

Introduction

A DECADE AGO, my husband, Mike, and I attended an alternative energy conference geared towards individuals who wanted to use wind turbines and make their own biodiesel. A college professor was among the speakers, and during her talk, she suggested that we do simple things like use a clothesline instead of an electric or gas-powered dryer to reduce our energy consumption. An older man in the audience was not happy with her suggestion.

“Why would we want to go backwards? We have all these new inventions to make our lives easier — like clothes dryers. Why wouldn’t we want to use them?”

There was a pregnant pause, and the professor smiled. She said something about making little sacrifices to conserve our resources.

“But if you use a clothesline, your jeans are stiff,” he interrupted.

At that point, she shook her head and sighed. “I don’t know. Stiff jeans or saving the planet?”

It seemed clear that the man in the audience thought the professor was nuts, and he was not planning to go backwards and give up his power-guzzling dryer. Her suggestion made sense to Mike and me, but we do a lot of things that some people consider old-fashioned or perhaps even backward. We produce 100 percent of our own meat, eggs, maple syrup, and dairy products, as well as a good chunk of our vegetables, fruit, herbs, and honey. A lot of people

ask us why we live the way we do. Why do we grow our own meat, make our own cheese, and raise sheep to make our own woolens when we could buy everything we need?

When we moved to our homestead in 2002, it was a challenge to find organic food, and finding organic wool was nearly impossible. The word “sustainable” was not being used in the same sentence as “agriculture,” and the word “locavore” had not been coined yet. After we had been out here for a couple of years, the big corporations jumped on the bandwagon. Organic foods were popping up everywhere in the grocery store, from the chip aisle to the frozen food section. I actually went through a period of time when I thought that if we had only waited a couple of years, there would not have been much need to move out here.

Then the curtain was pulled back on Big Organic, and we started seeing some things that were not so pretty. As big corporations began buying the trusted natural-food companies, ingredients were changed. Overnight, a popular soy milk was no longer made with organic soybeans, and the word “organic” was quietly removed from the label without any other changes to alert the buyer. People continued grabbing the same soy milk carton off the shelf without realizing the ingredients had changed. Months later, consumers discovered they had been duped.

Big cosmetic companies bought natural body care companies and began using ingredients that are known carcinogens and endocrine disruptors. Then I learned that the U.S. government does not require genetically modified foods to be labeled as such. I was once again happy that I was growing my own food and making my own body care products. In fact, the more I learn, the more I know that I will never go back to buying everything at the store.

Health

When people learn about my lifestyle, one of the first questions they ask is, “Did you always eat healthy?” I can’t help but laugh, because when I became pregnant with my first child in 1987, I thought that a cheeseburger with fries was a completely nutritious meal. I had my meat, dairy, bread, and vegetables. Yes, I thought that French fries, a couple of pickle slices, and a piece of lettuce counted as my vegetables. It is a correct assumption, however, that my

childhood somehow affected the person I am today. I hardly went two weeks as a child without being sick. When my first child was born, I started attending La Leche League meetings where I learned that nutrition plays a big role in a person's health. I had suffered so much as a child that I was willing to try anything to protect my daughter from the same miserable fate, so my first step was to begin cooking from scratch.

Even if you change nothing else about your lifestyle, cooking from scratch will reduce the number of artificial ingredients you consume, as well as the amount of fat, salt, and sugar. My philosophy is that if an eight-year-old can't pronounce it, I won't eat it. Would you like a little sodium acid pyrophosphate or dimethylpolysiloxane with your French fries? If you get fries at McDonald's, you are getting those chemicals, whether you want them or not. Some customers might think a Southern Style Crispy Chicken Breast Filet is a better option. It's just a breaded chicken patty — right? It contains sodium aluminum phosphate, sodium acid pyrophosphate, and monocalcium phosphate as part of its twenty-eight ingredients, not including the bun, which has another thirty-three ingredients, such as azodicarbonamide and ethoxylated monoglycerides.¹ Even if you buy similar items in the grocery store for baking or cooking at home, the list of ingredients on the package is quite long. My homemade bun recipe has only four ingredients — flour, yeast, salt, and water. My chicken breast contains only chicken, and my French fries contain only potatoes.

Because the majority of artificial ingredients have not been around for very long, we really have no idea what their long-term effect will be on our health. However, it is highly unlikely that such chemicals are beneficial to us. Although the manufacturers of such ingredients insist they are safe for human consumption, there are plenty of people willing to argue the point. Artificial colors are one example of a food additive assumed to be safe, yet many parents will attest to the fact that consuming artificial colors drastically affects their children's behavior. Manufacturers will say that those children are allergic to the substance, which is not unlike an allergy to a natural ingredient, such as peanuts. However, most carcinogens do not cause cancer in 100 percent of the population. There are smokers who live to be 80 or 90 and never get cancer, but no one disputes the fact that cigarettes are carcinogenic. Who wants to

discover which food additives cause cancer or other diseases after consuming them for 30 or 40 years?

Sodium nitrite has been used for centuries to cure meat, and it is a known carcinogen, but it is still used in processed meats such as bacon, hot dogs, and luncheon meat. Prior to the advent of refrigeration, it was used to cure meats and make them last longer. However, today it is still in use because people simply like the taste of the products it is used to make. The amount of nitrite in meat prior to 1925 was more than three times as much as what is used in modern meat,² so assuming the dose makes the poison, the government deems modern cured meats safe. Although today's level of nitrite might be safe for an occasional treat, what is happening to those people who eat three times as much bacon and ham as people in the earlier part of the 20th century? They are consuming a level of nitrites known to be carcinogenic.

People assume that all food available for purchase is safe. However, according to a 2002 study, 40 percent of chemical food additives are known to cause cancer in one or more species of rodents.³ Furthermore, most food additives are not even tested to see if they cause cancer, especially ingredients that will constitute a small percentage of the final food product.⁴ People are just now starting to question the logic that the dose makes the poison, because scientists have realized that people are developing cancer based upon exposure that was "generally regarded as safe."

Within the past decade, we have learned that even unimaginably small levels of chemicals can affect the human body. In fact, bisphenol A, or BPA, a chemical used to make hard plastic containers, has been shown to leach into both food and drink. After 50 years of being used to make food and beverage containers, including baby bottles, dozens of studies were published in the early 2000s linking it with cancer, diabetes, and hyperactivity. In 2008, Canada became the first country to ban BPA in baby bottles, while the plastic industry continued to insist that the product was completely safe.⁵ Today we know it is also an endocrine disruptor, which means it has a negative effect on the endocrine system, which includes things like your thyroid and pancreas. What else will we learn about BPA before it is no longer used?

