

Yum Universe

Bonus Information



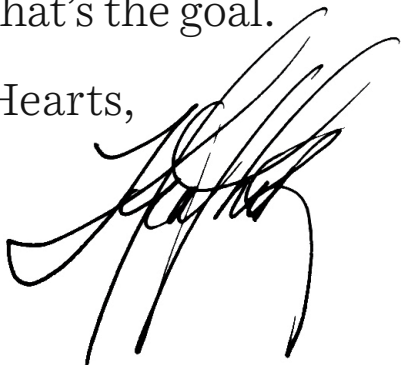
When I started out on my wellness journey, I was hungry for information and answers. The more I discovered, the more I realized how much there was to learn, and the more dots that I connected, the more empowered I became. I bet YU can relate.

There's a lot of "health" noise out there, now more than ever. This is why it's so important to share inspiration and information with others so they don't have to dig for it — potentially missing that one bit that could make all the difference.

When I sat down to draft *YumUniverse*, the goal was to create the comprehensive go-to book I needed years ago when I first heard the words "medication for the rest of your life." I wanted to write more than a cookbook, since clean recipes are only one part of a successful wellness transition. Folks who want to make lifestyle changes that stick also need (at least) a basic understanding of WHY and HOW.

While I'm beaming with pride for my book, I did end up writing too much content for 320 pages. It may have seemed like a problem at the time, but this turned into an opportunity to create Book Owners Central. I hope you find a gem in these pages — that's the goal.

Hearts,

A handwritten signature in black ink, appearing to be 'Hearts', written in a cursive style.

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Helpful, right?

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For more recipes, resources, inspiration, step-by-step photos, and tips, visit YumUniverse.com.

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Planty Basics

Here are helpful tips for prepping, eating, and becoming better acquainted with whole food ingredients and their healing magic.



Onion 101

A stew or veggie bowl isn't going to be wrecked if a red onion is used when a recipe calls for a yellow one. But there are important differences between onions, and here are a few tips for using them.



Yellow Onions: We're most familiar with yellow onions, and it's a safe bet that when we come across a recipe that calls for "onion," a yellow onion is a good choice. They have a brown, papery skin, white flesh, and high sulphur content that makes eyes water when chopping. They're used the most in recipes because they're versatile and add excellent flavor to stews, soups, and veggie dishes—hearty, flavorful dishes. They're pretty astringent raw, but sweeten up when cooked.



Sweet Onion (aka Vidalia or Walla Walla): These guys look a lot like yellow onions, but they have a higher sugar content and a lower sulphur content, which makes them great for frying, savory tarts, soups, roasting, caramelized preparation, and frying (their rings are thick and sturdy).



White Onions: These onions have a white skin, a white flesh, and they're a bit milder than yellow onions. Often used in Mexican dishes, they're a great choice if you want a less powerful onion flavor — like in a cold veggie soup or salsa.



Red Onions: When a dish is raw or uncooked — salad, sandwiches — red onions are the onion of choice because they're the sweetest and most mild. It can absolutely be used in cooked recipes (I will add them for color), though it will just be more mild in flavor. They have a purple-y red skin and white flesh layered with the vibrant skin color. Delicious in guacamole, salsa, and grilled.



Shallots: Technically not an onion, and grows in cloves like garlic, a shallot has an onion-y flavor that's less overpowering. It's sweet, with a bit of spiciness, and delicious in sauces, dressings, quiche, pickling, and as garnish if thinly sliced. Since a shallot contains multiple bulbs (2–4), it can be confusing as to whether to use one clove or the entire bulb when a recipe calls for "one shallot." The best bet is to use all of the cloves in that shallot bulb as "one shallot."



Green Onion (aka scallions): There are a few ways to use green onions, which have long, green stalks that end in a tiny white bulb. Cut off the root end and thinly slice from white to pale green — use as a raw garnish or ingredient in salads, stir fries, and sauces. The tougher, dark green end makes a vibrant garnish that can be cooked with, as well. Store loose in the crisper drawer for longest life.

Mother Nature's Medicine Cabinet

Cool clues from nature regarding what to eat.



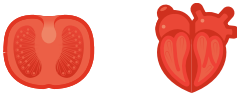
Sliced Carrot Round = Iris

Full of antioxidants and vitamin A that promotes good vision, carrots help to form the pigments in the retina.



Sprouted Bean = Kidney

Beans contain beneficial potassium and magnesium, which help maintain healthy kidney function.



