80 acres with no buildings on it, with a creek and ponds, but it was clear-cut timber company land with no big pines or even other big trees, except across the creek where the timber company couldn't access the woods.

## Where will you live?

Obviously, the best bet is buying a place with some sort of home already in place, hopefully with a well and septic system. A fixer-upper is wonderful. They are usually much cheaper than a nice cabin or house but can be made wonderful with sweat equity. I've done that several times in my life.

Most of the time, off-gridders don't have a lot of money. I know we didn't. But we also did not want to be

in debt. We chose cheaper land which could be developed. Unfortunately, with no buildings, we had to have some place to live. As we'd sold our home in Montana, we had some cash to work with. We put nearly all of it into the new land, having a small mortgage.

No, we couldn't have a house built. No, we couldn't buy a mobile home (which I hate). Instead, we bought a \$500 fixer-upper trailer and a cheap old 8x8-foot fishing shelter to attach to it as an addition. The trailer's furnace required power to run it, which meant running a generator 24/7, obviously a no-go. With the fishing shelter add-on, we were able to put a propane wall heater in so we could keep warm. (I got some old couch cushions from the dump and stuffed them between the closely parked fishing shelter and trailer. Ugly, but it worked.)

Just a note: If you plan on living on your bare land in a travel trailer or RV, unless you're living in a very mild climate, don't plan on using things like your shower, toilet, and sinks as you would in the summer. In cold winter areas, your water lines and storage tanks will freeze solid and lines will crack and break. We looked at living in Northern Minnesota in our old trailer as camping in a solid-sided tent. Much more room and convenience than a tent, but you do need to make adjustments because of winter!

Some folks are using shipping containers as housing. Yes, that works but they need a lot of work to turn into a livable cabin. And they are fairly expensive. What we ended up doing, as we had unexpectedly moved Mom and Dad in to live with us, is getting a free older mobile home. Yes, I hate them, but it gave us quick housing that had bedrooms, a kitchen, and a bathroom. No, we couldn't use the bathroom: no septic. More about that later.

As we then had elderly folks to consider, we put in a propane heater in their bedroom and another in the living room. We added insulation under the floor and skirting around the trailer. It was cute when I fixed it up inside and evicted the red squirrels who lived in the ceiling and mice in the cupboards. Not fancy, but we had very little invested.

Another thing that's popular with would-be off-gridders is buying a pre-built (often Amish-built) "shed" to turn into a tiny house. Sure, that's a possibility. But for one thing, they aren't cheap. They also require a lot of fixing up to live in, wiring, insulation, etc. A lot of us just don't have the time. Again, I'd opt for the cheap or free mobile home. You can use it while you build your forever home and get rid of it later. We kept ours for storage.

With a tiny home, there's just no room to store much. For me, it's about storing all our home-canned foods and long-term storage foods. (It took up nearly half of our U-Haul truck to bring here!)

## Look into building codes & regulations before you buy!

One reason we chose this area of Northern Minnesota is that it had very few building codes and regulations. Unlike our place in Montana, which, being a remote subdivision, did have homeowners association rules in place. For instance, you couldn't have pigs and there were a bunch of other rules that many folks disregarded.

In many areas of the country, codes and regulations are very stiff. In Northern Wisconsin, there are places where you have to buy a permit to even *camp* on your own land for a couple of weeks a year!

It's better to research first. Contact the county and township you're looking at as to their regulations *before* you buy. In most places, you do have to have a permit for a septic system or even an outhouse, along with a well



permit. (It's a good idea to talk to neighbors or local well drillers to find out approximately how deep a well in your proposed area might cost.)

In many cases, the more remote areas have fewer regulations. But, like some areas of Northern Wisconsin and Arizona, that's not always the case. Always do your research!

## How much land do you need?

It depends! If you only want to have a garden and raise a few chickens, an acre or two is plenty. If you want to be sure you have your own firewood or have plans on having larger livestock like goats or cows, your needs are much larger.

As before, consider your location. In the desert, you won't have any pasture or firewood, no matter how large your property is. In some areas, you will seldom be able to afford a large acreage, no matter how much you like it.

I've always had horses and will until I die. We also want to be sure we have pasture for cattle and goats. Then there's our huge garden requirement. We now own 200 acres: unlimited firewood, good pasture, as well as privacy. But we sure couldn't afford it all at once. Over 24 years, we slowly bought one 40-acre parcel, then another, then another. Yep, it took patience and hard work to be able to afford it all and fence what we needed to.

I've heard it said that you can raise all your own food on an acre of land. That's pretty much untrue. Especially if you have chickens or any livestock. There's not enough land for raising grain and/or hay.

Yep, five acres might do it, just like the popular book, *Five Acres and Independence*, wildly popular in the '70s with back-to-the-landers. But, then again, it depends on the location, definitely not in the desert or the mountains. In the mountains, there



*Take livestock into consideration when looking for land.*

isn't enough flat land; it's usually pretty much up and down!

Basically, few homesteaders ever become totally self-reliant. It's a journey, not a destination. We keep at it, striving to become more and more self-reliant but still need cash to pay taxes, buy equipment parts, repairs, health needs, etc. Yes, you can surely earn money through home business or farmers market sales. But few folks ever reach the point of living totally off their homesteads. They just get less in debt, enjoy life more, and are usually healthier because of the lifestyle.

## The basics of life

There are a few basics that all off-grid homesteaders usually need. Among these are bathroom facilities, power, lighting, water, and heat. I'll go at them, one by one, taking into consideration how most of us have handled them.

## Bathroom needs

In most locations, an outhouse is a first consideration, provided that it is legal. Fortunately, we've lived in areas where it was. (Here in Northern Minnesota, in our county, a permit is needed for an outhouse now. When David built his house, he got a permit quite easily and cheaply.) Basically, you dig a deep hole, about four feet by six feet. Dig her deep as it will fill up eventually, necessitating moving the outhouse and covering the hole with dirt.

Will and David lined his with an old fuel oil tank with the ends cut out to keep dirt from eroding into the hole from rain. In most soils, it isn't really necessary though. They dug the hole with our backhoe but, of course, you can also dig by hand. Do be careful as the soil can unexpectedly cave in and bury you!

The outhouse itself is a relatively easy, quick build, with a simple shed roof slanting to the back. Inside,



*If permitted, an outhouse is essential when first arriving at your off-grid land. Here's ours and the generator shed, way up in Montana's mountains.*

you'll want a bench built just knee high. We use plywood. Cut out a hole and attach a toilet seat to it. An exhaust pipe running through the room helps keep odors down. We also keep a five-gallon bucket of pine shavings in there, as well as a small trash can lined with a plastic bag. The shavings are so you can toss a handful in on top of solid waste and the trash can is for toilet paper. We've found that not putting toilet paper into the outhouse hole makes the hole fill up much slower than when you just toss the paper down there. We burn the toilet paper on a rainy day.

When we moved to our current land, it was mid-February so we couldn't build an outhouse as the ground was frozen under four feet of snow. Yes, our trailer had a toilet. But you can't use a trailer's toilet and black water storage tank in the winter as the tank would freeze solid. What we did was line the toilet with a good plastic bag. Then we kept a five-gallon bucket of pine shavings nearby as well as another one with a toilet lid on it for urine. When we deposited solids, we'd toss in a handful of shavings on top. When the bag was getting full, we tied it shut and placed it in a bin outside. The urine bucket we

spread about in the woods and rinsed out. This worked very well. No odor, no inconvenience. When Mom and Dad came to camp with us, we used her bench-style commode and the same bag-and-shavings setup. Come summer, we put up a barebones outhouse.

Even now, when we have a septic system, I have a trash can next to the toilet for toilet paper. I've found that not putting a lot of toilet paper down the toilet helps keep the septic tank from having to be pumped out so often.