The synthetic food additive tert-butylhydroquinone, or tBHQ, was approved by the FDA in 1972, and is used in many foods as a preservative,

which is not always listed on the label. After more than 40 years of assumed safety, there is now a growing body of research that shows a link with common food allergies. When tBHQ is added to cooking oils, nuts, and wheat products, such as crackers, waffles, and bread, the body sees the food as an enemy that needs to be attacked by the immune system. It causes T cells in the body to release a type of cytokine that is associated with allergies. Not only have researchers seen this happen in laboratory models, but also the rise in food allergies, as well as the severity of allergies parallels the expanded use of the chemical.⁶

There are several drugs that can be used in dairy animals that have no withdrawal time, meaning that a dairy farmer can give the drug to a cow, milk her, and sell the milk without waiting for any time to pass for the drug to get out of her system. I realize that these rules are made based upon evidence that shows it is safe to consume milk from a cow that was treated with these drugs; however, I personally have a hard time believing that there are no drug residues in the milk of an animal that was given a drug. When one of my dairy animals needs a drug, I double the time required for withdrawal, and if a medication claims to have no withdrawal time, I don't use the milk of that animal for a week. Of course, not everyone will feel the need to be so careful, but that is one of the advantages of having your own dairy cow or goat. You can decide what is acceptable or not in your milk.

If you buy conventional milk at the store, it may or may not be from cows that received rBGH, a growth hormone that increases milk production. The United States Food and Drug Administration (FDA) ruled that milk from cows that received rBGH does not need to be labeled, so consumers are not given the opportunity to decide whether they want milk that is free of rBGH. Even though many areas of the economy are sluggish, the organic milk industry is growing because people are worried about drug residues and hormones in conventional milk.

While most doctors say that the cause of Crohn's disease is unknown, there are a number of scientists, doctors, and veterinarians who believe it is caused by Johne's disease in dairy cows. There is no requirement to test dairy cows for Johne's because it is assumed that pasteurization will kill any pathogen in the milk. However, others argue that Johne's can survive pasteurization.

Regardless of which side you believe in this debate, if you have your own cows or goats, you can have them tested for Johnes and feel good about the dairy products you are consuming.

When I wrote the first edition of this book, I thought it summed up the problems with our food. Three years after the book's publication, however, I was diagnosed with Hashimoto's disease. Basically my immune system had gone rogue and was attacking my thyroid gland. The endocrinologist told me there was nothing that could be done. He said he would watch my lab work and when my immune system had damaged my thyroid gland, I could simply take thyroid hormones for the rest of my life. I didn't like that prognosis, so I started reading.

It turns out that autoimmune diseases have reached epidemic levels. About four times as many people suffer from autoimmune diseases as cancer. What is really shocking is the rate at which autoimmune diseases have increased. Do you know anyone with multiple sclerosis, rheumatoid arthritis, celiac, Crohn's, Hashimoto's, or Grave's? These are just a few of the dozens of diseases that are autoimmune in nature, and I know multiple people with all of these. Ten years ago, I knew no one with any of these diseases. The incidence of Hashimoto's alone has increased to almost five percent of the U.S. population now.⁷

The other thing I learned is that there is a convincing correlation between diet and the incidence of all of these diseases. Prior to my diagnosis, I wondered why there suddenly seemed to be so many people who were starting to follow a gluten-free diet. I thought that much of it was simply that carbohydrates were now being demonized as the culprit in our country's battle against obesity. Although excessive carbs can contribute to obesity, that's not the whole story.

Modern wheat is a hybrid that was developed within the last century, so we are not eating the same grain that our ancestors ate for centuries. It is also not eaten in its unadulterated form any longer. Even flours labeled as "whole wheat" are blends of unbleached flour that were initially separated from the germ and the bran.⁸ Furthermore, virtually all bread today is made with commercial yeast, which was invented in the 1860s and became popular towards the end of the 19th century. During World War II, Fleischmann's created

“active dry yeast,” which did not require refrigeration, and in 1984, they created “rapid rise yeast.”⁹

The focus was always on convenience for the bread maker with no thought as to how these new products — or the lack of natural fermentation — might affect the human gut. Contrary to the popular belief that people have been eating bread since ancient times, there is nothing “ancient” about modern bread. Little more than a century ago, people were grinding whole wheat and fermenting it naturally, creating a sourdough that was easier to digest, using strains of wheat that are almost extinct today because they don’t work well with modern farming equipment. It also contained more fiber and a completely different protein than what is in modern bread.

If people are having trouble with a modern wheat hybrid, should it surprise us that genetically modified grains and other foods will wreak havoc on our bodies? Approximately 90 percent of all corn and soy in the U.S. is genetically modified, and it’s in most packaged foods in the form of corn syrup, cornstarch, soy lecithin, corn oil, soy oil, “vegetable” oil, natural flavors, dextrose, white vinegar, caramel coloring, ethanol, powdered sugar, and more than a hundred other ingredients that don’t look like corn or soy. When I heard that most people with Hashimoto’s and other autoimmune diseases have food sensitivities, I was skeptical. I really did not think I had a problem with any food because I had never noticed a correlation between any foods and symptoms. However, I felt like I had nothing to lose by trying an elimination diet, so I quit eating wheat, corn, soy, dairy, tree nuts, peanuts, and eggs, for three weeks, and as I tried to re-introduce each of these foods, I realized that I did have a problem with all of them except for peanuts.

Fast-forward two years, and it’s been proven again and again that I can’t consume artificial foods like cornstarch made from genetically modified corn, but I can eat organic heirloom corn. Conventional dairy products cause digestive problems for me, but our homemade yogurt or aged raw cheeses don’t cause the same symptoms. After eliminating those foods, my lab tests also improved. Rather than my TPO antibodies increasing as my endocrinologist had predicted, they have actually fallen so low that many would not even diagnose me with Hashimoto’s at this time. Growing our own food and making

meals from scratch has become even more important to me today than it was six years ago when I wrote the first book.