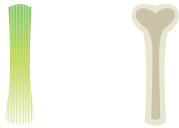
Sliced Tomato = Heart

Like a heart, a tomato has four chambers, and it's loaded with heart-healthy antioxidant compounds like lycopene.



Walnut = Brain

Rich in beneficial omega-3 fatty acids that boost memory, walnuts have beneficial effects on brain function.



Celery = Bones

Celery has an alkalizing, anti-inflammatory effect on the body, which keeps bones strong.



Avocado = Uterus

Loaded with folic acid, potassium, and vitamins that help babies grow in the womb and help mamas battle morning sickness, avocados also take nine months to mature from blossom to fruit.



Onion = Cells

Studies show that onions are loaded with flavonoid compounds that clear wastes from the body. Studies also show that they have a role in reducing cancer risk.



Mushroom = Ears

Just like humans, mushrooms can produce vitamin D when exposed to sunlight. Studies have linked vitamin D deficiency with hearing loss. And since vitamin D builds bone health, the tiny bones in the ear that transmit sound to the brain benefit, too.

Prepping Fruits & Veggies for Freezing

If produce items are reaching the end of their shelf life (or you overbought), wash them well, dry them completely, and transfer to an airtight container to freeze for later.

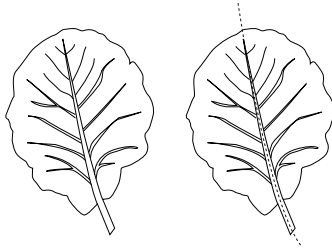
Follow these tips:



- For diced and sliced produce, use a cookie sheet to initially freeze, and then once solid, transfer frozen bits to a freezer-safe glass container or BPA-free baggie. This way, you don't get a brick of broccoli, or an iceberg of berries.
- For produce that oxidizes like apples, pears, and avocado, squeeze lemon juice over them before freezing to keep browning to a minimum. Why? Lemon juice is full of antioxidant power. Remember, browning is oxidation. Also the juice reduces the pH of the exposed fruit and makes it difficult for oxidation to occur.
- Freeze cooked grains, pseudograins, and legumes for easy last-minute meals.
- Utilize ice cube trays for single serving portions of soups, sauces, purees, cooked grains, juices, herbs, stocks, and more. Freeze in the cubes, and immediately once solid, transfer to an airtight container for long-term storage. If left in ice cube tray too long, frozen goodness is likely to turn to freezer burn.
- You can freeze most herbs on their stems; peel and chop once thawed.
- Always peel the bananas *before* freezing.
- Prepare fruits into individual cobblers and freeze. Simply bake when you want a treat.
- Freeze pre-made pie crusts for easy, comforting dinners or desserts. Just remove, fill, and bake.

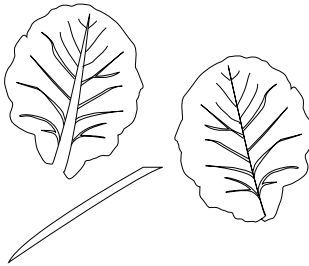
Mastering the Collard Green Wrap

Collard greens make super chlorophyll-rich wraps (see page 5) because they're ginormous and sturdy. There are a few ways to prepare them for rolling and eating:



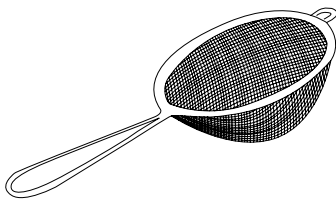
The Score & Roll:

Trim and score the stem of a collard green before using it as a wrap—the stem is thick and doesn't like to roll; scoring it helps reduce rigidity. Simply place the leaf face down and carefully shave the top off of the rounded stem. Then run your knife down the length of the stem gently enough to create a cut that doesn't go all the way through. Then fill and roll.



The Overlap:

Another trick for rolling preparation is to remove the stem altogether and overlap the cut pieces of the leaf before filling. Then roll.



Bye-Bye Bitterness:

Many people (especially newbies) are afraid of the collard green wrap. It's okay. I was too. What helped me get over my aversion to using them was a quick steam—30 seconds to one minute. It removed some of the bitterness of the leaf and made the texture softer. Give it a try before filling with goodies and rolling.



