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THE REAL FOOD REVOLUTION

HEALTHY EATING, GREEN GROCERIES, and the Return of THE AMERICAN FAMILY FARM

Congressman
TIM RYAN

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To Mason, Bella, and Brady, and all our children, on whose health the prosperity of our nation depends.

acre, 12 times greater than the federal government's reported average. In addition, researchers found that the rate of soil loss across Iowa was twice the sustainable rate estimated by the USDA.

Soil erosion is a major concern for our world food supply. Once enough soil is removed, the land becomes unable to sustain crops. One study estimates that over the past 40 years, 30 percent of the world's arable land has become unproductive as a result of erosion!

Naturally, then, there is increasing effort to plow more land to increase crop yields—both to feed us and to feed the herds of animals in these farms. These actions don't just clear land for food, they negatively impact biodiversity. For example, they take out native plants like milkweed that provide nectar for many species. A 2012 study published in the journal *Insect Conservation and Diversity* (thank heaven such journals exist) found that Iowa has lost almost 60 percent of its milkweed, and another in *Crop Protection* found a 90 percent reduction from 1999 to 2009.

The massively efficient industrial food we've created is massively profitable to a few who are in charge of it, but it's a blunt instrument that does not take into account the delicacy of our ecosystem and the connections between plants, animals, humans, air, water, and soil. It treats the earth and its creatures as if they were machines. And, as we have seen, the machine is breaking down.

Whether you are Republican, Democrat, Independent, Tea Party, Libertarian, what have you, how can you advocate for a system that is ruining the very land, air, and water we rely on?

THE POWER OF GOVERNMENT AND BIG BUSINESS

The large corporations at the heart of the current food system, supported by our government, dictate what's available to eat at what price. If it's not working for you, you need to fight back.

The history of agriculture policy in the United States is one of increasing concentration and consolidation, with big driving out small in the name of efficiency.

—Marion Nestle

We are all connected to many different systems that support life. In addition to our social systems—family, community, church, and so on—there are huge national and international systems that undergird our life. And they often go unnoticed as we go about our day. They're so much a part of us, they're like the water a fish swims in. You flick on a light switch or plug in your phone to charge it, and you're relying on our energy system. Your daughter goes to school, and you're relying on a vast network that makes up our education system. You drive to the airport and fly your family to see Grandma, and you're relying on our transportation system. You get sick, you rely on the health care system. You spend money, it's the banking system. You go to the bathroom . . . okay, you get the picture.

We put these systems together, for the most part, with the best of intentions. We're trying to create a good life. You know—life, liberty, and the pursuit of happiness. But sometimes a system goes bad. How do we know? Because the outcome is not a happy one. That's what's happening with the food system. As I've made clear already, the food system is not achieving its aim of fostering our health and well-being and that of our environment. I'm sorry. It's just not. End of story. I'm not going to debate that anymore.

But then you have to figure out what to do about a system gone bad. That's a tough one. There's a lot we can do as individuals to improve how we collectively manage our food system, but before we do that, we have to understand what got us to where we are, and what's keeping us here.

FULL DISCLOSURE

As I talk about lobbying and fundraising and its impact on the political system, it is important for you to know that I too have taken money from a few of the organizations that are involved in the food industry, primarily the sugar industry. But as you can tell from the fact that I have written this book and will promote the ideas in it in a very public way, campaign contributions do not influence the way I think or the way I vote. If they did, I would not talk about these issues. But through the course of my career in Congress, I work with groups that may agree with my position on some very important issues and disagree on some others. For example, we may see eye-to-eye on trade issues but disagree on certain kinds of subsidies. These organizations have chosen to support my campaign fund, and I appreciate their help, as every politician needs money to run for reelection. But let me say clearly that no campaign donation has ever led me to compromise my beliefs or my votes. I have never let money influence my decision-making and I never will. I will speak my mind and let the chips fall as they may. As an aside, I am one of only a handful of members who support publicly financed campaigns. It is the surest way to clean up our broken system and get money out of politics.

One of the major developments that brought us to this sorry state of affairs, Michael Pollan explains, was change in agricultural policy, which began under President Richard Nixon in the 1970s. In order to fight food price inflation, we began rewarding farmers

to grow *more* food, whereas previous policies tried to support food prices by reducing supply; for example, by idling land. This helped the farmers rather than looking out for the consumers. But with this change, Pollan says, the federal government gave growers incentives to *overproduce*.

This policy kept prices down for consumers, all right, but as I've learned the hard way in my last 14 years in government, there are always unintended consequences for any policy we enact. The overproduction rippled throughout the system and we ended up with what we have now. There's a lot more grain, and that cheap grain in the form of corn became cheap corn sweetener, available to sweeten everything imaginable. The increased supply of grain was one factor that caused us to end up with the feedlot meat system, which gives us meat filled with hormones and antibiotics instead of nature's original grass-fed beef. We subsidized the grain-based foods—processed foods and lower quality meat from big producers, essentially—making them cheap, while providing almost no support for fruits and vegetables. The story goes on from there, but you get the picture. All those cheap calories made their way to the American waistline, and taught a whole generation of kids how to eat too much, and poorly.