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I've always been interested in working outside, in the dirt. My first job was working at a small farm, out in the fields and at the farmstand. During college, my boyfriend (now my husband) and I had a small apartment where we had a vegetable garden. Little did I know that this would be the beginning of a career in farming for him. My own health issues with a late celiac diagnosis at the age of 26, led me to learn more about nutrition. When I was 36, I decided to change my career from marketing to nutrition. As a nutritionist living on a working organic farm, I think that the majority of our modern health issues are related to how we are currently eating, which is completely mismatched with the diet humans evolved to eat. About $\frac{3}{4}$ of our food intake

is highly processed carbohydrates, industrially produced seed oils and sugar, a far cry from our hunter gatherer days of consuming meat and fish, healthy fats, vegetables, and a little fruit. And while we can't exactly replicate our ancestral diet, we can come close. This begins with cooking from scratch. By using fresh, seasonal ingredients prepared at home, we can take the first step in reclaiming our health. Choosing pasture-based meats, wild caught seafood, organic and seasonal produce cooked in natural fats like butter and olive oil is the best way to start a meal. It's time to value cooking as a skill, return to the kitchen and reclaim our health.”

— Diana Rodgers, RD, LDN, NTP
author of *The Homegrown Paleo Cookbook*,
www.SustainableDish.com

Safety

Even if every known ingredient in our food and food containers could be certified as natural or organic, there would still be questions about the safety of food purchased in stores because of the risk of contamination and food-borne pathogens. The FDA sends out notifications of recalls almost every day of the workweek. Consumers can sign up to receive emails about the recalls, because the media only reports on those that cause large outbreaks of food-borne illnesses, such as those for eggs, peanuts, and cantaloupe over the last few years. Although cooking from scratch may not have saved everyone from

those recalls, those with backyard gardens and hens knew that their food supply was not tainted. In both of those cases, the problem was ultimately traced back to large factory farms.

Many of the recalls occur because a known allergen contaminated a product, which means that individuals with life-threatening allergies are at an especially high risk when consuming commercially packaged foods. Weekly there are recalls of food that was processed on equipment that was also used for a known allergen, such as wheat or peanuts.

Although pesticides, herbicides, fungicides, and other chemicals are sprayed on many food crops during the growing season, approval by the FDA is not required because they are not considered ingredients. The Environmental Protection Agency regulates pesticides and sets limits for residue that they consider safe. Yet, the material safety data sheet for glyphosate, the world's most popular herbicide, does not sound like you are working with a product that is safe to consume. The person handling glyphosate should be wearing rubber gloves, safety goggles, long sleeves, pants, shoes, and socks. If swallowed, emergency procedures say, "Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious or convulsing person." But this product is considered safe to spray on food crops. The irony is that it is an herbicide, which means it will kill plants. With genetic engineering, however, plants are created that can survive being sprayed with glyphosate, such as Roundup Ready soybeans and corn. Genetically modified corn and soybeans account for 90 percent of the corn and soybean crops planted in the United States today, so if you are buying almost any processed food, you are consuming a genetically modified ingredient that was probably sprayed with an herbicide. Corn oil, cornstarch, corn syrup, MSG, maltodextrin, sodium carboxymethylcellulose, and dozens of other corn-based food additives are in almost all processed food. Vegetable oil made from soybeans is also an ingredient in many processed foods, as are other soy derivatives, such as soy lecithin. Soy is a common filler in ground meat and is often listed as "vegetable protein" in ingredient lists.

Some scientists believe that consumption of glyphosate through products made with GMO corn, soy, canola, and sugar beets has led to an increase in

diseases such as “gastrointestinal disorders, obesity, diabetes, heart disease, depression, autism, infertility, cancer and Alzheimer’s disease.”¹⁰ Others believe that it has caused the increase in celiac disease and gluten intolerance because the chemical is sometimes sprayed on wheat to kill it before harvest. One study said that glyphosate can cause endocrine disruption at 0.5 ppm but it is in some sprayed plants as high as 400 ppm.¹¹ Another study showed that glyphosate causes the growth of human breast cancer cells.¹²

It first became obvious to researchers in the 1970s that farmers had a much higher rate of some cancers, although they are otherwise healthier than the general population. Since then, studies from many countries have found that farmers have increased rates of leukemia, non-Hodgkin’s lymphoma, multiple myeloma, soft tissue sarcoma, and cancers of the skin, lip, prostate, brain, and stomach. After eliminating other possible causes — such as increased sun exposure causing an increased risk of skin cancer — insecticides were declared the culprit for the increased risks of leukemia, multiple myeloma, and brain cancer. Herbicides have been linked to non-Hodgkin’s lymphoma and soft tissue sarcoma. An Iowa study showed deaths from non-Hodgkin’s lymphoma to be highest in counties where herbicide use was high. A Wisconsin study showed more deaths from non-Hodgkin’s lymphoma in counties with the highest use of herbicide, fertilizer, and insecticide. Yet another study showed that workers who produced insecticide had higher rates of malignant lymphoma.¹³

A 2004 study showed that children of farmers who apply pesticides have higher rates of several cancers. The study included 17,357 children born to Iowan farmers after 1975 and compared them to the cancer rates for the general population of Iowa during the same time. Researchers found that there were twice as many cases of childhood lymphoma and two and a half times as many cases of Hodgkin’s and Burkitt’s lymphomas. They also had more than twice as many bone tumors and germ cell tumors. The researchers also found increased rates of brain tumors, neuroblastoma, retinoblastoma, Wilms’ tumors, and soft tissue tumors. Even more telling is the fact that the cancer rates were three times as high for children whose parent did not wear chemically resistant gloves during mixing and application.¹⁴

I personally know two farmers with children who had leukemia, yet I’ve never known anyone else with a child affected by leukemia. What makes this

really disturbing is that farmers make up less than one percent of the population, so the percentage of farmers I've known in my life is quite small compared to everyone else.

In January 2008, the FDA ruled that cloned cattle, pigs, and goats can be used for milk and meat in the United States and that no labeling was required. They said that milk and meat from cloned animals was as safe as milk and meat from conventionally bred animals and that it would be impossible to enforce labeling requirements because there were no tests available that could identify an animal as cloned. Although it is highly unlikely that cloned animals are used for meat, because they are still quite expensive to create, they are used for breeding meat and dairy animals. "Because clones would be used for breeding, they would not be expected to enter the food supply in any significant number. Instead, their sexually reproduced offspring would be used for producing meat and milk for the marketplace,"¹⁵ according to the FDA.

When I wrote the first edition of this book, there were no genetically engineered animals approved as food animals in the United States or Canada, but the AquaAdvantage salmon was approved by the FDA in November 2015. The genetically engineered salmon reaches market weight twice as fast as a natural salmon, and developers insist it is perfectly safe for consumption. Critics, however, worry about what will happen if the salmon accidentally finds its way into the wild. There is also the question of how they know it is safe for consumption when there have been no studies of humans consuming it.