The Double-Decker Training Wheels Wrap:

If you want to get used to using a collard green, but dark greens are new to the palate, try making a double-decker style wrap. Steam a gluten-free brown rice tortilla and spread with some kind of thick goodness, like hummus or cashew cheese. Score and trim a collard green and place on top of the brown rice tortilla and the spread. Then fill and roll. Not only will contents be nice and snug in these two layers, but we're training taste buds to like collards.



Agriculture

These are heavier realities that many folks avoid, but need to be understood. Maybe take them on a bit at a time — dive in and do your own research to learn more about some of these topics.



Deciphering Labels

Labels like “organic” and “all natural” prove that more and more folks care about what they eat and how it arrives at their table. Unfortunately, marketers and food companies see this, too. It’s why shopping for honestly clean, humane, organic foods has become so confusing. There are countless terms and misleading labels used to encourage your purchase, and many of these claims aren’t verified by anyone at all. Lack of clarity creates confusion, and Big Food counts on that.

I’ve got a list here to help you shop wisely for plant-powerful foods. If you still consume animal products, make sure you research labeling for those items because “Free Range” and “Cage Free” don’t guarantee grassy fields and freedom.

What’s your best bet? Eat as much whole, clean, plant-based foods as possible. Prepare recipes with whole ingredients. Grow your own food if you can. Head to the Farmers’ Market and meet your local farmers. Ask them questions. Visit the farms.

PRODUCE & PACKAGED GOODS

Local: Generally, when a food is produced within a particular geographical region from where it’s bought and enjoyed, it can be labeled “local,” but there’s no regulated definition for this term. It’s important to know that just because a food has the local label, that doesn’t mean that it’s more nutritious, or was grown without dangerous chemicals or GMO seeds. Due to their size, many small businesses aren’t required by law to provide a nutrition label on that adorable jar of jam, or those colorful pickled veggies. It’s so important that we support local farmers, but don’t assume that what’s for sale is clean food. Ask.

Organic: A “USDA Organic” label on packaged foods indicates that at least 95 percent of the food’s ingredients are organically produced.¹ And for produce (and single ingredient foods), it means that it was produced without GMOs, synthetic pesticides, or petroleum- or sewage sludge-based fertilizers. The seal is voluntary—many organic producers use it and many do not, for different reasons. Paying for a USDA certified organic status is pricey for small organic farms and many others, and even large organic food producers use clean practices that exceed USDA standards, so that label isn’t accurate—they choose not to use it.²

“Made With Organic Ingredients” means the product was made with a minimum of 70 percent organic ingredients, with restrictions on the remaining 30 percent, including no GMOs.

Non-GMO: The Non-GMO Project is North America’s only independent verification of Non-GMO products (and Non-GMO businesses like restaurants and delis). A Non-GMO verification is an assurance that a product has been produced according to consensus-based best practices for GMO avoidance. Verification is maintained through an annual audit, along with onsite inspections for high-risk products.

PRODUCE & PACKAGED GOODS CONTINUED

All Natural/Natural: The term “natural” is applied to many foods, but it doesn’t have a consistent meaning. There is really no formal definition for the term “natural,” but on their website, The Food and Drug Administration claims that “from a food science perspective, it’s difficult to define a food product that is ‘natural’ because the food has probably been processed and is no longer the product of the earth.” The agency has not objected to the use of the term “natural” or “all natural” if the food does not contain added color, artificial flavors, or synthetic substances.

Since there are few regulations governing the labeling of “natural” foods, food manufacturers can include ingredients that may not be considered natural or humane by some consumers. For example, natural vanilla, strawberry, and raspberry flavors can be derived from the castor sac in a beaver’s behind.^{3,4} Crushed bugs can be used for coloring.⁵ Most manufacturers know that consumers tend to trust what’s written on a package, so if it says “natural” it must be healthy and humane, right? Use the ingredient’s label as the true litmus test.

Gluten-Free: According to the FDA, the term “gluten-free” means that a food is inherently gluten-free (produce for example) or must limit the unavoidable presence of gluten to less than 20 parts per million (ppm). The FDA also allows manufacturers to label a food as gluten-free if it doesn’t contain any ingredient that is any type of wheat, rye, barley, or crossbreeds of these grains, or has been derived from these grains, or if it contains ingredients that have been derived from these grains, but have been processed to remove gluten to less than 20 ppm. Note that “wheat-free” doesn’t necessarily mean “gluten-free.” Gluten is present in many whole grains besides wheat (visit pages 42–43 from *YumUniverse*).