## Water

In Montana, we had a good spring on the land. It wasn't plumbed to the cabin but it was plumbed to a frost-free hydrant in the front yard. We did have to carry water, but it was not far nor a big deal as we had an outhouse (and potty buckets for winter and night in the house). To take a bath, at first we just used a big washtub in front of the wood kitchen range. Then I traded a Morgan filly for some merchandise, including a clawfoot bathtub. I heated our water in several big canning kettles on the wood range.

Later, when we moved here, we used a battery-operated shower. I

would heat a nice and toasty kettle of water, drop the inlet into the kettle, and stand in the bathtub to shower. The gray water ran out onto the ground a few yards from the trailer via a PVC pipe.

When we looked at the property, I stopped in a couple of businesses in the nearest town and asked around to see where folks like us could get water as there was no well or obvious spring on the land. I hit the jackpot with an older lady who told us about the Idington spring, located just a few miles from our new land.

In Montana, our spring only ran in the spring and summer. In the fall and winter, we went to the nearest town, which had a fire hall and for-pay water dispenser. For a quarter, we could fill up our 350-gallon poly tank on the back of our pickup. We would drive home and empty it into a 400-gallon poly water tank, buried in the ground, several yards uphill from our house. That worked very well.

In the late summer, we would use our other big poly tank and a 12-volt water pump to go down to the creek and pump water to irrigate our gardens. That was easy and worked very well too.

A water catchment system where you install gutters on buildings and catch water into either IBC totes or 55-gallon barrels works well. Do understand that there are certain areas of the country where water catchment is illegal! The same applies to pumping water from a stream, river, or other body of water. Out west, especially, water rights are a big thing! You can't pump water from some bodies of water unless you have the written rights to do so.

After we built our log house here, we had a well with submersible pump in place and a water line run to our house. However, we couldn't have a normal system as our generator wouldn't be on all the time so there wouldn't always be power to the well pump. Instead, we installed



two 350-gallon vertical water tanks in the basement. The water is plumbed to the tanks with an overflow into the sump, just in case they might overflow. Water pressure is accomplished with a 12-volt pump on the wall next to the tanks. A line runs to our propane water heater. Thus, we have constant water pressure to both the kitchen and bathroom. With a septic system in place, our off-grid home has a flush toilet and hot and cold running water.

I wish I had known about the 12-volt pump earlier. In our last home in Montana, we had enough gravity pressure to take a hot bath but not enough to take a shower. A simple addition of a 12-volt pump and battery in the vanity, under the sink, and we could have eliminated that irksome problem.

### Washing clothes

The first off-grid home we had, I could only wash clothes outside during the warmer months as I didn't have room for my wringer washer indoors. (When you live off-grid, a wringer washer is a godsend. It does the job and uses gallons less water than a modern washing machine.) In the winter, I had to go to town and use the coin laundry, which got expensive, especially when David was in cloth diapers!

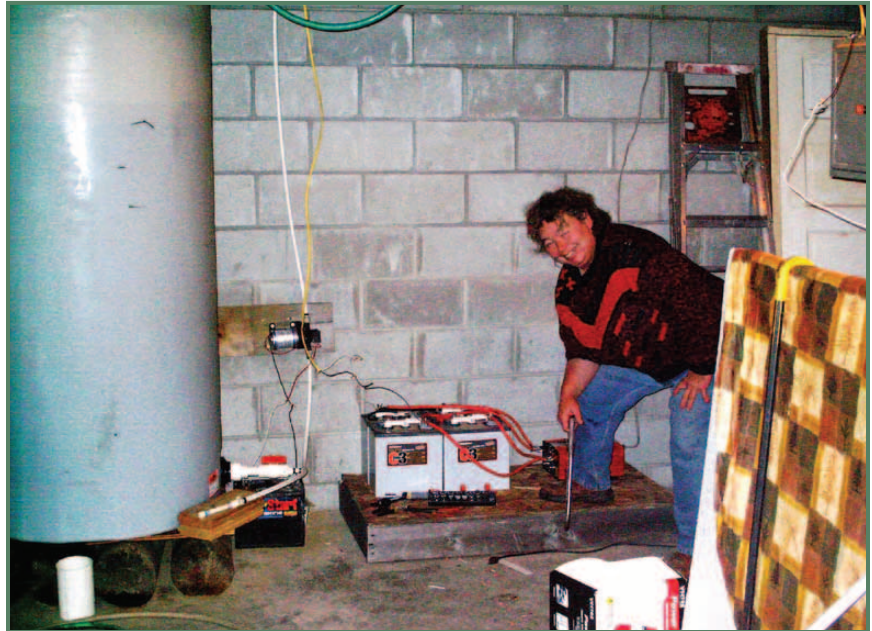
I took that wringer washer to New Mexico and then back to Montana again. Finally, it came here with us back in 2004, where again I used it in the warmer months and ended up at the laundromat in the winter. When we built the house, bit by bit, it went from the basement to the new laundry room. Not only do wringer washers use less water, but they get clothes cleaner.

Although I now have a propane clothes dryer, I also have a nice set of clotheslines right in the front yard. I love hanging clothes and smelling the wonderful fragrance of sunshine and wind over fresh-cleaned fabric.

### Power

When we lived in Montana, we were pretty broke and had to live very conservatively. Some say poor, but honestly, we didn't mind. We had one propane light in the kitchen/living room, plus kerosene lamps and

candles for lighting. On Saturday, we would start the gas generator and while I would wash clothes, my late husband, Bob, and David would watch a VHS movie. I'd make popcorn and we'd have "Saturday night at the movies" while the clothes washed



*Our first vertical 350-gallon water tank, 12-volt pump on wall, and our first tiny battery bank in the basement*



*From one 350-gallon tank, we added a second plus a pressure tank to keep the pump from turning on every time we drew water.*



away. Other than that, because of only having a 55-gallon barrel of gasoline to last the winter, we used the generator very infrequently.

When we moved here, we still weren't rolling in money, obviously.

We only ran the generator some evenings, plugging the trailer into it for power. (We were careful not to keep the generator under the trailer to protect from carbon monoxide poisoning!)



*This is our first set of larger solar panels, which gave us more access to power.*



*Slowly, we added more solar panels. This is our second array. Will is working on a third in his spare time for the panels we have already bought.*

After we built the house, we brought the old fishing shelter down fairly close to the house and ran wiring to it. We usually only ran the generator at night or occasionally during the daytime for washing clothes or some other such power drag. We did not use any energy hogs such as a microwave, Crock-Pot, toaster oven, or television.

A couple of years after Bob died suddenly, my current husband, Will, arrived from Washington state. We had already installed a few deep cycle batteries and an inverter in the basement so we could have lights at night. When Will and I were married, one of our wedding gifts from our friend Tom was a set of three 45-watt solar panels. That was the start of our solar array. Over time, we added one array in the backyard and then another one in the front of the goat barn. Plus a battery charger that runs off the generator power when it's on, and a larger inverter as we now had greater use of electricity.

At first, all of our generators were gasoline fueled with pull starts. All in all, most worked fine for several years. As time passed, we added a backup generator to have "just in case." But as gasoline kept shooting up in price and because gas doesn't store long-term worth a darned, we decided to go to a multi-fuel generator, running off our 1,000-gallon propane tank. We could have chosen a diesel generator, they work very well, but diesel fuel also kept dramatically increasing in price. All in all, we're happy with the change.

Even with all of our solar power, we still don't run even a window air conditioner, except on a few hot, sunny days. Our system just won't handle it. I laugh at some would-be off-gridders who think they'll be using air-conditioning 24/7, plus an electric stove, air-fryer, big-screen TV, and ceiling fans. It just ain't going to happen! You must learn to live with what you have.