Marion Nestle, author of *Food Politics* and *Eat, Drink, Vote*, is a public health nutritionist and professor at New York University. Like Pollan, she points out that we've ended up with a system that "is very efficient and provides an overabundance of foods from which to choose at relatively low cost," but it seems to revolve around one principle: to produce calories as cheaply as possible.

So let's dive a little deeper into this system that keeps us in this sad state of affairs, starting with the farm bill, which, from 1995 to 2012, allotted $292 billion of our tax money to subsidize our broken farm program. Yes, I said 292 BILLION DOLLARS. That's nine zeros. Even in Washington, DC, that is a boatload of money. I'm guessing you have no desire to read the 959 pages of the farm bill that passed in 2014, so let me tell you just a little bit about it—including the problems that I found with it.

From 1995 to 2012, the farm bill has allotted $292 billion of our tax money to subsidize our broken farm program.

The "farm bill" is the shorthand name for a massive piece of legislation that Congress enacts about every five years. It authorizes the federal government to spend money on dozens of programs that are intended to provide us with a working food system while conserving land and protecting, maintaining, and improving the soil, water, and air that supply us with the food. The farm bill is not the only piece of legislation that governs agriculture, but it is by far the largest and most significant. The first farm bill was enacted in 1933 in response to the economic depression and the dust bowl in that era. Its goal was to keep our farmers in business while also encouraging conservation. Subsidies for key commodities such as corn and wheat have continued to rise in farm bill after farm bill over the decades; however, these subsidies have not been in line with the original intention of keeping struggling farmers in business. They now disproportionately benefit the richest of the farmers and the big agricultural companies that supply these farmers.

Over the years, the farm bill added other elements. The 1973 bill provided nutrition assistance in the form of food stamps (now called the Supplemental Nutrition Assistance Program, or SNAP). The 1985 bill was notable for including new conservation laws; the 1990 bill included organic agriculture for the first time; the 1996 bill included the Fund for Rural America, to increase USDA research into innovations in farming (thank you, Bill Clinton); and the 2008 farm bill included provisions to promote local food systems, including the Farmers Market Promotion Program.

The farm bill began with good intentions—to save our farmers and our food supply during the Great Depression. And many good programs have been enacted over the years, but in general, I feel the legislation has strayed from the fundamentals:

> *To ensure a food system that supports our farmers' work in providing healthy, nutritional food while conserving our land and environment*

As I have made clear, we are failing to do this. So, the kind of farm bill and overall food legislative program I want to see would realign priorities and increase funding for:

- Sustainable regional and urban agriculture systems
- Conservation and environmental protection
- Non-genetically modified food and organically grown food

- Actions that to encourage complete transparency concerning ingredients and processes
- Beginning farmers
- Vegetable and fruit growing
- Innovation research and agricultural extension programs
- Nutrition education from K–12 to college to medical school

(I might add that I like the idea that Michael Pollan shared with me of having a national food policy advisor as a senior official in the White House. We have a national security advisor. "Isn't our food supply just as important to our well-being as defense?" he asks. Makes sense to me. Michelle's Obama's tireless work in bringing nutrition issues to the forefront of the national conversation is the kind of leadership we are going to need on this issue in all future administrations. The appointment of Sam Kass as Senior Policy Advisor for Nutrition Policy has also been a good step toward a higher-level administration position. This White House has us off to a great start.)

The bill that passed Congress this year, known formally as the Agricultural Act of 2014, did not come close to initiating the kind of reform that I would like to see, given the fact that our food system is yielding so many unhealthy outcomes. It took no steps to decrease the levels of antibiotics and hormones in our meat and poultry. It carried on the gross subsidies (now called crop insurance) to large-scale commercial agriculture, while offering a paltry sum for sustainable and regional specialty

farmers. And when I refer to sustainable and regional farms, I'm not just talking about "certified organic." Many farmers have an approach that is similar to organic, but getting the certification is so time-consuming and costly that it isn't worth the trouble

While 98 percent of farms are family-owned operations, only a small percentage receive agricultural subsidies. Over the last ten years, 62 percent of farms collected no subsidy.

While 98 percent of farms are family-owned operations, only a small percentage receive agricultural subsidies. Over the last ten years, 62 percent of farms collected no subsidy at all. Emerging, innovative local farmers do not get a leg up. The already entrenched farmers get the "help." For all these reasons, I voted against the bill, and am working now to correct problems with it and pave the way for a farm bill that people interested in good nutrition and a sound environment can get behind. (For those interested in farm bill reform, the Environmental Working Group [www.ewg.org] provides excellent information on how the money is spent now, and a vision for how it could be better spent.)

One of the reasons it's so hard to change policy is the power of lobbyists sent to DC on behalf of these corporate interests. For a member of Congress, being lobbied is a daily activity, whether it's someone at the grocery store or dry cleaners at home telling you how they feel about the issue they feel most passionate about, or a more formal sit-down in a congressional office in Washington, DC. Most of the formal meetings are pretty cordial, with people from Ohio who belong to an organization asking

for my support on a particular issue. On occasion, my whole day is filled with sit-downs. I'm happy to do it. The day I start complaining about this is the day I should retire, because the best part about our democracy is that people can walk into their congressperson's office and state their views.