A “gluten-free” label doesn’t mean healthy — many gluten-free options are highly processed and contain loads of starches, chemicals, and sugars that replicate the properties of gluten.

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GMOs

The other day, I was looking at a canary yellow cereal box with nothing on the front except the word “Trusted,” and one whole grain “O” simply placed as a period for impact. Underneath, it proudly claims to be the “first finger food that many moms trust for their little ones.”

Is this cereal “trusted” because of deceptive marketing and uncompromising lobbying efforts, or because it truly should be trusted? If we dive in, we’d easily find that the parent company for this classic American cereal contributed \$1,135,000 to oppose California’s landmark measure Proposition 37, which would have required manufacturers to label food products containing Genetically Modified Organisms (GMOs).¹

What’s the deal with GMOs? Well, GMOs are plants (or animals) that have had their DNA blueprint changed by science. In commercial instances, this genetic manipulation is practiced so crops can withstand large quantities of herbicides, and even produce their own pesticides. GMOs are the biotech industry’s proposed solution for world hunger, drought, pests, and boosting the nutritional value of crops. But in nearly two decades, these promises have proven empty, since none of the GM products on the market deliver in any way demonstrated by long-term study. People all over the world are still suffering from hunger and chronic malnutrition.^{2,3} And the increased pesticide use has led to a rapid increase in the growth of pesticide-resistant “super weeds” and “super bugs,” which means farmers are forced to use more powerful pesticides and herbicides more frequently, which ultimately harms local communities and beneficial insects, like bees and butterflies.^{4,5,6,7}

Genetic engineering practices for crops are ambiguous, unreliable, and they haven’t been proven a safe practice by research other than the short-term studies conducted by the corporations that actually develop the GMOs (and profit from their sale). Yet, GMOs have been approved by the U.S. government and released into the food supply.

Let’s think about this: if a biotech company can implant traits of their pesticide into the DNA of a seed, then that seed is resistant to said pesticide when it’s sprayed all over the growing crop—so the inside and outside contain chemicals — that biotech company can then patent and sell the seed to farmers, and make them agree to buy the associated pesticides, herbicides, and fertilizers if they want that seed.

Seeds are life—passed around thanks to hungry animals or insects, and they (and pollen) can float on the breeze until they find a nice bed to lie in. There, they’ll root down and grow if the conditions are right. If a patented seed makes its way into a neighboring crop, since it’s “property,” that farmer is now liable. Chemical companies have put on their “sustainable agriculture” clothing to structure a system that delivers profits from many angles. They claim to dedicate themselves to “empowering farmers,” but both conventional and organic farmers find themselves in litigious David-versus-Goliath face-offs with Biotech all too often—all because nature is trying to do her thing.

Slippery Labeling

I recently picked up a popular USDA certified organic, fair-trade chocolate bar at the store and flipped it over to read the label. The ingredients were: Organic Chocolate Liquor, Organic Raw Cane Sugar, Organic Cocoa Butter, Soy Lecithin (Emulsifier), and Organic Vanilla Extract. The good news is that it’s a fair-trade product and it appears that all ingredients are organic. But look closely. The only ingredient that doesn’t actually have “Organic” in front of it is Soy Lecithin. Since 94 percent of soybeans grown in America are genetically modified and loaded with carcinogenic pesticides, odds aren’t in our favor that this is an organic, non-GMO, clean ingredient. Plus, this chocolate bar is certified by the USDA, and according to their certified organic labeling rules, a product labeled as “organic” can contain up to 5 percent non-organic ingredients. Deceptive wiggle room, huh?

Don’t fret. You can avoid GMOs in your chocolate bar or other foods by purchasing goods labeled “100% organic,” or from brands that are non-GMO certified by The Non-GMO Project (nongmoproject.org).

There's a growing body of evidence connecting GMOs to all sorts of problems, like increased crop diseases and toxicity in humans and livestock. And particular herbicides are known to contaminate groundwater supplies, cause birth defects and reproductive issues (like miscarriage and infertility), damage DNA, and even cause behavioral disorders and cancer in animal tests.^{8,9} Studies also show that GM toxins have been found in human blood samples, even though most manufacturers claim that they break down in the human digestive system.¹⁰ When GMOs are approved by government agencies, they're relying on findings from 30-, 60- and 90- day studies involving short-lived laboratory animals. These tests simply cannot determine the long-term consequences for people who eat genetically engineered foods over a lifetime.¹¹ Simply put: we just don't know enough yet. Still, seventy percent of the foods in a typical American grocery contain genetically modified ingredients—corn, soy, canola oil, and sugar beets are the most prevalent. And yes, these ingredients can even be found at your favorite trusted health food stores, too.¹²

“ Science has a credibility problem. It has for too long been used to distort food and twist the natural into long lasting Twinkies and nutritionally void Lunchables. Tobacco was good for us, we were told, and DDT was fine to spray on our fields. Food dyes are all still considered safe for our kids to eat, and “natural” foods, we are made to believe, are made of naturally occurring ingredients. In all cases we have been misled, and today it is not “false fears” that has bred skeptical consumers, it is experience.”