## Heat

The most obvious heat for an off-grid home is wood. Honestly, I've never had a house that didn't have wood heat. But, please, as a former firefighter, do not put a woodstove in your camper, bus, or trailer. They cause a whole lot of deadly fires. Yes, you can safely install a tiny woodstove in *some* small spaces. But those small stoves require adding wood very frequently. I'm talking about every hour or so. They just aren't worth the effort.

Instead, use a propane heater for those spaces, whether it be a UL-listed unvented wall heater or vented heater. This is why we added the old fishing shelter to our travel trailer, so we would have a wall to hang it from, as the trailer had no wall space without a window above it.

When you put a woodstove into your cabin or home, please choose a large enough stove and install it properly, according to the manufacturer or online specifics. These are not "suggestions," they are necessities for safety. We always use double wall pipe through the ceiling and above, with single wall below it.

Behind and opposite both sides of our living room stove, Will built a stone wall. Not only is this for safety, but the stone absorbs heat during the day and releases it at night. In our cold country, that's a big bonus!

As we're real preparedness freaks, we try to have at least two years' worth of firewood under cover, come winter. This wood is all cut from dead wood from our homestead. We begin storing up wood as soon as spring comes. (In Minnesota, we have two seasons, winter and getting ready for winter!) All of our wood is split and stored up as dead, dry wood. Yes, green wood can burn. But it takes a lot of BTUs to get that wood dry enough to burn, so you end up with less heat from that green wood. Plus, green wood can make a lot of creosote buildup in the stove pipe and



*For safety and heat retention, Will built a stone hearth and surround wall for our woodstove in the living room.*

chimney. So does burning pitchy wood and shutting down the draft in the stove overnight. In Montana, all the firewood we had was Ponderosa and Lodgepole pine, scavenged from logging sites all summer. We had to burn a very hot fire every morning to keep the stove pipe and chimney clean. We still do as we burn about anything that makes smoke. When we clean out our stove pipes, there is no creosote in them at all, just a light dusting of soot. Trust me, you do not want a chimney fire! I've had a couple, and they were doozies. One was not from a wood fire, but a fuel oil furnace that malfunctioned. The other? My fault. I didn't clean out the chimney often enough. Lesson learned.

Just a note, we always keep two fire extinguishers handy, plus two chimney flares right by the woodstove, which will put out a chimney fire. Just in case.

Not only do we have a woodstove in the living room, which heats our

whole two-bedroom house, but we also have a wood kitchen range, which I absolutely love. In very cold weather, we keep that one going as well as the big stove.

For normal everyday cooking, I usually use our propane stove as well as our propane refrigerator. We do want to add a propane wall furnace, just in case we have to be away for a while in the winter. After Will's heart attack, that became a very good idea, as it was in February.

I hope this has given you food for thought. Remember, being off-grid simply means not being hooked up to the power company's grid. You can choose to be as rustic as you want or need to be. We've done that. You can eventually have all the conveniences like lights, running water, flush toilets, television, and computers. We do now. But we worked at it, little by little. It's important to have patience and fortitude throughout the process. If you do, I can promise the best life has to offer. Δ

# Letters

We welcome readers' letters. We may use your letter in whole or in part, depending on space. Please send your letter to [letters@backwoodshome.com](mailto:letters@backwoodshome.com). — **The Editors**

## Improves my life

*Every issue has something that improves my life! I don't homestead. The Lord sent me to a high desert mountain area, but in my little suburban home, I enjoy gardening, cooking, baking, and DIYing with you all. Thanks for supporting my lifestyle. Every page is enjoyable.*

**Chris Dutson**  
Herriman, Utah

## Huge variety of subjects

*I really enjoy this magazine, the huge variety of subjects, and even tried my hand at rendering ham fat! It turned out nice and I actually use it. I have to pace myself reading the magazine though. Keep up the great work!*

**Dee Corey**  
Enoch, Utah

## Solid information

*I have never liked a magazine so much. Please don't add any advertisements. I will pay much more to keep ads out. Your magazine is jam packed with solid information and it feels like I'm reading a real book each issue!*

**Greg Matson**  
Grand Rapids, Minnesota

## Free master index of articles

*I have been a subscriber of Backwoods Home Magazine and Self-Reliance for years. I love them immensely and have learned so much. I am in my late 60s and hubby is in his early 70s. We started a new homestead of sorts two years ago. Broke*

*new ground with the help of our children and grandchildren. We only have chickens but we do plant a garden every year and I can my own food or freeze it. I wish I had discovered homesteading when I was younger. However I am thankful for what the Lord has provided in our golden years. I would love to have the master index (of previous articles) to help me find things easier. I have one of your anthologies too. Thank you for this wonderful resource.*

**Cindy Hotchkiss**  
Willow Spring, North Carolina

A digital master index is available free. Contact us at [customer-service@backwoodshome.com](mailto:customer-service@backwoodshome.com) and we'll email it to you. We do not offer a paper copy of it. — **Sam**

## Firearms knowledge

*Enclosed is my check for a two-year renewal to Backwoods Home. I do enjoy every issue and read them from cover-to-cover. I like the recipes, jokes, how to build things, and the self-reliance articles. I really look forward to Ayoob's firearms articles. I am a retired federal law enforcement officer and his knowledge about firearms and safety are excellent.*

**Dewey K. Barton**  
Bartlett, Tennessee

## Slowing down, love the life

*We love your magazine and anthologies — have every one of them. We can't do as much now (both of us in our 70s) but would not have missed any of it. We have been married 60 years now and are slowing down, but love the life.*

*I learned to butcher and preserve livestock. I could do a 2,000 pound cow by myself in 6 days from start to finish. My husband used the tractor to elevate the cow for me to skin and gut it, then I deboned and freeze dried, smoked, and canned the meat. I now need help, but for years I did it alone.*

*We did our own hay, just the two of us. We now let the (much younger) friend down the road do it and we split the hay. We love the ranch and the animals. I still garden and can, dry, and freeze the food. Thanks for the help.*

**Eileen M. Bisson**  
Philomath, Oregon

## Thanks for Vlad the Ratter

*You guys are just sneaky. I was going to just keep up Backwoods Home and let Self-Reliance go (since they are similar and I'm 84 years old and will never make it out of town but thought Self-Reliance might have more stuff for stuck in town folks) but then you did the Vlad story (Issue #40, Spring 2026) and I'm hooked!*

**Kathleen Smith**  
Palm Beach Gardens, Florida

## Concrete and cement

*Love your magazine. We've been subscribing and reading for many years. Have one favor to ask. Please inform your writers of the difference between concrete and cement. Cement is a bonding agent. That's why model airplane glue is called rubber cement. The bonding agent in concrete is Portland cement. Concrete is aggregate, sand, Portland cement, and water (in varying portions depending on the mix required). There are mixes other than concrete that use Portland cement, such as flow fill, mortar, etc. There is no such thing as a cement patio, a cement foundation, or a cement sidewalk; they are all concrete.*

**Diane Nash**  
Kiowa, Colorado

## Science of Death & MAID

*I have read the article by Jaeger Everett in Issue #203, Jan/Feb/March 2026 and the article by Massad Ayoob in Issue #204, April/May/June 2026.*

*I subscribe to both Backwoods Home and Self-Reliance magazines.*



*I look forward to all the articles pertaining to my homesteading. I have learned many things that have made my homestead more valuable. Some articles I can't use because my wife and I both have Alpha-Gal which means anything pertaining to cows, pigs, goats, etc. we can't use, but recognize their value to homesteading for other like-minded people. From articles about bees and poultry and general homesteading we have learned much.*

*You mentioned in your editorial in Issue #204 that you don't serve just "plain vanilla" in the magazine. I find the various articles on prepping and homesteading to be valuable and not "plain vanilla" but rather are the reason I subscribe.*