A potential problem with allowing genetically engineered meat into the food supply chain is that it could cause allergic reactions. "Recent scientific research has also demonstrated the occurrence of severe allergic reactions to foods to which the eater is not allergic but which include genes genetically

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An animal clone is a genetic copy of a donor animal, similar to an identical twin, but born at a different time. Cloning is not the same as genetic engineering, which involves altering, adding or deleting DNA; cloning does not change the gene sequence. Due to their cost and rarity, clones are intended to be used as elite breeding animals to introduce desirable traits into herds more rapidly than would be possible using conventional breeding.”¹⁶

— United States Food and Drug Administration

engineered into the food from other foods or substances to which the eater is allergic,” according to Dr. Ron Epstein of San Francisco State University.¹⁷

Many researchers feel that genetically modified animals are quite new and that they should be studied long-term to make sure there will be no adverse effects for the people who eat the meat. There is an abundance of headlines about the dangers of genetically modified meat, but there is little evidence, and that is the point, say the critics. Very little research has been done. There are also ethical and religious issues related to genetically engineered meat in the food supply. How would a Jewish or Muslim person feel about eating meat from an animal that had pork genes spliced into its DNA? Should humans be eating meat from an animal that has even a small amount of human DNA in it? Cows, goats, and sheep have been genetically modified with human DNA to produce human proteins in their milk, but all commercial dairy animals eventually wind up as meat. Although none of these animals are in the food supply as of this writing, the field of “pharming” is growing, and these are questions that will have to be answered in the future.

There are genetically engineered goats and chickens that produce a medicinal substance in their milk and eggs. The FDA has approved them and the drugs are being used. So far, the rules say that those animals must be incinerated, buried, or composted at death. However, when genetically engineered animals become more common, it is conceivable that someone will decide to lobby the FDA to allow them to use the meat from these animals as food rather than simply disposing of it.

One area of research that seems to be popular is genetically engineering cows, pigs, and sheep to produce more of the healthy omega-3 fats. It is a well-known fact that people consume a disproportionately large amount of omega-6 fats in the standard American diet. One reason for this is that cattle and pigs are fed diets high in corn rather than being pastured and grass-fed. Historically people had no problem consuming a diet with the proper ratio of omega-3 to omega-6 fatty acids. Instead of genetically engineering animals that might have unintended negative attributes, we could simply go back to eating a more traditional diet.

A new technology called gene editing is increasing in popularity, and the FDA has ruled that gene-edited crops and mushrooms do not need regulatory

approval, so companies are free to sell their products to the public. Gene editing is different than genetic modification because it does not use DNA from other species. The first two gene-edited dairy bulls were born in 2015 after scientists removed the gene for growing horns from the embryos and replaced it with the polled gene from another cow.¹⁸

Scientists are also using gene editing to create pigs that can be fattened with less food, cattle that grow meatier, chickens that produce only females for egg laying, and cattle that produce only males for beef production. Animal welfare is cited as the reason for some of these projects. After all, most farmers don't like disbudding cattle, and the current practice in commercial egg production is to kill cockerels at hatch because the modern hybrid egg-laying breeds don't grow big enough to be a profitable meat chicken. Obviously the bottom line for creating chickens that only have pullets is profitability, as is the motivation behind making pigs and bulls grow bigger faster. The question of safety, however, has not been answered. In fact, the FDA is not even asking the question. They're just assuming that since the genes are only being edited or moved around a little that the resulting food will be safe.

Some chemists are fond of saying that everything in the world is made up of chemicals, and that just because something is natural does not mean it's safe. That is absolutely true. Mercury is an example of a natural chemical that is not safe. However, if you simply look back a couple hundred years, you can see that people used it as medicine. Over the years, however, they began to realize that it was actually poison, and they quit consuming it. When people have been eating something for hundreds of years, it's safe to assume that it really is safe. However, when something has just been invented, then everyone who eats it is a guinea pig.

Although genetically engineered and gene-edited animals are new, and we have no idea what we will know in 20 or 50 years, we do know that scientists have made many mistakes in the past. The chemist who discovered DDT was awarded the Nobel Prize in medicine in 1948, and in 1972 the chemical was banned in the U.S. They originally hailed this new insecticide as a way to prevent typhoid and malaria. But we ultimately learned it is carcinogenic and an endocrine disruptor. It also was responsible for the near extinction of several birds of prey including the bald eagle.

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I like to cook. I've been to culinary school and found that understanding plants as food and how they grow is fundamental to being a good cook. Many of the tastiest varieties of vegetables just can't be found in grocery stores as they don't last long... I like knowing that I am living with as little footprint as possible on this earth. I'm tired of all of the food controversies — yellow number five, GMOs, CAFOs, etc., etc., etc. By being as close to my food source as possible I avoid all of the junk.”

— Amy Manning, Beavercreek, Oregon

Quality

Taste and nutrition are not considered when commercial growers decide which varieties of fruits and vegetables to grow. They look at qualities like yield per acre and whether a specific variety can handle commercial harvesting, storage, and being transported thousands of miles. The same is true for farmers and ranchers who produce meat. They want to raise a breed that has the best feed-to-meat finishing ratio, as well as one that will do well in confinement, where it can be finished quickly and with minimum human labor costs.

Although safety was the main reason I wanted to start producing our own food, nutrition ranked a close second. Research has confirmed that the sooner fruit and vegetables are consumed after harvest, the more nutritious they are, but there is far more to it than simply the amount of time it takes to get from the field to your plate. Handling and conditions during transportation also play a role, because bruising can decrease nutritional quality, as can less-than-optimal temperatures and humidity during transportation.

Many people agree a vine-ripened tomato tastes better than one picked green, but few are aware that the vine-ripened tomato also has more nutrients. Although fruits that produce ethylene, such as tomatoes, apples, papayas, peaches, nectarines, and melons, will continue to ripen if picked green, the vitamin C content will be lower than if they were left to ripen on the plant.