Sometimes, however, these meetings can get uncomfortable. Like earlier this year when I had to meet with the Ohio Farm Bureau. It was uneasy because just weeks before I had voted against a compromise farm bill that, while making a number of improvements, simply did not go far enough. The Farm Bureau felt I should have supported it. Agriculture is the top industry in Ohio. Unfortunately, according to the Centers for Disease Control and Prevention, 10 percent of adults in Ohio have diabetes (and another 16 states are as bad or worse), and it's estimated that over 500,000 adults in Ohio have been told by doctors that they have prediabetes, while a much larger number have the condition but are undiagnosed. I firmly believe the high incidence is largely due to our current food system, and it's worth remembering that treating the people suffering from this condition costs five times more than the average person.

The Farm Bureau folks were friendly, but we had a frank exchange about why I voted against the bill. I really like these people. I read their magazine every month, and I note that they have more and more articles about smaller farms. So, I think it's fair for me to point out when I think we can do better. If we can provide a strong alternative—a thoughtful, balanced agenda—in my estimation the majority of farm bureau members would see it as in their best interest for the future and support it.

During our discussion, I pointed out some initiatives outside of the farm bill that I thought needed attention, such as the fact that the current Congress is trying to limit transparency by rejecting labeling and warnings that would let consumers know what's in the food they're buying, what country it is from, and how it was produced. And these standards for GMO and country-of-origin labeling need to be national ones. A state-by-state approach would be a nightmare for businesses to deal with, as many of them ship products to many different states. But we do need transparency for the consumer. Most farmers agree with this. In fact, just this past summer the corn and soy associations in Ohio voiced their support for labeling. Sadly, some very powerful interests aren't on the same page.

Congress is trying to limit transparency by rejecting labeling and warnings that would let consumers know what is in the food they're buying and how it was produced.

You may fairly ask, "Is this food genetically engineered?"

The big industry folks say it's none of your business. They have adopted the stance my Italian grandmother used to take with my brother and me when we were eating at her dinner table and acting up. She would say in her local Italian dialect, *"Sta zitta. Mangia."* It translates into "Shut up and eat!"

If we ask the food industry, What's in this food?

Shut up and eat!

Is it genetically engineered?

Shut up and eat!

If my children eat more than a small amount, will they get diabetes?

Shut up and eat!

If my diet relies on this processed food, will I get heart disease?

Shut up and eat!

I could take this from my grandmother, who was feeding us homegrown veggies from the garden and carefully prepared homemade meals. But I will not accept this attitude from monopolists who consistently try to hide what they're doing, including what political contributions they're making to keep the current system intact. The companies use perfectly legal means that make it difficult for you and me to trace the sources of contributions, but just because it's legal doesn't mean it's praiseworthy.

POLITICAL PRESSURE BY INDUSTRY

Wheeling and dealing by big corporations is one of the things that keeps the farm bill skewed. According to the Center for Responsive Politics, a nonprofit watchdog on federal lobbying dollars:

- 325 organizations and individuals registered as lobbyists in 2013 to work on the Senate farm bill.
- $111.5 million was spent by agricultural industries in lobbying during that time period; lobbying in the agriculture sector totaled nearly $150 million in 2013.

One example of the strength of the corporate lobbying dollar is the Corn Refiners Association (CRA), a trade association that is made up of six giant

corporations, including Cargill and Archer Daniels Midland. In recent years, the CRA has been spending tons of money to promote a positive image for high-fructose corn syrup. Between 2000 and 2013, the CRA spent approximately $5.2 million in federal lobbying. It was also revealed that the CRA spent more than $30 million on a private PR campaign, including $10 million to fund a four-year research project by a cardiologist that disputed the contention that there are any negative health consequences from corn-based sweeteners!

Separately from the CRA, Archer Daniels Midland spent $1.79 million on federal lobbying on Agricultural Services issues, which the company listed as "issues related to food, feed, and renewable fuel." Its CRA partner Cargill spent $1.4 million in 2013 lobbying on crop production and processing issues, with specific issues listed as "poultry processing, partially hydrogenized vegetable oil rulemaking, food labeling and claims, food additive regulations, pathogen regulation, antibiotics."

Food and beverage companies also spend heavily to influence legislators, spending $185 million on federal lobbying between 2009 and 2013.

The effort to maintain the status quo through influence doesn't stop at our borders. In 2003, when the World Health Organization published dietary guidelines suggesting that no more than 10 percent of an adult's daily calories should come from "free" sugars (those added to food, as well as natural sugars in honey, syrup, and fruit juice), the U.S. Sugar Association pressed the federal government to withdraw funding for the WHO if the organization did not modify its recommendations. Fortunately, the WHO did not buckle from this kind of pressure, and in 2014, has recommended cutting the level to 5 percent.

One of the people representing corporate interests called my office after I voted against the farm bill. My staff told me how disappointed this group was with my vote. I told my legislative director to call him back and tell him why I voted against it and explain my plan for shifting the food system in America.

Their response: "We can't afford that."

Really?

Let me get this straight, we can afford to give this small, elite group of businesses a blatant handout, while we screw (er, I mean neglect) the small- and medium-scale farmer and perpetuate a system that causes half of our population to have either diabetes or prediabetes? That's okay?