*I found no value in the article by Jaeger Everett and minimal value in Massad Ayoob's article. I would prefer Mr. Ayoob go back to writing about weapons and self-defense ...*

**Stephen Kelly**  
*Marshfield, Missouri*

*I have been subscribing to Backwoods Home Magazine since around the start of the pandemic and I welcome the articles on death and dying. They are as relevant to modern homesteading (and life in general) as bread recipes or how-to articles. I also love that you have taken a strong stance against AI generated content. It is great to support a publication full of real content by real people.*

**Erin Fisher**  
*Charlotte, North Carolina*

*I read with much interest Massad Ayoob's view regarding Medical Assistance in Dying (MAID).*

*Prior to giving my view, let me say first off, this is not a pick up my ball and go home pout party. Nor is it meant to be a jab at Mr. Ayoob. Dissenting views are critical to a well-balanced society. I will never revoke a subscription(s) because of one article. There are way too many*

*useful and helpful stories in your magazine to cancel over one disagreement. As Mom would have said, "Don't cut your nose off to spite your face."*

*Regarding Mr. Ayoob, I highly respect his writings and his teachings. Many tides have risen and fallen since taking a high liability course under him at the Florida Public Safety Institute. Subsequently, I became an instant fan and continue to be.*

*Now for my dissenting argument against MAID. In the Book of Genesis, God called Adam to have dominion over the beasts of the earth, fowl of the air, and fish of the sea. In such, God charged man to respect and be good husbandry men of his animals. I agree that to be a good animal caretaker, one on occasion must take the life of an animal that is terminally ill or suffering in great pain. I personally know of no decree where man has been called to have dominion over another person. Or legally take one's life unless they are in fear of great bodily harm. "Thou Shalt not Kill."*

*Knowing there are states in the USA that allow MAID, where does it stop? In Canada MAID is lawful. However, there are also reports that MAID is offered without a doctor diagnosis. Will America follow this trend? I.e., you're old, feeble, and/or no one cares about you. Wanna try MAID? NOT TODAY!*

**David Rigdon**  
*Crawfordville, Florida*

*Regarding the dissatisfaction some addressed to the "Science of Death" article, I truly must add several words of reality. When we each look into the mirror, we are viewing someone who is actively dying. If you are born, you will die. This is a true statement. I am a retired BSN, RN who worked 25 years as a Critical Care Nurse in a large Level I Trauma/Burn Intensive Care Unit. I was present at many deaths which sadly could not*

*be prevented due to extensive injuries. These injuries included large burns, multiple gunshot wounds, motor vehicle accidents, stabbings, drownings, and massive falls. Unfortunately many were young people who should have had long lives, as well as adults of all ages. We had immense support for families as the patient's life was not to be. Having supported many families who experienced a loss, I am honored to still be contacted by them even 20+ years later. Yes, death is sad and heartbreaking, but preparing for the inevitability can often decrease the pain each of us experience. Life and death are both sciences we should all be informed about.*

**Beth Cooper**  
*Trafford, Alabama*

*We have really enjoyed the magazine this last year. I actually subscribed because we live in the suburbs and I wanted my kids to at least be familiar with homesteading concepts.*

*So imagine my dismay when only after I handed the magazine off to my 10, 9, and 8-year-old children, I later learned that The Publisher's Note and My View were writing in support of MAID. I have a problem with that for a homesteading magazine!*

*The magazine is supposed to be family/kid friendly and focus only on homesteading topics. If I wanted to learn more about MAID, I've got all the internet to do that. The magazine is supposed to be a collection of information that would be hard to find online. That is what sets you apart.*

*Yes, death is a part of homesteading. But, it is a far stretch to include suicide in this sort of magazine.*

*I'm very disappointed in this decision to publish that article and I will think twice before renewing my subscription.*

**Jessica McCully**  
*Elyria, Ohio*

*I am a long-time customer and just read your Publisher's Note regarding an earlier story on the Science of Death. You may have lost a few customers by printing that story, but I wanted to say that my family found that article very interesting reading on a subject that I have not seen covered before. I thought it was handled sensitively. I hope you are encouraged to continue to print interesting stories ...*

*Nancy Moysiuk  
Toronto, Canada*

*Just read the article My View from Massad and couldn't believe the 180 degree turn this magazine just took! It's quickly become liberal propaganda. Wow. You're now advocating Doctors playing God by helping people kill themselves? Really? God decides when our life ends, not man. Sure people put down animals, but God gave man dominion over animals, not other men. It's a shame you just couldn't focus on home-steading info. What's worse is you defend it and say if you don't like it just skip the article. Well I'm skipping the magazine. Duffy was a class act, so it's too bad you went with Massad. He should stick with what he knows: guns. It was good while it lasted. Please cancel my subscription. Not looking for any refund. Just stop sending this magazine to my house.*

*Terry Smith  
Smithfield, Virginia*

*Thank you Backwoods Home and Massad Ayoob! Massad, your editorial on Medical Assistance in Dying is spot-on. I have worked in the medical field for over 40 years and have often wondered why we are so compassionate to our animals and inhumane to people. Maybe one day this will be in every state and if the need arises, I will have that choice. I think how much better it would be to have a "family and friends celebration of life" while I am still alive and then*

*go peacefully to sleep. Again, thank you for printing this.*

*Adena Moore  
Mount Airy, North Carolina*

*I am sending this email to comment on the article "Science of Death." I have enjoyed Backwoods Home Magazine for years and have gotten gift subscriptions for many of my family and friends. I am sorry to say that I will not be renewing my subscription.*

*It is your right to publish any article that you want in your magazine. I still enjoy the magazine, but as an older subscriber I really don't need to be reminded what is going to happen when I pass away. Think of the person who has a terminal illness that enjoyed reading your magazine and was excited to get it in the mail to find out how their life was going to end. In today's world that is all you hear about in advertising is illness and dying. Your magazine was one thing I could count on and be able to read that didn't remind me that I do not have that long to live and the details of death. I really didn't understand the reason for the article ...*

*Donna Mack  
Homer City, Pennsylvania*

*I couldn't believe my eyes when I read last issue's Publisher's Note, Issue #204, April/May/June 2026 saying folks were canceling their subscriptions over Jaeger Everett's article on the science of death. Listen, y'all, if you don't want to hear about death or anything other than whatever you consider "allowable," then go subscribe to NambyPamby's Magazine of Gentle, Non-offensive Pursuits. But this is Backwoods Home, where we understand that death is as much a part of life as anything else we do on the homestead. Good on you for standing by your writers and not giving in to a few whiny ol' readers or doing some stupid apologizing. Y'all done nothing wrong, and*

*Jaeger's article was informative and good reading. I look forward to reading more from him in the future.*

*Judson McKinley  
The Ozarks*

*I want to thank you for your magazine. I have been an off and on subscriber for one or two decades and I know in life that sometimes we have to agree to disagree and we will have different viewpoints, but I was sad to see the article on My View about medical assistance in dying. I know everybody has the freedom in what they want to believe in, but from a divine creator stance believing there is a God of the universe and his Word as truth myself and I'm assuming other readers definitely do not believe in Sam Duffy's or Massad's view on this subject ...*

*... It is a very slippery slope which we can learn from history even if one is not religious, when man starts to play God in taking a life or allowing someone to take a life, like Nazi Germany and other examples of people being exterminated because of race, religion, Down Syndrome, and the list goes on.*

*David Sanchez  
Tyro, Kansas*

*Regarding the magazine article My View by Massad Ayoob on Medical Assistance in Dying in your April/May/June 2026 issue.*

*I am sick in my heart that he would classify people to be treated like animals. I feel he has taken advantage of your magazine because it is about animals and nature to spread his false information and private feelings. I am shocked that your magazine would even publish this type of filth.*

*Anne M. Freye  
Pardeeville, Wisconsin*

*I'm one who disagrees with Massad Ayoob's article MAID in Issue #204, April/May/June 2026, but perhaps for different reasons. I should note that*



I'm a big fan of Massad, and have watched hours and hours of his videos on self-defense and related topics. He is a straightforward, clear communicator and I've found him very helpful. (As an ex-military man, I just resonate with his no-nonsense style.)