Growing practices also affect the nutritional quality of food. Research has shown that fruits and vegetables grown in soil rich with organic matter and compost are more nutritious than those grown in soils that are sprayed with chemical fertilizers. Commercial fertilizers focus on NPK — nitrogen, phosphorus, and potassium — but plants need far more than the big three to

nourish the bodies that eat them. When cover crops and compost are used to enrich soils, the plants that grow in them will have stronger roots and take up more nutrients. As those natural soil enhancers decompose slowly over time, they continue feeding the plant throughout its life cycle.¹⁹

Precut fruits and vegetables are becoming more popular in the produce section of supermarkets, and although they are still somewhat nutritious, there are several reasons why they are a bad idea. First, as soon as the skin is broken on a fruit or vegetable, nutritional quality begins to rapidly decrease, which may include the amount of antioxidants and phytonutrients available. The rate of spoilage increases as well as the risk of food-borne illness. In an attempt to make these foods safer for consumption and preserve some of the nutrients, they are often treated with preservatives.

If you are growing your own fruits and vegetables, you don't have to worry about how they will handle a two thousand mile trip after harvesting. You can grow different varieties, including some that are better for freezing or canning, eating fresh, or storing in a root cellar. Different varieties of produce have different nutrients. For example, if you are not a big fan of tomatoes, you can get your lycopene by growing and eating red carrots, which you can't find in supermarkets.

If you've ever grown tomatoes in your garden, you know the taste and texture are far superior to store-bought tomatoes, which are picked green and then gassed to ripen. Indeed, according to the National Gardening Association, taste is the most popular reason given when gardeners are asked why they garden, with 58 percent of them saying their homegrown food tastes better and 51 percent saying it is better quality.²⁰ I have yet to find a single vegetable that does not taste better straight from my garden. In fact, there were many vegetables that I never liked until I ate them fresh. People who have only eaten canned or frozen peas or asparagus are often happily surprised the first time they taste them raw, fresh from the garden. Although I had eaten pears from the store, I had no idea that a properly ripened pear would taste so sweet and be so juicy.

Homegrown eggs and meat also taste better than those produced on factory farms. Eggs laid by free-range hens look and taste different from those laid by hens living in confinement. Yolks are darker yellow, and most people

prefer the taste. They even have more nutrients and less cholesterol. The same is true of grass-fed beef, lamb, and goat. And with poultry, you can choose breeds that are known for their superior taste, rather than simply growing the birds that will reach market weight the quickest.

If you are accustomed to eating processed foods, your taste buds have accepted that bitter chemical taste as a normal part of the food you eat. But after eating made-from-scratch foods for a few weeks, the processed foods will not taste as good as they once did. You'll start to notice an odd after-taste, and they will seem overly sugary and salty. Your taste buds will become more discerning. After a speaking engagement a couple of years ago, a woman approached me and said that after her family had stopped eating fast food for a few months, her daughter was begging for a milkshake from a specific fast food establishment. The mom finally relented, but after her daughter took one sip of the milkshake, she made a face and said that she didn't like it. After a few months without consuming those chemicals, her taste buds didn't like them any longer. I will never forget the morning I woke up and realized I had become a food snob. When I said, "I guess we can use last night's milk in our coffee," I realized I had crossed over. Fresher is undoubtedly better. Contrary to what one might think, the more you cook from scratch, the more you want to cook from scratch, because packaged foods and fast foods no longer taste

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When I grow my own food, I know what's in it. When I raise chickens, I know what went into making the eggs, I know about the bugs and frogs and grass the chickens ate, I know what I'm eating when we butcher the chickens or eat the eggs. I know what was or wasn't sprayed on my vegetables; I know the seeds were carefully chosen; I know what's in the soil; I have a pretty good idea of what's going into my body when I eat the

vegetables we've harvested. Also, home-grown just tastes better! I always chuckle when someone eats an egg we raised. 'There's so much flavor! Why don't store eggs taste like that?' Gee, it makes you wonder. I think we've become a nation of people who just don't know, and don't necessarily want to know. Just put it on my plate so I can eat it — you know?"

— Amy Dingmann, St. Francis, Minnesota

good. And the more food you grow in your garden, the more you want to grow, because it is a sad day when you eat your last fresh pepper or asparagus of the growing season.

Quality of homemade products goes beyond food, though. How many times have you said that they just don't make things like they used to? You buy a sweater and a button falls off the first time you wear it, or you like the way a wool sweater looks, but it is too scratchy. The quality of handmade fiber items tends to be much nicer than factory made clothing and accessories that use fibers from factory farm animals. As the saying goes, you can't make a silk purse out of a sow's ear, and you can't make a silky soft scarf or sweater using wool from a sheep that was raised for its ability to convert feed into meat quickly and cheaply.

Variety

On more than one occasion when I was being interviewed about the first edition of this book, the reporter would ask, "Do you ever get bored just eating the food you grow yourself?" It was a question that honestly made me laugh because it is far from the truth. I didn't include variety in my original list of the benefits of growing your own food, probably because it seemed too obvious to me. The variety of food we eat is far more diverse than the average modern diet.

We eat our homegrown beef, pork, lamb, goat, chicken, duck, and turkey. Since we process the entire animal, we also eat the more nutritious parts, such as the liver and the heart. We render our pig fat to make our own lard for cooking. In addition to the usual cooking methods, such as roasting, frying, and grilling, we also cook meats in our cob oven, using fallen hickory wood, which gives it a delicious smoky flavor. We use leftover bones to make nutritious bone broth, which we use in other recipes or simply as a warm breakfast beverage. In addition to having regular chicken eggs, we also have eggs from bantams, ducks, and turkeys. While most people are content with two or three types of cheese in their lives, we've made close to two dozen different types of cheese with our own cow and goat milk. For even more variety, we sometimes blend the two milks. In addition to all of the cheeses, there's also butter, yogurt, buttermilk, and kefir.

In our garden, we grow a dozen different colors, sizes, and shapes of tomato, which most Americans have never even seen. I prefer orange or yellow tomatoes for creamy soup, chocolate cherry tomatoes for eating fresh on a salad, and green zebra tomatoes on quiche. Patty pan, yellow zucchini, and lemon squash make beautiful sautés with a bit of crushed garlic and a fresh basil chiffonade. I also love my red Russian kale, which is rarely seen in supermarkets. Then there are the dozen or so varieties of lettuce that we grow for beautiful and nutritious salads.

We have a continually changing parade of fresh fruit through the growing season, starting with strawberries in June, moving through mulberries, raspberries, plums, and peaches in the summer, and moving on to apples and pears in the fall. Our Kieffer pears and Granny Smith apples store in the root cellar or refrigerator for many months so that we can continue to eat fruit through the winter. We also freeze and can a variety of fruit for winter use.