At the time the farm bill was being debated, the renowned economist Joseph Stiglitz wrote a post on *The New York Times'* Opinionator Blog, called the "Insanity of Our Food Policy." I was glad to see an economist who could see the absurdity of what we're doing, and I thought he summed up nicely what's wrong:

> American food policy has long been rife with head-scratching illogic. We spend billions every year on farm subsidies, many of which help wealthy commercial operations to plant more crops than we need . . . As small numbers of Americans have grown extremely wealthy, their political power has also ballooned to a disproportionate size. Small, powerful interests—in this case, wealthy commercial farmers—help create market-skewing public policies that benefit

only themselves, appropriating a larger slice of the nation's economic pie.

This is what we are up against. The will of a secretive, entrenched monopoly is pitted against the will of America's parents—and the farmers who want to do right by them. I'm placing my bet with the moms, dads, and the next generation of Americans who want transparency, openness, and fresh, tasty, local, healthy food.

COSTS AND ACCESS

Our food system is technologically efficient but socially deficient. It is not delivering healthy, affordable food to large numbers of our citizens, in either the cities or the countryside.

Equal access to healthy, affordable food should be a civil right—every bit as important as access to clean air, clean water, or the right to vote.

—Will Allen

The real food revolution has been driven, in large part, by people living in the more affluent zip codes in America—though not exclusively. It's time for this revolution to spread to all our citizens. In many of our cities, food deserts abound where for miles on end families with no

real means of transportation have zero access to fresh, healthy food. The corner store is filled with junk food, soda, and processed ready-to-eat meals that all too often our fellow citizens eat as breakfast, lunch, or dinner. This same population has very high rates of diabetes. Our country needs a strategy to help our inner cities move from places of consumption of crappy food to places of production of good food.

The lack of access to healthy food is a problem that impacts not only the physical health of a community's residents, but also the economic and social health of the community altogether. Poverty and poor nutrition are intertwined. According to a University of North Carolina study, communities with limited access to healthy foods tend to be places with "higher poverty rates, lower median incomes, higher numbers of convenience and fast food stores per capita, more households without access to a vehicle, and larger minority populations." While a lack of fresh food may not cause poverty, it certainly makes it more difficult to rise out of poverty if you're not being given access to good nutrition.

Grocery stores and fresh food retailers provide a commercial hub that allows neighborhoods to grow, creating jobs and fostering local economies. A Food Trust report sums it up: "Access to healthy food promotes healthy local economies, healthy neighborhoods, and healthy people."

The USDA reported in 2009 that 23.5 million people lack access to a supermarket within a mile of their home, and a multistate study found that low-income areas had half as many supermarkets as wealthy areas. In predominantly white neighborhoods, there were four times as

many supermarkets compared to predominantly black ones. A similar study reported that 8 percent of African Americans live in an area with a supermarket, compared to 31 percent of whites. Low-income areas tend to have a greater number of convenience stores (30 percent more than middle-income areas), which lack healthy and fresh items. A 2005 study called "The Availability and Cost of Healthier Food Alternatives" found that uniformly smaller grocery store/convenience stores lack whole-grain products, low-fat cheeses, and low-fat ground meats.

The USDA reported in 2009 that 23.5 million people lack access to a supermarket within a mile of their home, and a multistate study found that low-income areas had half as many supermarkets as wealthy areas.

Put simply, people in economically disadvantaged areas are deprived of good food, and this is affecting their health. Here are a few facts to consider:

- In Albany, New York, 80 percent of nonwhite residents cannot find low-fat milk or high-fiber bread in their neighborhoods.
- In Baltimore, 46 percent of lower-income neighborhoods have limited access to healthy food compared to 13 percent of higher-income neighborhoods.
- In California, obesity and diabetes rates are 20 percent higher for those living in the least healthy food environments.

- In Chicago and Detroit, it was found that residents who live farther from grocery stores than from convenience stores and fast food restaurants have significantly higher rates of premature death from diabetes.
- A statistical modeling study estimated that adding a new grocery store to a low-income neighborhood in Indianapolis would lead to a three-pound weight decrease among its residents.

Even if you can get access to better food, food cost is a big factor in healthy eating choices. USDA researchers found that the cost of the healthier food deterred people from choosing those foods, using a market-basket survey that compared the USDA Thrifty Food Plan basket versus a healthier market basket. The USDA Thrifty Food Plan is a meal plan for a family of four for a diet that meets the minimum recommendations of the 1995 dietary guidelines. It found that for a two-week shopping list, the average Thrifty Food Plan market basket was $194, and the healthier market basket was $230, mainly because of the higher costs of whole grains and lean meats. The higher-costing healthier basket is equal to 35 to 40 percent of low-income consumers' food budgets of $2,410 a year.

For a two-week shopping list, the average Thrifty Food Plan market basket was $194, and the healthier market basket was $230.

DOES FAST FOOD REALLY COST LESS?