I would like to share a few thoughts for your consideration, in the spirit of **not** "freaking out" and immediately cancelling — which as you well know tends to be the default these days.

**The science vs the morality of death.** I resonated with your comments that, "We don't wanna see that" is a poor reason not to talk about death. Our forebearers were far more familiar with it as it was literally part of survival, and our more sanitized modern world could do with some understanding of "the way of things." That said, using those objections as the justification for why folks would disagree with your printing in favor of MAID conflates the two. What happens when someone dies is one thing. Whether we should partake in that process is quite another. That doesn't change your editorial prerogative. But don't lump all dissenting readers into one bucket.

**"People upset means we're right."** You said in your note that readers leaving "confirm[s] my belief that we're publishing the correct content." I'll say a bit more about content below. For here I'll just point out that it is most certainly not the case that making people mad is a validation of an argument or position. I've seen liberals literally rage at MAGA. I've seen MAGA literally rage at the left. To state the obvious, it doesn't make them both right.

**Arguments in the article.** As I said, I have a lot of respect for Massad and his clear speaking. I think that's what made me even more disappointed that this piece came from him. This note is already long, and my intent is not to write a philosophical critique; but a

few things stood out which I hope you will at least appreciate as a writer:

1) Lots of people do it. Massad said exactly this: "Many countries allow it" and then took the time to list them and note how long it had been going on (of note, something the article argues should be "natural" has only been legal **anywhere** for around 100 years — which is a blip in human history). The simple point here should be that how many people do something can never be the standard for whether it should be done. Almost the entire world practiced slavery for millennia. I've lived and worked in the developing world and different cultures, and there are things there that are widely accepted that would cause any BHM reader to cringe.

2) We do it for our animals too. He ends with this almost as an aside, presented as if it should be obvious. What should be obvious is that people aren't animals. I know that's a moral statement in itself and one you and others might disagree with. I would simply ask questions like, "If there is no difference between people and animals, why don't we eat people?" Or "Why don't we keep herds of people in barns so they can be beasts of burden?" (On that last question, many of your readers might point out that there are places in the world where that does happen — and we condemn it.)

3) "Almost all will require a confirmed medical diagnosis that natural death is likely within six months." To this I will just say that this was almost always the case anywhere MAID was initiated. But it's not anymore — almost to the point of Massad's statement being false. The Netherlands, Belgium, Spain, Luxembourg, Switzerland, Austria, Italy, Canada, Colombia, and Ecuador all allow it for non-terminal patients. Beyond just physical suffering, The Netherlands, Belgium, Luxembourg, Switzerland, Colombia,

Canada, and Spain all allow it for mental health reasons in non-terminal patients. (On that point, I have personally counseled individuals who struggled with suicidal thoughts. It is horrifying to me to think of them going to a doctor, saying they'd like to die because their suffering was too intense, and get the answer: "Ok.")

All that is not to convince you one way or the other about MAID — only to point out that the arguments in Massad's article are in spots simplistic and incomplete — or at least have very valid counter points.

**Good journalism, and BHM's purpose.** The beauty of America is that if you want to publish a magazine that brings homesteading wisdom and advocates for particular moral perspectives, then you can! Free exchange of ideas is the beauty of our system. I would just humbly suggest that if you choose to go that direction, you consider giving voice to countervailing opinions to let folks think about the issue from both sides. That's 100% your editorial decision, of course! (And from what I've seen, if you did allow both sides, BHM does a good job keeping it civil.)

There is SO much good information you have to offer — information that's helpful whether your readers are Christian, Jain, Wiccan, or atheist. Personally, I don't know why hot button issues need to even show their face. Even as a strict business decision — BHM is a good source of info, but not the only source. Why drive people away for the sake of an issue? Again, your call, and the beauty of the systems. But we have X and Facebook for that (well, Facebook for us old people).

If you have finished this, I want to say a hearty thank you for the courtesy. You're a busy man and there are a lot of opinions. I hope this has been even a small help.

David Sutton  
Fairfax Station, Virginia

# My Back Porch

From the quiet of my back porch  
to the winds of the Atlantic Ocean

**L**ife is always changing. I had intended to retire to the quiet of my back porch, but instead I'm in the middle of the Atlantic Ocean, about a thousand miles from land, aboard a giant yacht with enough sail to cover half a football field. We're smashing through 10-foot swells at 13 knots (15 mph), thanks to a helping 25-knot southeasterly wind. It's more than 2 miles to the bottom of the ocean, and I've never been more than a few miles from shore, fishing from small boats. How did I get here?

My wife Lenie talked me into this trans-Atlantic voyage aboard the *Wind Surf*, the largest sailing cruise ship in the world. It is just shy of two football fields in length, has six decks and five masts and is equipped with computers that unfurl and furl its seven sails automatically, depending on wind and sea conditions. It also has a computer-controlled ballast system that shifts a million liters (264,000 gallons) of water between starboard and port to keep the yacht from leaning more than 6 degrees. Otherwise we'd be heeled over 20 degrees or more and holding on. Lenie has taken this same voyage by herself the last two years, and this year I decided to see if her tales of adventure mixed with relaxation were true.

They are! Despite my apprehension of going on my first cruise ship for a 14-day crossing of the Atlantic, my mind has been expanded by the immensity of it all — the sheer size of the ocean, its calmness followed by its fury, the mental exhilaration of being immersed in a world I've never experienced. I'm enjoying it all.



Elaine Eagle sings *Desperado* by the Eagles in the *Compass Rose* bar on *Wind Surf*. ([elaineeaglemusic.com](http://elaineeaglemusic.com))

It's amazing how a new experience that totally captivates your mind can produce excitement and calmness simultaneously. I'm a workaholic so I have difficulty relaxing. Playing a game of golf for money (just a few quarters) is the only recreation I've found that settles me down. The sensations of this trip seem to occupy my mind like golf does.



Dave Duffy

My fancy watch whose prime job is to measure distances for golf shots, has a built-in secondary job of monitoring my health by tracking my sleep, heart rate, and breathing. It's been telling me for a year that I'm getting poor sleep, am not properly recharging my "body battery," and have high stress levels. On this voyage it's been praising my "deep, restorative sleep," rejuvenated body battery, and low stress levels.

## Not your ordinary cruise ship

*Wind Surf* is not your ordinary cruise ship. Compared to the large cruise ships with their several thousand passengers and abundant entertainment that often includes water slides and casinos, *Wind Surf* is small. On this ship there are 161 passengers and 210 crew. It is the flagship of Windstar Cruises, based in Miami and owned by a corporation headquartered in Denver.

Windstar refers to its small ships as yachts. Entertainment is at a minimum. Instead there are gourmet meals and the sounds of waves, wind, and passengers quietly conversing. Refreshingly, nobody talks politics. I found myself not reading the news even though I had internet thanks to a Starlink satellite.

Entertainment consists of tours of the kitchen and bridge, lectures on maritime history and seagoing adventure, and music delivered by a handful of singers playing piano, violin, sax, and guitar. I, like most of the other passengers, mainly entertained myself with walks on the decks, naps on the outdoor lounge chairs, and watching and listening to the ocean. I also enjoyed writing this column for my favorite audience. Occasionally, in the late evening, I went to the *Compass Rose* bar at the stern on deck 5, sipped a glass of Casamigos tequila, and listened to Elaine Eagle, a good piano player with a beautiful voice, sing songs from the '60s and '70s. My wife, along with



about a third of the passengers, also took part in trivia games in the lounge. That's about it for entertainment.