—Beth Hoffman, contributor, Forbes.com

Where Are The GMOs?

According to nongmoproject.org (please spend some time on their website), here's a listing of what crops contain GMOs, or are at risk for GMOs:

High-Risk Crops:

(in commercial production; ingredients derived from these must be tested every time prior to use in Non-GMO Project Verified products — as of Dec. 2011)

Alfalfa (first planting 2011)

Canola (approx. 90 percent of U.S. crop)

Corn (approx. 88 percent of U.S. crop in 2011)

Cotton (approx. 90 percent of U.S. crop in 2011)

Papaya (most of Hawaiian crop; approx. 988 acres)

Soy (approx. 94 percent of U.S. crop in 2011)

Sugar Beets (approx. 95 percent of U.S. crop in 2010)

Zucchini and Yellow Summer Squash (approx. 25,000 acres)

Monitored Crops:

(those for which suspected or known incidents of contamination have occurred, and those crops which have genetically modified relatives in commercial production with which cross-pollination is possible; we test regularly to assess risk, and move to "High-Risk" category for ongoing testing if we see contamination):

Beta vulgaris (e.g., chard, table beets)

Brassica napa (e.g., rutabaga, Siberian kale)

Brassica rapa (e.g., bok choy, mizuna, Chinese cabbage, turnip, rapini, tatsoi)

Curcubita (acorn squash, delicata squash, patty pan)

Flax

Rice

Wheat

Also High-Risk:

Animal products (milk, meat, eggs, honey, etc.)

Common Ingredients Derived from GMO Risk Crops

Amino Acids, Aspartame, Ascorbic Acid, Sodium Ascorbate, Vitamin C, Citric Acid, Sodium Citrate, Ethanol, Flavorings ("natural" and "artificial"), High-Fructose Corn Syrup, Hydrolyzed Vegetable Protein, Lactic Acid, Maltodextrins, Molasses, Monosodium Glutamate, Sucrose, Textured Vegetable Protein (TVP), Xanthan Gum, Vitamins, Yeast Products.

Common Ingredients Derived from GMO Risk Crops

Amino Acids, Aspartame, Ascorbic Acid, Sodium Ascorbate, Vitamin C, Citric Acid, Sodium Citrate, Ethanol, Flavorings ("natural" and "artificial"), High-Fructose Corn Syrup, Hydrolyzed Vegetable Protein, Lactic Acid, Maltodextrins, Molasses, Monosodium Glutamate, Sucrose, Textured Vegetable Protein (TVP), Xanthan Gum, Vitamins, Yeast Products.

Others to Consider

Tomatoes: In 1994, genetically modified Flavr Savr tomatoes became the first commercially produced GMOs. They were brought out of production just a few years later, in 1997, due to problems with flavor and ability to hold up in shipping. There are no genetically engineered tomatoes in commercial production, and tomatoes are considered "low-risk" by the Non-GMO Project Standard.

Potatoes: Genetically modified NewLeaf potatoes were introduced by Monsanto in 1996. Due to consumer rejection by several fast-food chains and chip makers, the product was never successful and was discontinued in the spring of 2001. There are no genetically engineered potatoes in commercial production, and potatoes are considered "low-risk" by the Non-GMO Project Standard.

Salmon: A company called AquaBounty is currently petitioning the FDA to approve its genetically engineered variety of salmon, which has met with fierce consumer resistance. Find out more here.

Pigs: A genetically engineered variety of pig, called Enviropig was developed by scientists at the University of Guelph, with research starting in 1995 and government approval sought beginning in 2009. In 2012 the University announced an end to the Enviropig program, and the pigs themselves were euthanized in June 2012.