I feel strongly that the price gap between real, healthy food and fake food with lower nutritional value needs to shrink. Of course, it's also the case that food marketers are fooling people into thinking they are getting bargains when they go out for a fast food meal or buy sugary cereal that is marked down. If you actually buy fresh food, and take a little bit of time to prepare it, the cost will almost always be lower than feeding your family at a fast food restaurant. To a certain extent, we are paying for convenience at the cost of our health. But is it more convenient if we have to give children insulin shots every day? Is it more convenient to end up with a generation that is the first to live shorter lives than their parents? Is it more convenient if young people today need more health care when they reach their productive working years?

Fruits and vegetables have also become more expensive for everyone over the years, because our subsidy system puts a little too much emphasis on grain production and provides little assistance to specialty crop farmers. (Including fruits and vegetables under crop insurance in the most recent farm bill is a step in the right direction.)

Marion Nestle notes in her Food Politics blog: "The Department of Commerce reports that the indexed price of fresh fruits and vegetables has increased by 40% since 1980, whereas the indexed price of sodas has declined by about 30%. Fast food, snacks, and sodas are cheap. Fruits and vegetables are not. Without access to healthful foods, people cannot eat healthfully."

Price discrepancies build favoritism toward bad, cheap food—the kind you see heavily advertised in grocery store flyers.

That's just considering the cost of fruits and vegetables grown by conventional methods. As is well-known, the costs of organic fruits and vegetables (and those that are organic for all intents and purposes but without the certification) tend to be much higher today (although bargains can be had at many farmers' markets). Comprehensive nationwide data is hard to come by, but in early 2011 a hearty and highly motivated group of Colby College students surveyed prices for organic and nonorganic items at five grocery stores in Waterville, Maine. Here were the results of what they found for produce:

Produce	Nonorganic	Organic	Price difference
Romaine Lettuce	$1.78/head	$3.54/head	99%
Carrots	$0.77/lb.	$1.51/lb.	96%
Bananas	$0.57/lb.	$0.89/lb.	56%
Tomatoes	$2.82/lb.	$4.05/lb.	44%
Red Peppers	$2.76/lb.	$5.89/lb.	113%
Yellow Onions	$0.93/lb.	$1.57/lb.	69%
Apples	$1.57/lb.	$2.34/lb.	49%

The Maine Organic Farmers and Gardeners Association did find that prices for produce at farmers' markets tended to be lower, given the economies of direct selling (organic lettuce sold for 18 percent less than organic lettuce in the supermarket, for example). Nevertheless, if this is the kind of food we want to promote for our own health and the health of the planet, the cost is still too high.

It's also the case that while our fruits and vegetables have been going up in price, they have been decreasing in nutritional quality due to depletion of soil quality from high-intensity agriculture methods—which emphasize quantity over quality—according to several authorities both here and in the United Kingdom. In its EarthTalk blog, *Scientific American* estimated that to get the same amount of vitamin A our grandparents derived from one orange, we would need to eat eight. We are paying more money for less nutrition.

> **To get the same amount of vitamin A our grandparents derived from one orange, we would need to eat eight.**
>
> **—EarthTalk, *Scientific American***

It would be easy to think that city dwellers are the only ones who experience high prices and availability problems for fresh food, since rural people are closer to the source, but that is sadly not true. There are many "rural food deserts," where all residents live more than ten miles from a supermarket or supercenter. A nationwide analysis found that there are 418 rural food desert counties—20 percent of all rural counties in the U.S. In Mississippi, the state with the highest obesity rate in the country (35.4 percent of adults), over 70 percent of food stamp–eligible households travel more than 30 miles to reach a supermarket. The lack of supermarkets and access to fresh food correspond to the likelihood of fresh food consumption. In rural Mississippi, residents in food desert counties are 23 percent less likely to consume the recommended fruits and vegetables than those in counties that have supermarkets.

There are larger implications from the lack of access to healthy food. Residents in areas without access to good food have poor physical and economic health, due to costs in obtaining food (transportation) and the costs associated with poor health. Local businesses suffer due to an unhealthy workforce, and state and local governments face increasing health care costs and the loss of tax revenues when residents leave a jurisdiction to purchase food. According to the University of North Carolina, rural food deserts will increase as rural populations decline, and the food industry continues to shift distribution to larger superstores in higher population areas. Just another of the many reasons we need to change this food system now. What we're doing today is just not fair. Healthy food is essential for "life, liberty, and the pursuit of happiness," and our food system is just not delivering it to all of its citizens.

port progressive food legislation or oppose legislation that will have a negative impact. The group's website lists these pieces of legislation along with the scores of the legislators. The higher the score, the more often they vote in ways that will help improve the food system. So go to the Food Policy Action Group's Scorecard (www.foodpolicyaction.org/FPA2013Scorecard.pdf) and look at how your elected officials vote . . . and then speak to them with *your* vote.

THE FARM-TO-TABLE MOVEMENT

We need to listen to the regional farmers. We need to celebrate their work. We need to support them. They supply the kind of food we need to be eating.

Eating is an agricultural act.

—WENDELL BERRY

It was a cold day in what had been a long, snowy winter in Ohio, not the sort of day that I'm eager to spend walking around in fields. But, I had heard so many great things about Melissa and Aaron Miller's farm that I just had to meet them. Miller's Farm is just about 25 minutes from our home in Ohio and 70 miles south of Cleveland. About

15 years ago, after owning a hardware store for almost two decades, the couple decided to follow their passion and start farming. "Starting the farm was probably the difference between living and dying," Aaron said.