The food is more exciting. Good food, served elegantly, often with several courses, is an important part of the voyage. Dinner is especially well done, served in the main dining room, and passengers are expected to dress properly as they dine on fine wine and gourmet food. The ladies often wear pretty dresses and the men sometimes wear a nice jacket with a bow tie. We went on the kitchen tour and met the chef who has published 12 books on cooking.

The passengers have purchased all sorts of ticket packages to take this quiet voyage. Ours included a small state-room with queen-sized bed, gourmet meals, drinks, laundry, and internet, plus some onboard credit each to spend at the ship's store. As luck would have it, the store sold handsome, light, waterproof and windproof jackets similar to my favorite golf jacket I wear at home. We spent most of our onboard credit on jackets for our kids and grandkids.

There are 27 nationalities onboard, and everyone speaks English with an array of accents, but my Boston accent is still unique. Of those in charge, Captain Marin is Croatian, his second in command, Staff Captain Ryan, is from England, Chief Engineer Stanimir is from Bulgaria, and Hotel Manager Onur is from Turkey. The rest of the crew are mainly Indonesians and Filipinos, who are friendly and efficient. They are so friendly, in fact, you think of them as fellow passengers. They serve aboard ship from six months to a year under various contracts.

Our 14-day voyage started from St. Maarten, a 30-square-mile island in the Caribbean, so we had to fly the better part of a day to get there. The ship aimed for Ponta Delgada in the Azores, our one stop before its final destination in Lisbon, Portugal. The first few days had

mild tropical weather so I took naps on deck. My skin, whose rash outbreaks are the Achilles' heel of my body, lay down completely thanks to the mild humidity, salt in the air, the gentle rocking of the ship, and the sound of the ocean sloshing. They combined to totally subdue my overactive mind and restless body, just like golf does.

## Wind cancels our stop in the Azores

I'll fast forward this story to its conclusion. On day 9 of the cruise, two days before we were to arrive in the Azores, the captain announced that 35-knot (40 mph) winds and 4-meter (13-foot) waves made it too dangerous to stop in the Azores, so we headed south to avoid the weather and arrived in Lisbon a day early. That gave us three full days in Lisbon, a delightful city full of walkable streets and friendly Portuguese who hardly noticed the traveling Americans sprinkled among them. We rode their small subway transit system all over.

Then we flew to Boston, where I grew up, and spent two days there riding their big subway system all over, including to my old neighborhood which they are in the process of tearing down and putting up new apartment buildings. The first generation Irish/American families who lived there while I was growing up have long ago been absorbed into America. Then we flew home to Corvallis, Oregon and rediscovered just how nice a small city Corvallis is with its walkable streets and friendly people.

It was an enjoyable and relaxing 28-days, the longest and most unique vacation of my life. We plan to take the same *Wind Surf* voyage next year, with the one stop planned for the Canary Islands rather than the Azores. I'll tell you all about it next year. — **Dave Duffy**



Windstar Cruises

*This is the calm version of Wind Surf. In the middle of the Atlantic, we had it knifing through 10-foot swells at 13 knots.*

# The Last Word

“The female soldier”

By John Silveira

Many women stepped up to aid the Continental Army during the Revolutionary War. They served as field nurses, cooks, laundresses, seamstresses, and more. Some even disguised themselves as men so they could fight as soldiers, and in 1782, a 21-year-old Massachusetts woman named Deborah Sampson did just that; she bound her breasts, dressed herself as a man, assumed the name Timothy Thayer, and enlisted in the Continental Army. Whether she wanted to join the fight against the British crown in the war for American independence, to collect the enlistment bonus, or for some other reason, we'll never know. However, when she enlisted, a local resident recognized her and she quickly fled.

But you can't keep a good woman down. In May of the same year, she disguised herself as a man again, used the name Robert Shurtleff, and once more tried to enlist. This time she succeeded.

Sampson was about 5 feet, 8 inches tall at a time when the average European man was about 5 feet, 5 inches and the average colonial man about 5 feet, 7 inches. Her contemporaries described her as broad-shouldered, plain-featured, and muscular. With her stature, and her disguise hiding anything feminine about her, she was able to join the 4th Massachusetts Regiment. The 4th was an elite light infantry unit that was made up of only the tallest and strongest men.

Over the next 17 months, she fought in several skirmishes alongside her male compatriots who never questioned her true identity. In fact, because of her inability to grow facial hair, many of them thought she was simply a teenage boy who was big for his age. However, during a skirmish against Tories (colonists who stayed loyal to the British), outside of Tarrytown, New York, she was wounded when she took two musket balls in her left thigh and a sword cut to her forehead. Following the battle, out of fear she would be discovered, she tried to refuse medical treatment but was forced by a fellow soldier to go to a hospital where she allowed the doctors to treat her head wound. But before they could treat her leg, she fled. Away from the doctors, she used a penknife and sewing needle and removed one of the balls by herself, but she couldn't remove the other.



Wikimedia Commons / George Graham

*This engraving of Deborah Sampson was done by George Graham. It served as the frontispiece for Sampson's memoir, which was titled "The Female Review: Or, Memoirs of an American Young Lady" (1797), by Herman Mann. The engraving was based on a painting by Joseph Stone and a drawing by William Beastall.*

After treating her leg wounds herself, she returned to her unit. But her leg would never completely heal, and it would bother her for the rest of her life.

It's clear she intended to remain unexposed for the remainder of the war, but a year later her unit was stationed in Philadelphia, and she fell ill with a high fever that put her into a coma. A physician tending to her, Dr. Barnabas Binney, undressed her to treat her and discovered Sampson was a woman. Instead of revealing who she was, he chose to transport her to his own home where she was cared for by his wife, his daughters, and a female nurse.

After she recovered, and with Dr. Binney and his family keeping her secret, Sampson continued to serve, now as a trusted orderly to General John Paterson, until the Treaty of Paris (1783) which ended the war. It was then that Dr. Binney had Sampson deliver a sealed message to General Paterson. She suspected the message was going to reveal to the general that she was a woman. It did. Paterson's reaction was to give her money so she could make it home to Massachusetts. But first, he allowed her to go to the fort at West Point where, though she was a woman, she was honorably discharged by General Henry Knox (for whom Fort Knox is named).

A year and a half after she returned to civilian life in Massachusetts, Sampson, now 24, married a farmer named



Benjamin Gannett. During their marriage they had three children and adopted a fourth. But life was tough, so in 1792 she petitioned the General Court of Massachusetts (the Massachusetts State Legislature) to request the military pay that had been withheld from her after she had been discovered to be a woman. Her petition was approved by the Court and signed by the governor, John Hancock, the man who had been the second president of the Second Continental Congress and whose name is the largest emblazoned on the *Declaration of Independence*. Sampson received her back pay *plus* accrued interest.

In 1797, a printer from Dedham, Massachusetts named Herman Mann compiled interviews he conducted with Sampson and published a book about her life, titled *The Female Review: Or, Memoirs of an American Young Lady*. It contained true and fictionalized events in her life. It was a bestseller in its day and was revised and reprinted throughout the nineteenth century and into the twentieth century.

Also in 1797, she petitioned Congress for a full pension for both her military service and for the wounds she had received at Tarrytown, from which she had never fully recovered. Her petition was denied.

Still trying to support her family in 1802, and not yet 32, she began a year-long lecture tour and spoke about her life as a Continental soldier. She was the first woman in American history to have a paid lecture tour. Charging 25

cents per person (about \$8 in 2026 dollars), her lectures extolled the virtues of being a woman and having children and a traditional family life. But when she finished that part of her lecture, she would disappear from the stage only to return in a full military uniform. She would then perform the complicated and strenuous military drills she had experienced as a soldier in the Continental Army.