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Agricultural Subsidies

According to a study in the *American Journal of Clinical Nutrition*, “\$1 could purchase 1,200 calories of potato chips or 875 calories of soda but just 250 calories of vegetables or 170 calories of fresh fruit.”^{1, 2} Two-thirds of calories consumed by Americans come from only four crops, and not a one includes health-boosting fruits and vegetables.³

Why is this the case? Agricultural subsidies.

Our government delivers agricultural subsidies to certain farmers and agribusinesses to supplement their income, manage the supply of agricultural commodities, and influence the cost and supply of these commodity crops.

While farm subsidies are intended to alleviate farmer poverty, the majority of subsidies go to commercial farms with average incomes of \$200,000 and net worths of nearly \$2 million. Farm subsidies are intended to be consumer-friendly and taxpayer-friendly, but they ultimately cost Americans billions each year in higher taxes and costs of food.

What is the Department of Agriculture most heavily subsidizing?⁴

1. *Corn*: The biggest crop in the United States is corn—some 13 billion bushels are grown each year over 80 million acres. Accounts from the Department of Agriculture for corn subsidies don’t include the effects of ethanol subsidies (ethanol is a biofuel additive for gasoline produced simply from corn sugar). Even without the ethanol supports, corn takes the top slot.
2. *Wheat*: Wheat demand and prices are declining a bit worldwide, yet wheat subsidies persist because they accrue “disproportionate benefits to those with disproportionate power.” Congressional over-representation of farm states makes it easier to add subsidies than remove them.
3. *Soybeans*: Not only is soybean meal a major feed for animals that end up on a dinner plate, but soy products — mainly soybean oil — make their way in some form into most processed foods. What consumers don’t eat, animals do.
4. *Rice*: By the American Revolution, the nation produced some 80 million pounds a year, and the crop continues to increase.
5. *Beer*: Barley and sorghum — two of the main ingredients in beer production — are among the most heavily subsidized grains. According to the USDA, a little under half the barley crop, and 15 percent of the sorghum grown, go to making alcohol.



What if you knew the government and certain businesses were messing with your brain? Well, they are. As Ellen Ruppel Shell writes in her book *Cheap: The High Cost of Discount Culture*, governments and some big businesses know that most people get the same buzz from a good discount as they get from gambling. But as with gambling, the “house” always wins.

For every big-win story, there are thousands more who’ve lost. This discount technique comes into play in our food as well, as no government subsidies or handouts are given to organic farmers, putting the cost of paying for pricey certifications, inspections and high insurance plans solely on them. This is why the things you buy the most — such as milk and eggs — are dirt-cheap compared to their organic counterparts. Zap! That good deal just gave you a buzz that encourages you to resist organic.

— Maria Rodale

Author, CEO, and Chairman of Rodale, Inc.

6. *Milk*: One of the most popular products in the United States — the average citizen consumes $\frac{3}{4}$ cups a day.

7. *Beef*: America produces and consumes the most beef in the world. The average American consumes some 66 pounds of beef a year, and the government provides millions in federal livestock payments.

8. *Peanuts*: According to the National Peanut Board, 90 percent of American households eat peanut butter, and Americans in total consumed an astonishing 4 billion pounds of peanuts in 2010.

9. *Sunflower Oil*: According to the USDA, sunflower production covers some 2.5 million acres across the United States. Businesses and restaurants use sunflower oil for frying, since it is relatively healthy and neutral in taste. One of the biggest consumers of the oil, for example, is Lay's potato chips.

Shaping How Americans Eat

Subsidies were originally created to assist struggling farmers, establishing food security, but the reality is that they've been misdirected. Farm bill subsidies have shaped the way Americans eat, and in a roundabout way, how they get sick. Corn, soy, cotton, rice and wheat account for 90 percent of subsidized crops, which makes the cost of healthy options, like organic fruits and vegetables, too high for many Americans.^{5,6}

What can you do?

Start by making your voice heard. Vote with your dollars — shift demand by making informed purchases. Start asking questions.



Americans have begun to ask why the farm bill is subsidizing high-fructose corn syrup and hydrogenated oils at a time when rates of diabetes and obesity among children are soaring, or why the farm bill is underwriting factory farming (with subsidized grain) when feedlot wastes are polluting the countryside and, all too often, the meat supply. For the first time, the public health community has raised its voice in support of overturning farm policies that subsidize precisely the wrong kind of calories (added fat and added sugar), helping to make Twinkies cheaper than carrots and Coca-Cola competitive with water...