They started with 50 Holstein heifers and 2 beef cows. And now they run a very successful livestock business where, Melissa says, they "turn over 70 head of livestock a year, 90 pigs, 500 chickens, 100 lambs, 150 turkeys, lots of eggs, and 150 buckets of maple syrup." And if you've never had fresh maple syrup from Northeast Ohio, you don't know what you are missing!

This is a great American story in and of itself. It's great to see people who take calculated risks and then have success. But what I really love about them is that their farm is sustainable. They raise grass-fed beef and lamb and pastured pork, chickens, and turkeys. Their hens lay eggs, not in cages, but on 168 acres of land. They follow a careful plan of rotating which animals are on which pasture over a 28-day cycle. Melissa explained to me how their grass-feeding regimen works:

> We do what's called "managed intensive rotational grazing." We have big, long fields that have a special mixture of grass, and then we use a system that puts the herd into a paddock as big as a football field. After about 28 days, we rotate them out to a fresh field. This gives them the ideal mix of energy and routine, moving them all the time, so that they're not coming back into a place where manure has been, that way we don't have to use antibiotics.

The Millers have worked hard to get certified by the Food Alliance, an independent organization that has some of the highest standards for assessing sustainability. They evaluate farms on a number of practices, including safe and fair working conditions, humane treatment of animals, and stewardship of the local ecosystem. Miller's Farm passes with flying colors.

While Northeast Ohio is a tough food market, where margins are tight, the Millers are helping to grow and shape this market. Their big customer is Bon Appétit at the world-renowned Case Western Reserve University in Cleveland. In some years, Case Western has purchased up to half of their hogs. Local Food Cleveland has identified them as Superstar Farmers. They sell directly to a local restaurant in Cleveland called Fire Food & Drink as well as others in the region. They hit the farmers' markets every week.

One Saturday my wife sent me out to pick up some meat for the weekend and wouldn't you know, I bumped into Melissa and Aaron at Catullo Prime Meats, a family-run butcher shop in Youngstown. The Millers were there cooking up their meats right in the store with Danny Catullo, the third-generation butcher who has grown the business from a small-town shop to a bustling butcher shop that is a national beef distributor. Danny is always on the cutting edge (no pun intended), and now he is including Miller's meat in his portfolio. Needless to say I bought some of their amazing breakfast sausage.

The Millers work long hours and rarely take vacations, but they are able to make a decent living and send their kids to college. They just love what they do, and you can feel that love when you speak to them. And they're making a huge contribution to our local community.

They have maintained a level of independence from a system they believe has become corrupted. They aren't getting any subsidies and they're not beholden to enormous agricultural companies who control what seed you can use. They're the American farmers you think of in a Norman Rockwell painting. When I asked Melissa what she knew about the commodity farmer and the subsidies they got, she responded, "Do I know those big guys? I certainly do. Do I know that sort of business? No. We're in the food business, and food doesn't get any sort of subsidy."

I believe too many people in America are blaming our average everyday farmers for the problems caused by our food system. I don't like this. The fact of the matter is that these down-to-earth, humble farmers have been caught in the middle of a very difficult and unfair system, as I've noted. I've represented Ohio farmers in public office for the better part of 14 years. They have been an amazingly progressive force—and not just on farm issues. For people to label them as the problem does a disservice to their commitment to creating a better life for all of us. I've watched my friends in Ohio agriculture work to create and maintain a rural safety net—including everything from access to affordable health care to quality education to reliable clean energy.

I witnessed the Ohio Farm Bureau standing up for clean and renewable energy initiatives even when they were under attack by our governor and general assembly. These groups stood up for a robust transportation policy and sound funding for our schools—including a strong science, technology, engineering, and math curriculum—in addition to farm-to-school food programs.

When there was a push from outside interests to change the way Ohio agriculture houses animals, Ohio agriculture stepped up and took the lead. This was no small feat, but they did what was right for Ohio agriculture and for animal welfare. The real food revolution needs the leadership and experience of the American agricultural community. They are our allies in this effort. They are smart, open-minded, and reasonable in their approach. They are concerned about the health of their children, and they want them to live just as long or longer than themselves—to carry on the legacy. They're worried about the quality of the soil and the conservation of our land. While we have had our differences on some policy matters, I trust and respect this community like no other that I've worked with in my tenure in Congress. While I can't say if every state's agricultural groups are as enlightened as the ones in Ohio, many are open to new ideas and approaches.

In every state in our country, we need to meet the agricultural community halfway. Many farmers are stewards of family farms that are generations old. So, it is altogether appropriate for them to hesitate at literally risking the farm to switch to a different crop. They are providing a life for their families. They can send their kids to college now and pay their mortgages. For most farming families, it is difficult, but they do it. If we want farmers to start growing more specialty crops, we need to lower the risk involved in growing fruits, vegetables, and nuts. Farmers are business people. Too much risk means they will not make the investment. Fruits and vegetables are perishable. Peaches will not last as long as the grain that can sit in a big silo for an extended period of time. That makes them a riskier investment.