We have beehives that provide us with honey for naturally sweetening baked goods. Each year, we make three to five gallons of maple syrup, depending upon how the weather affects the sap flow. People have sometimes responded to that last statement by asking, “How many pancakes do you eat?” We almost never eat pancakes, but when you aren’t paying a small fortune for maple syrup, you can use it as the sweetener in baked goods, as well as in a cup of coffee or chai tea, or you can pour a cup of it over a pork roast while baking.

Ethics

My mother was quite the enigma. On the one hand, she wanted to be modern. She bought Tang, which must be good because the astronauts were drinking it, as well as canned spaghetti and frozen pizza. On the other hand, my parents bought meat from local ranchers whom they knew and trusted. When I asked my mother why we didn’t buy meat from the store like everyone else, she simply said, “Because you don’t know how it was grown.”

I had no idea what that meant or why we should care. When I was growing up in the 1970s and ’80s, they were starting to move pigs indoors and to use hormones in beef production. Today meat animals are raised in a manner that is unhealthy for the animals and the people who eat them, as well as for the

planet. Pigs and poultry are raised in crowded, filthy conditions without ever seeing sunshine or breathing fresh air, while being fed a diet that includes daily antibiotics. Ask people who have visited a modern pig farm or feedlot, and they will tell you that the air stinks so badly, it is a challenge to breathe. Beef spend their last few months “finishing” in feedlots, knee-deep in their own manure, and injected with hormone implants to make them grow faster. Ask beef ranchers about their practices, and part of the evidence they provide of excellent care is the frequency with which they see a veterinarian, not realizing that healthy animals do not need to see a veterinarian regularly.

My husband, our fifteen-month-old daughter, and I became vegetarians in February 1989 after I read an article about concentrated animal feeding operations (CAFOs). Like most Americans, I thought chickens and cows were running around outside, enjoying the sunshine and fresh air. I had no idea that laying hens are packed into small cages and have their beaks cut off to stop them from cannibalizing each other due to the lack of space. Although I was concerned about our diet, I also felt it was ethically wrong for animals to be raised in confinement. But ethical dilemmas don't end with the animals.

Workers in agriculture and food services are the lowest paid employees in the United States. Farm workers often do not receive minimum wage. Farms are exempt from the requirement to pay overtime, and they often pay harvesters based upon how much they pick. Tomato workers in Florida were paid 50 cents for every 32-pound bucket of tomatoes they picked in 2011, which was only ten cents a bucket more than they were paid in 1980. “A worker today must pick more than 2.25 tons of tomatoes to earn minimum wage in a typical 10-hour workday,”²¹ according to the Coalition of Immokalee Workers in 2011. Most earned less than twelve thousand dollars a year. After creating the Fair Food Program and staging many protests, they finally got a one-cent per pound increase in wages and created better working conditions. But for some farm workers, life was even worse.

In 2010 federal prosecutors in Florida indicted two different groups for running slavery rings, where workers were held without their consent and forced to work in the fields for no pay. This is, unfortunately, not new. Over the years since 1960 the subject of slavery in agriculture has been examined in documentaries, in Senate hearings, and the Modern-Day Slavery Museum,

opened in March 2010. It was a mobile museum housed in a 24-foot cargo truck that is a replica of one that was used to hold 12 farm workers captive from 2005 to 2007. Because of the low wages offered to farm workers, few U.S. citizens are willing to take the jobs, meaning that the majority of farm workers are illegal immigrants, who are easy to exploit.

In 2016, a group of Associated Press reporters won the Pulitzer Prize for a series of articles they wrote about slaves on fishing boats in the Pacific. For 18 months they traveled from San Francisco to Hawaii to Indonesia and found that seafood being sold in the U.S. was being caught and processed by slaves who were held against their will on boats for months or even years. One man had been kept on a ship and forced to work for 22 years. When he asked to go home one time, he was chained to the ship's deck for three days without food or water. He had seen other slaves beaten to death or thrown overboard.²² Because these fishermen never set foot on American soil, our labor laws do not protect them. Even those who are paid receive compensation far below the minimum wage and receive no benefits. Some work 20 to 24 hours a day when at sea and receive \$350 a month or less.²³

Farm work and commercial fishing are also dangerous. The incidence of heat-related deaths among crop workers is 20 times as high as for the average worker, according to the U.S. Centers for Disease Control and Prevention.²⁴ Farm workers often handle dangerous chemicals and sharp tools. They usually repeat the same activity for hours at a time, increasing the risk of repetitive stress injury.

Commercial fishing is the deadliest occupation in the U.S. According to the CDC, the risk of death is 39 times higher than average.²⁵ Fishermen are at increased risk of falling and may die when they fall overboard, when working with machinery, or when boats burn or sink.

Working conditions in big slaughterhouses are also dangerous, and pay is not much better. Meatpackers have the highest injury rate of any occupation, and they work for wages that are barely above the poverty level for a family of four. According to the United States Bureau of Labor Statistics, the average salary of meatpackers was \$11.55 an hour in 2010.²⁶ It increased to only \$12.33 an hour by 2015.²⁷ The median pay for farm workers was \$20,090 per year in 2015.²⁸

And the bad news does not end when we leave food manufacturing. Parents — usually fathers — who worked in meatpacking and factories half a century ago supported their families with one income. But things have changed. When manufacturers tried to lower wages in factories, or even when they refused to raise salaries, employees went on strike. Manufacturers responded by closing the plants and moving to Mexico and Asia. One such example is Huffy, a bicycle manufacturer. In the mid 1990s in their Celina, Ohio plant, they paid an average of eleven dollars an hour with six dollars an hour in health and retirement benefits. They closed that factory and moved to Farmington, Missouri, where they paid workers six dollars an hour with no benefits. After passage of the North American Free Trade Agreement, they closed that factory and moved to Mexico for a few years before moving their factory to China where they paid workers 25 to 41 cents per hour.³⁰ I am not suggesting that we all make our own bicycles, but this is the same scenario that has happened in the garment-making industry and even the food industry.

As of 2013, the United States was importing 19 percent of its food.³¹ More than 95 percent of coffee, cocoa, spices, fish, and shellfish are imported.³² Between 1995 and 2005, we increased importation of food from 11 to 15 percent of all food consumed in the country. Importation of fish and shellfish increased from 55 to 84 percent; processed fruit increased from 20 to 37 percent; and tree nut imports increased from 40 to 54 percent. Some of these imports come from countries that have lower safety standards than the United States or do not enforce the standards that are in place. In 2007, pet food ingredients imported from China caused the deaths of 235 cats and 112 dogs.³³ Importing food takes us back to the question of safety and brings up the issue of sustainability.