... But the politics of food have changed, and probably for good. If the eaters and all the other “people on the outside” make themselves heard, we just might end up with something that looks less like a farm bill and more like the food bill a poorly fed America so badly needs.

— **Michael Pollan**, author of *The Omnivore's Dilemma* and *Food Rules*

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Eating Animals

The treatment of animals in conventional food production is an especially difficult and charged topic to discuss. When I started out my plant-based journey, I was mainly motivated by health reasons. But not long after I began my research, I came across some hard truths in regards to animal welfare.

I have to say, there's no better motivation for saying goodbye to animal products than a YouTube or Google search for "factory farming" or "CAFO" (concentrated animal feeding operation). Watch some videos and read some articles if you can stomach it. And know that according to calculations from USDA data, factory farming is how 99 percent of all farmed animals are raised and slaughtered in the United States.



Were the walls of our meat industry to become transparent, literally or even figuratively, we would not long continue to raise, kill, and eat animals the way we do.

— **Michael Pollan**, author of *The Omnivore's Dilemma* and *Food Rules*

Now, I respect everyone's decision to eat what they think is best for them, but I urge you to inform yourself if you choose to continue consuming animal products. What was once a responsibly raised product, eaten on occasion, is now the main attraction at every meal. And with the increase of meat at every meal, so increases our waistlines. The meat and dairy industry's image of happy animals eating their natural diet of green grass on family-owned farms is, for the most part, a successful combination of plain fantasy, pure marketing, and powerful lobbying efforts.

Let's test this idea out. What comes to mind when you hear the word "osteoporosis"? If I were a betting woman, I'd say it's "milk." Followed by "strong bones." "Calcium." Then maybe "healthy teeth."

The dairy industry has done a great job of also lobbying government agencies to convince (or scare — fear *is* powerful) Americans into believing that for a healthy life, they need to regularly consume milk. If you turn off these voices and think about it — really think about it — milk is a secretion, designed to take a baby calf from birth to 1,000 pounds in its first year of life. Dairy is a food designed for a baby cow (with four digestive compartments in their single stomachs), not for humans, and definitely not for *adult* humans. Even adult cows don't drink milk.

In a study authored by researchers at Yale University School of Medicine in 1992, based on data collected in thirty-four separate surveys conducted in sixteen different countries, and then published in twenty-nine peer-reviewed research publications, it was found that 70 percent of bone fracture rate was attributable to the consumption of animal protein. And *The China*

Meat & Mood

Personal discovery time: From childhood through my twenties, I would experience bouts of depression — like wearing around a dentist's X-ray vest. I'd nap all day, and I wouldn't have energy or motivation to do much. This cycle disappeared a few months after I stopped eating animals, and it hasn't returned. Not to get woo-woo on you here, but I believe that emotion affects us all on a cellular level. When I stopped consuming animals whose cells were bathed in stress, trauma, and sadness due to the inhumane feedlot environment, I stopped being sad myself. Coincidence?

Research from *The Journal of Animal Science* and the University of Milan's Faculty of Veterinary Medicine confirms that fear/anxiety experienced by animals elevates stress hormones in their flesh, which remain after slaughter. Consequences of animal abuse are well known within the meat industry — there are even acronyms to categorize quality, taste, and color damage brought on by fear-induced hormones. Do these hormones affect humans when consumed? It's still up for substantial scientific debate, but there are a few reports that confirm that the restriction of meat, fish, and poultry in omnivorous folks does indeed improve mood.

A local farmer is the best choice to find humane, pasture-raised, GMO-free, antibiotic-free animal products, if you still consume them. "Free-range" or "cage-free" are not trustworthy labels — they usually mean "packed on top of each other and fed GMOs in a filthy, hot barn with a tiny door towards the back cracked open just enough to meet the label requirements, but not enough to be humane or to encourage roaming."

Study—the largest comprehensive study of human nutrition ever conducted via a partnership between Cornell University, Oxford University, and the Chinese Academy of Preventative Medicine—discovered that in rural China, where 90 percent of the protein consumed comes from vegetable sources, the bone fracture incidence is only one-fifth that of the U.S. In multiple, peer-reviewed animal studies, researchers from the study also discovered that they could actually turn the growth of cancer cells on and off by raising and lowering doses of casein (the main protein found in cow’s milk and also snuck into “dairy-free” cheeses).