As policy makers and citizens, we need to figure out how to lower the risk for fruits and vegetables just as we lowered the risk for soy, wheat, and corn. How can we stabilize prices for them? How can we build a transportation system that meets the needs that these new crops demand?

If we want healthy, local food, we need to increase demand for fruits and vegetables. Not abroad, but right here at home. We have so many public schools, colleges, and universities sprinkled throughout our country. Each of these is a market just waiting to be tapped by our local farmers. We need our children and students to eat healthy because our health system will collapse if current trends continue. So, why not open these markets more directly to our farmers? Ohio State University, for example, has more than 60,000 students. I'm sure the farmers of central Ohio would be excited about directly supplying that population with fresh, healthy, local food that was just a short drive from the farm.

While some of the corporate farms are happy to preserve the current system, which is rigged in their favor, most of the farmers I know would be more than willing to help solve these great health challenges with a new approach. And, as always, my door will be open to help piece all the necessary groups and organizations together to make this revolution happen.

Like the Millers, Peter Volz is a farmer who's working to bring fresh food to his community through a number of innovative methods. For many years, he grew vegetables in a community garden plot and was active in the community garden leadership in his hometown. In 2007, in his late 50s, he left a university job and took the big

leap and started Oxford Gardens, a 4-acre market farm in Niwot, Colorado, just outside of Boulder. Peter has a small-scale polyculture farm. Polyculture, by contrast with industrial plant-growing, uses many different crops on the same soil, which mimics the diversity we find in natural ecosystems and avoids large stands of single crops. Yes, 4 acres is a tiny farm by American standards, but a lot of 4- and 5- and 6- and 20- and 40-acre farms start to add up to a significant addition to our food system.

When I visited Peter's farm, it was late spring, and as sometimes happens in the flatlands at the foothills of the Rocky Mountains, the sun was beating down on us pretty intensely, with only a light breeze. Peter's manager and four other people, several of them volunteers from Willing Workers on Organic Farms (WWOOF), were working in the rows. Even Peter was bending over and weeding, even though he spends most of his time dealing with his commercial customers, the office work, and being the face of Oxford Gardens at the farmers' market. He tries as much as possible to spend some time in the field, though. Farming is a hands-on business, to be sure.

The land he leases sits on an elbow-shaped bend in Left Hand Creek. As he walked me around the land, I sunk down a good six inches into the fine crumbly alluvial soil—excellent for vegetables. (But of course, having this kind of fine soil deposited by rivers also means you're prone to flooding. Farmers face more risks than a Wall Street trader. Mother Nature can be a pretty strict parent!)

Oxford Gardens has built a solid reputation as a reliable source of "hand-crafted" vegetables. They offer 30

different types of vegetables in more than 100 different varieties. They are not certified organic, but they follow many of the same practices as organic farms and do not use pesticides or chemical sprays of any kind.

Over the past seven years Peter and his team have become a force in both the Boulder community and now in Denver, as well. They have become a reliable supplier to more than 20 of the best restaurants in these towns of the growing, vibrant, and beautiful state of Colorado. They work the farmers' market weekly in Boulder and have built a great following with their Community Supported Agriculture (CSA) program where they build relationships between their customers and the farm. In a CSA, the customer buys the groceries before they're grown—providing the farmers with funds they need to buy seed and other important components of the farming process—and then the farm supplies them with high-quality veggies and herbs during the peak growing season. The consumer gets fresh vegetables in the spring, summer, and fall. And as they say on their website, people are "receiving produce that barely a few hours earlier was growing in the field," which is certainly preferable, since "the average produce in the grocery store is 7–14 days old and has traveled hundreds, sometimes thousands, of miles."

> **"The average produce in the grocery store is 7–14 days old and has traveled hundreds, sometimes thousands, of miles."**
>
> —PETER VOLZ

Oxford Gardens is also one of 13 farms that hosts open-air banquets through Meadow Lark Farm Dinners. There are farm-dinner small businesses all over America now, where chefs drive a mobile kitchen out to the farm, cook using ingredients picked that day, and serve the food, usually with wines that have been suggested (or supplied in certain jurisdictions, depending on the state's liquor laws). Diners sit at a table, often with nice tablecloths, plates, and cutlery, and experience a feast in the open air. In this case, farm-to-table is a matter of a few feet. I would just love to see this happen as part of a food education program for kids (minus the wine), where the food cost could be underwritten by a foundation, with a little help from the government.

Oxford Gardens is hot, and not just from the beating sun. Demand for their product is rapidly increasing. Their gross income increased 22 percent each year from 2009 to 2013. Even as I was corresponding with Peter about this book, he was getting requests for more business. Much of it he has to turn down.

You may also remember the huge flood that hit Colorado in September 2013. Oxford Gardens lost a substantial portion of its crop. Yet, they saw a whopping 25 percent increase over their 2012 sales. Now, they are implementing an expansion of operations that will double sales by 2016. Peter loves to quote a Chinese saying that sums up Oxford Gardens' approach to growing: "A bad farmer grows weeds. A good farmer grows crops. But the best farmer grows soil."