Many production jobs in food manufacturing involve repetitive, physically demanding work. Food manufacturing workers are highly susceptible to repetitive-strain injuries to their hands, wrists, and elbows. This type of injury is especially common in meat and poultry-processing plants. Production workers often stand for long periods and may be required to lift heavy objects or use cutting, slicing, grinding, and other dangerous tools and machines.”²⁹

— United States Bureau of Labor Statistics

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I am single, fifty-three years old, work full-time and have some health issues but want to be much more self-sufficient for the food I eat. I'm also a yarn dyer and spinner/weaver wannabe, so I'm raising my own version of wool.

In spring 2010 I decided to bring the country to the city. I raised four chicks (two Red Stars and two Buff Orpingtons) and purchased an English Angora bunny. I began composting. With some help from my Dad and brother-in-law, I planted out the front garden with herbs and a few bee

and butterfly beneficial perennials. A semi-dwarf nectarine tree is the beginning of my urban orchard. Spring 2011 will see me doubling my flock of hens, adding a French Angora bunny, building raised beds, planting berry bushes, and adding more fruit trees. I love the country life, but circumstances prevent me from living on my own farm, so I'm making the best of my situation. It is a work in progress and involves a lot of baby steps, but I'm okay with baby steps as long as I'm moving forward.”

— Penny K. Prince, Bedford, Indiana

Sustainability

Every item that is packaged and transported uses energy and resources. A hundred years ago, everyone ate locally. Today, the average dinner on American tables has traveled 1,500 miles to get there. Every town once had its own dairy, and people ate seasonally. They did not expect to eat oranges, bananas, and fresh tomatoes every day of the year. They did not even expect to eat eggs in January, because they knew that chickens stop laying when the days get too short. Producing eggs through the winter requires energy, because the chickens must be kept inside under artificial lights. Regularly eating foods that are out of season or are trucked thousands of miles is not sustainable, nor is it necessary. Obviously people ate locally and survived since the beginning of time, and that was before the advent of refrigeration, freezing, and canning. Our current eating habits have developed not out of necessity, but as a response to availability and advertising.

Farms cover almost 75 percent of the land in Illinois, a state with the third largest number of acres of farmland classified as “prime” by soil scientists, but it is a state that does not even come close to feeding itself. Currently, 96 percent of the food eaten in Illinois is grown in other states and countries. Only 3

percent of farms have dairy animals. Most of the land is used to grow corn and soybeans, and the state ranks third nationally for agricultural exports. More than 44 percent of grain is exported.³⁴ The state has the capacity to feed itself, but it needs farmers who are willing to grow foods that people can eat. Corn and soybeans are primarily used to feed livestock, and the rest is turned into soy or corn oil, cornstarch, corn syrup, and a long list of food additives, such as sodium carboxymethylcellulose, and even nonfood items such as Styrofoam packing peanuts.

In addition to the inefficiencies of transportation, foods that are shipped long distances also require more packaging, which is usually plastic (made from petroleum) and is not biodegradable. Often they must be kept at controlled temperatures, which require more energy. Convenience foods use even more packaging, as they are in a plastic bag or plastic-wrapped tray inside of a box.

One of the worst culprits for excessive packaging is baby food, which comes in single-serving jars, and although glass is recyclable, the amount actually recycled in most countries remains small. Only 34 percent of glass in the United States is recycled. A single baby will go through hundreds of jars of food, which are also overpriced. Making your own baby food is beyond the scope of this book, but it is not as difficult, time-consuming, or dangerous as some would have us believe. When I was pregnant with my first baby, I received a booklet from a baby food manufacturer warning me about the dangers of homemade baby food. It seemed obvious to me that the source was biased, because they wanted me to buy their product, but I suspect that many new moms did not even attempt to take on the task for fear of harming their children.

Frugality

Perhaps the biggest lie that corporate advertisers sold us is that our time is too valuable to make anything from scratch, whether it is food or clothing or anything else. “You deserve a break today” was named the best jingle of the 20th century by *Advertising Age* magazine.³⁵ Advertisers know they are not selling the most nutritious or delicious food out there. They are selling a lifestyle. You deserve to have someone else cook for you.

Almost everyone believes their time is “too valuable” to be bothered with menial tasks without even thinking about the logic of the statement. If you don’t cook dinner, how much will someone pay you to do something else? Normally, no one is paying me to do anything in my spare time. I can’t work every waking hour of every day, but by cooking from scratch, I can save money, which ultimately leaves more money in my bank account at the end of the month.

In 2008, KFC aired a television commercial in the United States claiming that you could not make seven pieces of chicken, mashed potatoes, and four biscuits for the ten dollars that they charged for the meal. They showed a mom and her two children taking the “KFC \$10 Challenge,” going into a supermarket and becoming exasperated as they see the prices of various ingredients. The little girl asks about the price of fried chicken at the deli counter, which is a far cry from homemade. Finally, the mom is tapping away at her calculator and is ecstatic when the total is more than ten dollars. She and her son give each other a high five because they are going to KFC for dinner now.

After watching the ad, I did a little math and calculated that a biscuit costs about eight cents to make from scratch, even when using organic flour. A pound of mashed potatoes would cost thirty to fifty cents, depending upon whether you buy a five-pound or ten-pound bag of potatoes. If you buy a whole chicken and cut it up, you have two legs, two thighs, two breasts, two wings, plus a back and neck. Add breading, which will cost pennies, and you have a bigger meal for under five dollars, and you can make a big pot of bone broth with the back and neck as a bonus. In less than an hour, you have saved five dollars as well as the gas that you would have used if you had driven to KFC. Although grocery prices have gone up since then, so have fast food prices, but you can still cook dinner at home for four people for less than ten dollars.

If you look at the makeup of any grocery store, it’s obvious that most of the aisles are filled with ready-to-eat food or mixes. The interesting thing about using mixes is that in most cases they save only a minute or two of preparation time. A simple cake recipe will use eight to ten ingredients. Most cake mixes require three ingredients be added to the mix. If you are not accustomed to cooking, it may take you longer to do things initially, but like anything else you do, you will get faster with time. When I first started making biscuits from scratch, it took me exactly the same amount of time to mix them up as it did

for my oven to heat up, which was 15 minutes. Now, however, the biscuits are mixed up, rolled out, and waiting on the baking pan in half the time.