The China Study included 367 variables, 65 counties in China, and 6,500 adults (who completed questionnaires, blood tests, etc.). When they were done, they had more than 8,000 statistically significant associations between lifestyle, diet, and disease variables. Hard to deny, huh?

By definition, factory farming is a large, industrialized farm on which a significant number of livestock are raised in conditions intended to maximize production at minimal cost. In reality, this means that animals are held in confinement, and denied basic freedoms, like moving, breathing fresh air, and socialization. They’re treated like emotionless commodities instead of living creatures — penned and stacked in rows like products on a grocery store shelf. Male baby chicks are tossed alive into grinders or trash bins; hens have their beaks seared and clipped off so they don’t peck at each other (which is a natural response to a hellish situation); pigs are kept in containers so tight that they can’t roll over, and if these animals get to walk freely, it’s through acres of feces, not fields.

Livestock are naturally supposed to consume grasses, but they’re fed (primarily genetically modified) surplus grains and soy instead. Just like humans who don’t consume their natural diet, the livestock get sick. So, in order to keep them alive and producing unnatural amounts of milk and meat to satisfy demand, antibiotics and hormones are regularly administered to them (often with each meal). According to the Union of Concerned Scientists, 70 percent of antibiotics used in the United States are administered to U.S. livestock, primarily to compensate for the unnatural and unhealthy conditions of factory farming.¹ And these antibiotics may also contribute to the antibiotic-resistant infections seen in many people, too.²

Think about when a human mother is nursing her baby, and a doctor recommends that she avoid particular “bad” foods because they will go straight to her baby through her breast milk. Why wouldn’t the herbicides, pesticides, dioxins (serious, persistent environmental pollutants produced from herbicide production), antibiotics, blood, pus, feces, bacteria, viruses, and hormones found in milk from factory-farmed dairy cows do the same for us? Other suspect issues potentially linked to factory-farmed animal products are adult and childhood obesity, and in turn, early puberty.³ If hormones used for livestock are designed to fatten them up in a short amount of time, and we are what we eat... well...

Inefficiency

According to Brendan Brazier’s best-selling book *THRIVE Foods*, by weight, 232 times more kale than cattle can be produced on the same amount of land (38,400 pounds of kale per acre compared with 165 pounds of beef). And since beef has a nutrient density of 20, and kale registers at 100 (according to Brazier’s nutrient formula from the book), which is 50 times greater, for every calorie that you get from kale, you’d have to eat 50 from beef to match the micronutrient level. Since beef has about four times the amount of calories per pound as kale, to gain the equivalent in micronutrients from beef as kale would require 2900 more arable land.



The Standard American Diet is simply unsustainable all around and industrial production of animal products is no exception. It simply requires more land and resources than the production of plant-based foods. 75 percent of all agricultural land is used for animal production, which consumes enormous amounts of energy, pollutes water supplies, generates significant greenhouse gases, and requires ever-increasing amounts of corn, soy, and other grains.⁴ If you choose to eat animal products, at the very least, consider choosing nonindustrial sources. Stop by the farm where they come from and see how they're raised and treated with your own eyes. A farm with integrity will let you do that.

Eating animals can be a pretty polarizing topic, but whether you choose to go there or not, we don't *need* to kill other beings to survive, or better yet, thrive in this life.

Ag-Gag

Do your research about CAFOs now, before a lot of this information is illegal. Oh yes: it's not good for business if consumers learn the truth—a handful of states now have “ag-gag” bills on the books. Ag-gag is a law that prohibits the making of undercover videos, photographs, and sound recordings for those concerned with food safety, labor issues, free speech, and freedom of the press.



Somewhere in Iowa, a pig is being raised in a confined pen, packed in so tightly with other swine that their curly tails have been chopped off so they won't bite one another. To prevent him from getting sick in such close quarters, he is dosed with antibiotics. The waste produced by the pig and his thousands of pen mates on the factory farm where they live goes into manure lagoons that blanket neighboring communities with air pollution and a stomach-churning stench. He's fed on American corn that was grown with the help of government subsidies and millions of tons of chemical fertilizer. When the pig is slaughtered, at about 5 months of age, he'll become sausage or bacon that will sell cheap, feeding an American addiction to meat that has contributed to an obesity epidemic currently afflicting more than two-thirds of the population. And when the rains come, the excess fertilizer that coaxed so much corn from the ground will be washed into the Mississippi River and down into the Gulf of Mexico, where it will help kill fish for miles and miles around.

— Bryan Walsh, writer for *TIME Magazine*

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