In 1804, with the help of Paul Revere, whom she had befriended, she petitioned Congress for a pension, again. In 1805 her pension was approved and she is the only woman to be granted a full military pension for serving in the Continental Army during the Revolutionary War.

Sampson died in 1827, at age 66, from yellow fever. Four years later, her widowed husband petitioned Congress for a pension as the spouse of a deceased veteran. But by the time the pension was granted, 10 years after his wife's death, he himself was also dead and he never collected a cent.

Today, there are monuments in Massachusetts to this woman. These include a life-sized statue of her in Sharon, Massachusetts, where she raised her family, and a plaque, placed in 1906 by the Daughters of the American Revolution, in the town of Plympton where she was born.

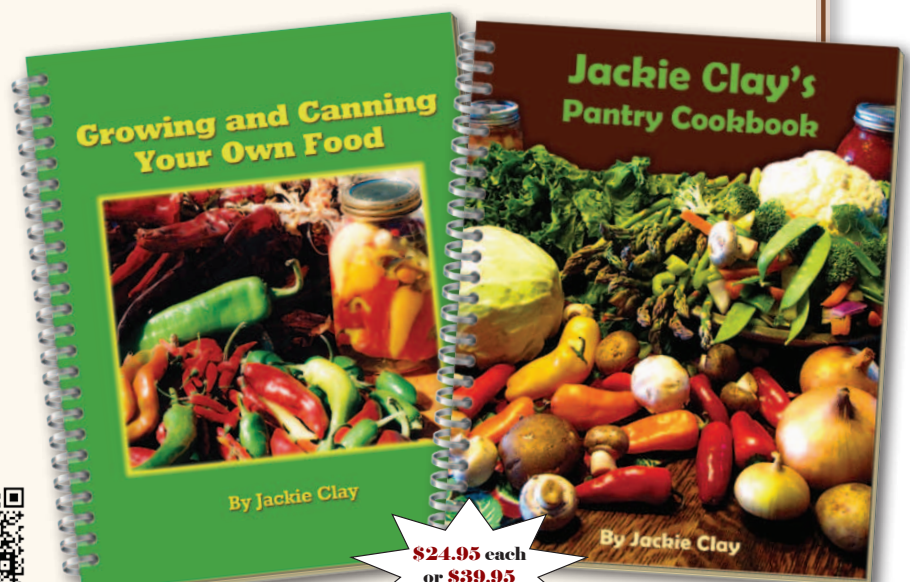
The headstone on her grave, also in Sharon, acknowledges her as Deborah Sampson Gannett, Robert Shurtleff, and *The Female Soldier*. Δ