Entertainment

Although a lot of people look at what we do and think it is a lot of work, I have to admit that a lot of it is just plain fun. I love trying new foods from our garden and watching baby goats bouncing through the pasture. Lots of people love knitting or baking bread. When I was telling a friend about how busy I had been lately, she asked, “When do you do anything for yourself?” I laughed, and explained that everything I do is for me. We do not have to do any of the things that I write about in this book. That means that if I am doing it, I love doing it. Rather than watching television or working out at a gym, I spend my time doing things that are practical and real.

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Why do I spin? There is something akin to reaching a state of Zen creating something useful from a beloved animal and then turning it into something a person will love and use.”

— Sherry MacKinnon, Curtis, Michigan

Personal pride

Although personal pride is at the end of the list, I imagine that it may be the most important reason that some people grow their own vegetables or cook from scratch or knit their own socks. The first few times I sat down to a dinner table filled with food we had grown ourselves, I was smiling so widely that it hurt my cheeks. Throughout the meal, I said several times, “Can you believe we grew all of this ourselves?” It is a feeling of pride that I have never had when I bought something at the store or went out to dinner.

Getting started

Obviously, a single book cannot cover every possible detail on gardening, canning, raising goats, and every other topic included. If you are just starting on the path to self-reliance and a sustainable lifestyle, you could buy dozens of books that give you all the details, but what if you decide that you don’t want to have dairy animals or fiber animals after reading an entire book dedicated to that subject? The goal of this book is to give you an overview and the

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We started reading *Mother Earth News* shortly after we were married and realized that there were other people out there that thought like us. We continued to read and garden in our postage stamp backyard. We had dreams of moving out of the burbs and into the country but assumed we would never be able to until our kids were grown when we were about fifty.

In August of 2005 we suffered some physical damage to our home due to Hurricane Katrina. Having both been born and raised in and around the New Orleans

area, the emotional scars were deeper than the broken windows and felled trees.

Long story made short, Katrina was the catalyst for change. We quit our jobs (old family businesses), gave away all of our stuff to two aunts who lost everything in the flood and bought seven acres in rural Davidson County, North Carolina. Our little brick house was pretty shabby, but there was an existing chicken coop on the property. And the story goes on.”

— Sedley Abercrombie, Denton, North Carolina

information you need to get started so you can decide whether a particular venture is for you.

Each section begins with a chapter on planning. Here, you will learn what you need to buy or learn before you can get started. Then we move on to deciding what you will grow and raise, whether it is vegetables, fruits, or animals. You will be able to choose the plants and animals that will work best for your lifestyle and your home.

The second chapter is about actually getting started with your own vegetables, fruits, or animals. It covers sustainable choices, such as repurposing bins or wire fencing to use as a compost bin rather than buying a new plastic one. And finally, it talks about organic solutions to problems, such as mulching to kill weeds and using good nutrition to keep livestock healthy.

The final chapter in each section is about making your own things from what you have grown. This is where you will find recipes for homegrown meat, eggs, dairy, and vegetables as well as for handmade soap and instructions for using homespun yarn.

You will not find a lot of highly technical information, because in most cases, you don't need it to succeed at growing your own food and making

things for yourself and your family. I grew up with a mother who did not own a set of measuring spoons or measuring cups, and although I do own and use those items today, I am not tied to recipes and instructions like my husband the engineer. While I sometimes discover interesting new food combinations by not being tied to a recipe, it can sometimes cause problems. It took me five years to perfect chèvre because I didn't keep records, and I gave up on hard cheeses after four or five failed attempts.

Mike the engineer, on the other hand, learned to make cheddar, parmesan, and other hard cheeses rather quickly because he followed directions exactly and kept scrupulous records of everything he did, so when something didn't turn out quite right, he looked at his notes and changed the time or temperature for the next batch.

I am always looking for shortcuts and money-saving ideas. Most people wonder how I fit everything into a single day, but one of my "secrets" is that I don't sweat the small stuff. I don't worry about how long the bread is kneaded, because I've discovered that it just does not matter. As long as the bread is mixed up, it will rise, and it will be edible. I may have missed a shortcut or two, but in most cases, if there is an easier way to do something, I have figured it out. And sometimes I have figured out things that do not work. I'll share those tips with you too, so you don't have to make the same mistakes I did.

Don't try to do it all today. On the other hand, don't throw up your arms in despair because you can't do everything and then decide to do nothing. Every little bit helps. For example, if you do nothing else other than start growing your own alfalfa sprouts for your sandwiches and salads, you will save money, be eating a healthy food, and be saving plastic packaging from the landfill. If you grow one jar of sprouts a week for one year, you have saved \$150 and kept 52 plastic containers out of the garbage.

Sustainability is a journey. In today's world, I can't imagine anyone getting to 100 percent self-sufficiency or a lifestyle that is totally sustainable. But we



Even more information is available on my website ThriftyHomesteader.com because before I was done with the first book, I realized there was a lot more information I wanted to share, but it wasn't all going to fit between the covers of a book. In addition to more information and photos, there are videos demonstrating techniques and processes for more "making your own."

can't give up. I hear too many people who sound hopeless. Because there is so much to be done in agriculture, transportation, energy, health care, and what appears to be every aspect of our lives, a lot of people think it is not even worth trying. Other people think that because they have no personal knowledge of how to overcome these challenges, it would be too difficult to learn. Some think it is too expensive to live a greener life. Others think that it really doesn't matter. All of those nay-sayers are wrong.

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Do what you can, with what you have, where you are.”

— Theodore Roosevelt

As they say, Rome was not built in a day. The problems in our world have been building for most of the 20th century, and every little thing that everyone does can make a difference. My personal journey started when I became pregnant with my first child in 1987 and realized that good nutrition might play a role in a healthier future for my baby. My first steps were to stop buying bleached flour and luncheon meats. Year after year, I became more aware of good nutrition. I learned to bake bread and stopped eating factory-farmed meat. In recent years, I quit eating wheat entirely. In most years, we moved forward to a healthier, more sustainable lifestyle, but there were a few times that we took a couple of steps back.

You will make mistakes. I promise. Get used to that idea. Don't think of them as mistakes. Just file them away as methods that don't work. Learn your lesson, and move on. I have learned far more from my mistakes than I ever learned from any book or expert, and I don't mind sharing them with you. While some mistakes are tragic, other mistakes turn out to be a pleasant surprise. I made a mistake making queso blanco cheese, and discovered an easy way to make ricotta. My son made a mistake making bread, and we learned to make soft pretzels and crackers. Who knows what we will learn next time we make a mistake? Yes, there will always be a next time.