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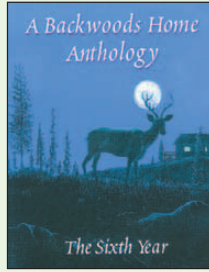
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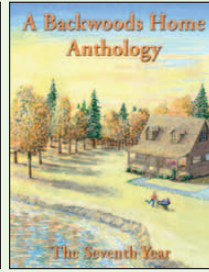
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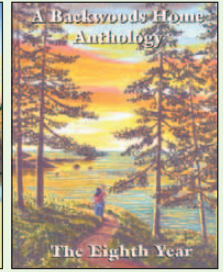
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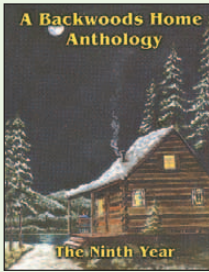
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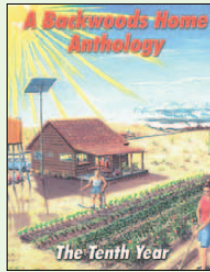
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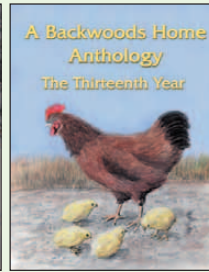
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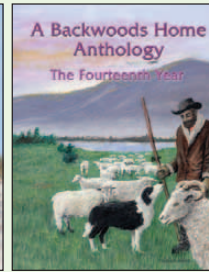
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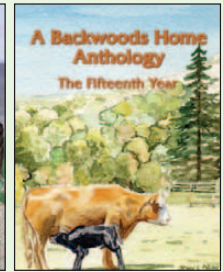
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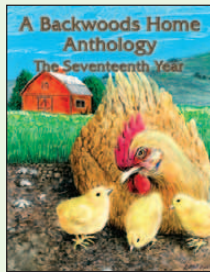
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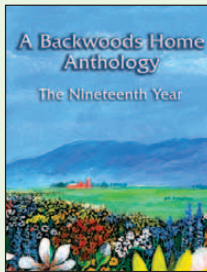
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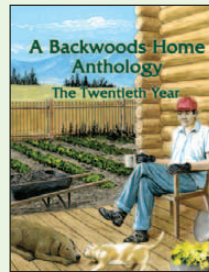
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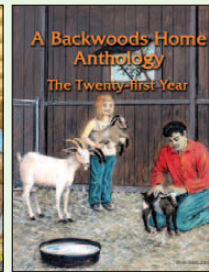
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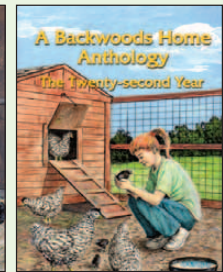
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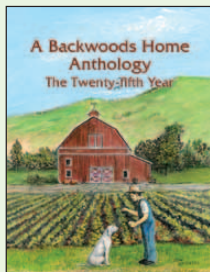
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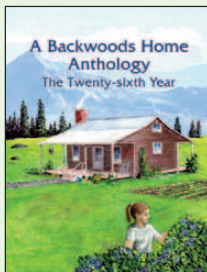
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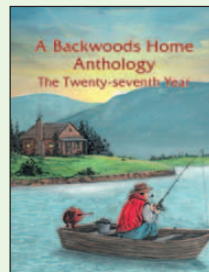
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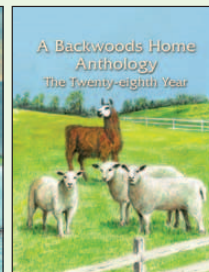
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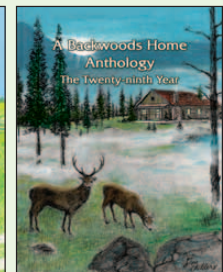
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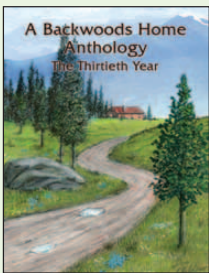
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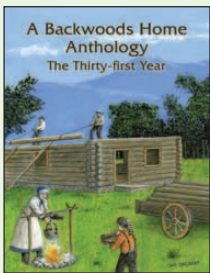
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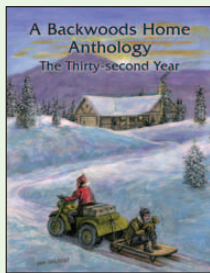
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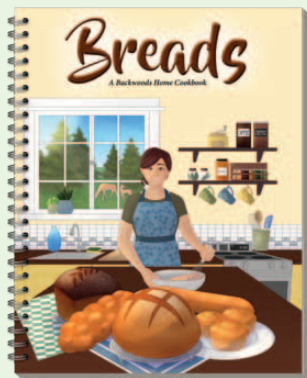
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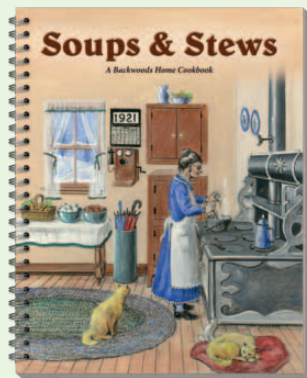
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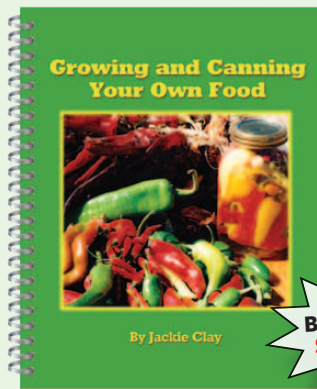
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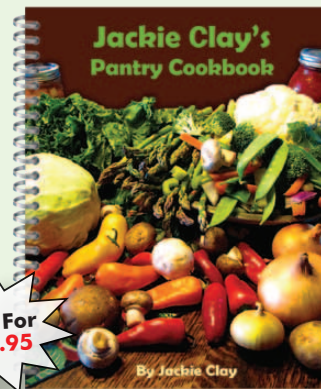
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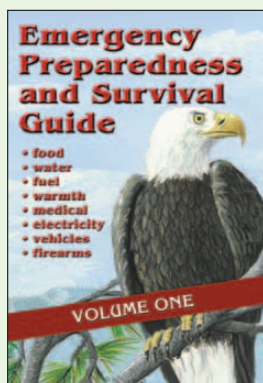
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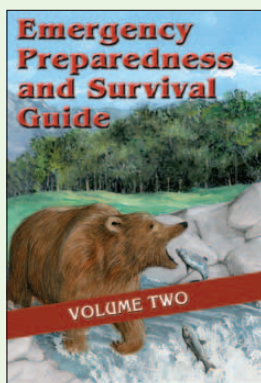
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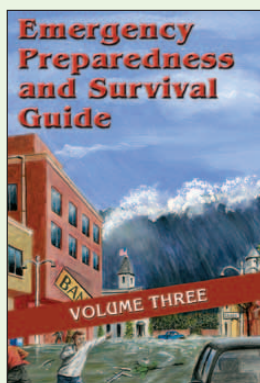
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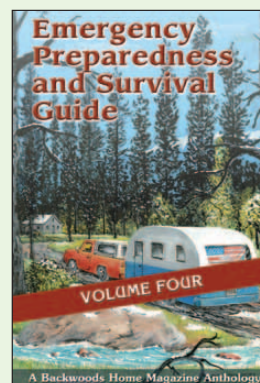
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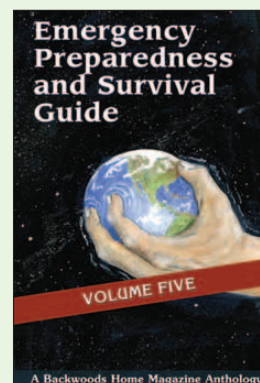
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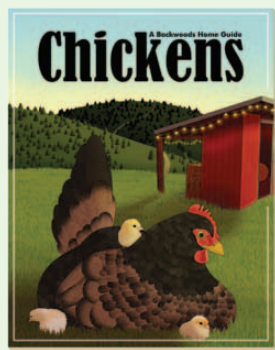
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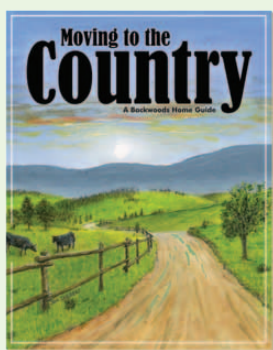
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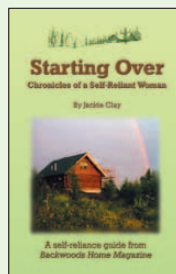
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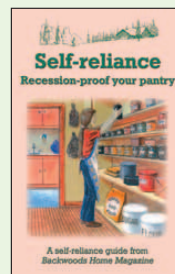
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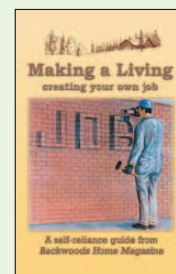
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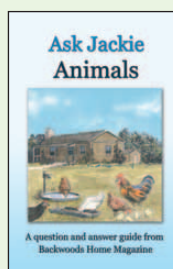
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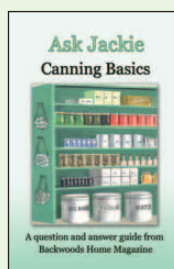
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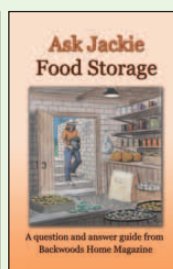
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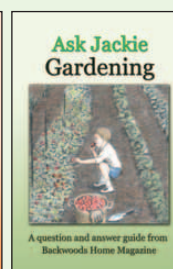
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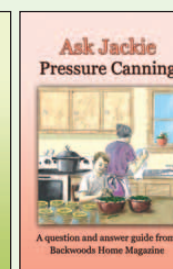
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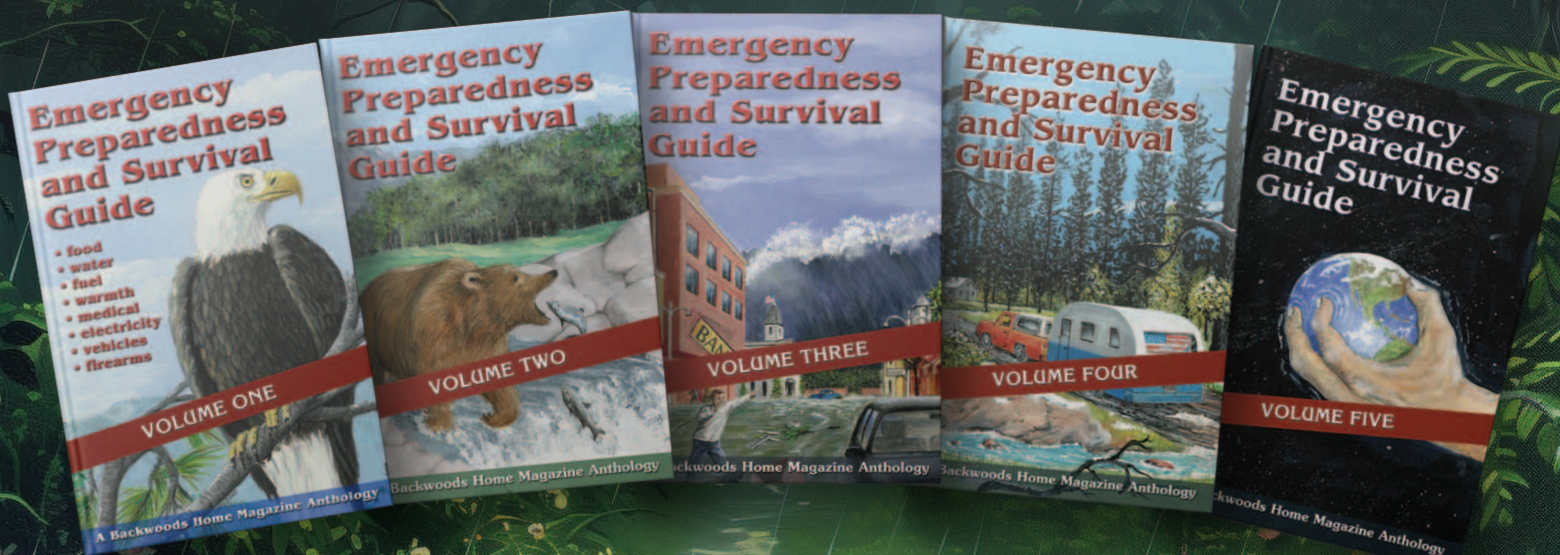
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