ALL WORTH IT ON THE FARM

When I was talking with Peter about all of the challenges he faces as a small farmer, including variations in rainfall, fluctuations in temperature, lack of good irrigation year-round, and the possibility of a natural disaster striking, I kept thinking about how hard it is to do this work. The people who strive to make fresh food available for us dedicate their lives to the effort. But when I asked Peter why he keeps at this Sisyphean task, he gave an answer that made it all clear:

"I had a mother come to the market with her six-year-old daughter last Saturday. We've been selling some cucumbers from our Denver greenhouse partners, and this lady has been giving them to her kids. She told me the first thing her daughter requests when she wakes up is 'Cucumber, Mommy.'

"Corny, but I hear it all the time: 'My kids never liked carrots from the regular supermarket. Now I can't give them enough of yours. They actually eat salads now!!!' I have seen kids grow up from infancy who come to the market with their parents, love good vegetables, and are healthy and beautiful. I am constantly posting kids eating vegetables on our Facebook, and they are always the most popular item."

I just love how these farmers have a laser focus on doing what is best for the soil and for the animal, because they believe that's what's best for the consumer. They reap what they sow. There are many Millers and Volzes all across America, and they need our support—in Washington, in state governments, and at the market. Because without a market, a farmer won't be in business for long.

Meeting Michael Pollan is like experiencing a cool breeze on a sticky, hot summer day. He is a kind, refreshing presence, and his intelligence gently wakes you up. I met him for lunch at Chez Panisse, the restaurant started by Alice Waters that serves local and organic food, as well as grass-fed beef, and celebrates the work of local farmers. Almost everything they serve is grown using sustainable farming practices. Michael is the smartest and most articulate person in the room when it comes to what we need to do to revolutionize our food system. We talked over a long lunch about food, politics, and the impact of the millennial generation. I walked away inspired by his quiet optimism about what the future of food can be. I share his optimism and know there is a movement waiting to be built that can change some of this. And Michael Pollan has been talking about this for many years.

> **"Buy your snacks at the farmers' market."**
>
> —MICHAEL POLLAN

According to Michael, the best way to help farmers move the system in a more sustainable and non-GE direction is to create markets for their products. No fuss, no cumbersome government program, just good old-fashioned free enterprise. Some of these markets are already open to non-genetically modified products, and farmers actually get a premium. In *Modern Farmer*, a forward-looking magazine that started publishing in 2013, I read an article titled "The Post-GMO Economy" where it said that "Clarkson Grain, which buys conventional and organic corn and soybeans, pays farmers a premium—up to $2 extra per bushel over the base commodity price

of soybeans, $1 for corn." These products are shipped to the European Union, South Korea, and Japan, markets that look poorly upon GE crops.

And what the godfather of the good food movement is asking is, why can't we create markets right here in the United States for our farmers to sell non-GMO crops, too? And why can't we create markets for grass-fed beef, which has less total fat, saturated fat, cholesterol, and calories, and more vitamin E, beta-carotene, vitamin C, and a number of health-promoting fats, including omega-3 fatty acids and conjugated linoleic acid (CLA)?

Domestic markets for domestically produced healthy food. No global price fluctuations. No commodities needing to be traded. No futures markets. Just a farmer, some product, and a local market to sell it. And if we can correct our subsidy system, these cutting-edge farmers wouldn't be at such a disadvantage. We can level the playing field, so the market can work properly. As Melissa from Miller's Farm said, "If we didn't subsidize corn so much, the beef with hormones and antibiotics in it wouldn't be so cheap, so that McDonald's couldn't sell a hamburger for $1. Why is bad food cheap? Because the inputs are cheap." On a level playing field, with good strategies to open markets, both here and abroad, we can send these farmers into a virtuous growth spurt that can improve our health, improve our environment, and bring needed jobs and investment to our rural communities.

At a meeting in my office with four local farmers from Ohio, they were all open to switching the crops they currently produce to other crops so long as there is a market for them to sell to. As I saw up close with my

visit to the Millers and Peter Volz (as well as many other farmers over the years), it's a very tough business, and almost every single farmer is carrying loans and mortgages and equipment leases. They will work longer hours and more days than anyone in America, but they need a viable market to support their operations.

A few farmers, a growing number in fact, have been finding markets—like the Millers selling to Catullo's and Peter Volz selling to a bunch of restaurants, a CSA, and the farmers' market. But the big question is how to find a lot more markets for a lot more people. Will we continue to have a small amount of high-quality food available to the elites? Hopefully not. So, how can we develop these markets? And how can we give the farmers the support they need to grow and raise the kind of food we need to be healthy?

A CASE STUDY IN AGRICULTURAL TECHNOLOGY: PURE SENSE—NEW TECHNOLOGIES TO ENHANCE AGRICULTURAL RESOURCE MANAGEMENT

Just planting gardens will not be enough to get us from where we are today to where we need to be in the future. We have to make technology work for us. This means, with support from the USDA, investing in new technologies that can scale up sustainable farming, while stopping investments in technologies that simply support the status quo of our failing food system. The kinds of technologies I am talking about are for precision irrigation, conservation, biopesticides, low-energy systems, soil remediation, land replacement technology, vertical farms, and many others. An exploration of new technologies for sustainable farming would make an entire book in itself, but I want to give you a small taste of what is possible.

Pure Sense is a California company that has installed field-monitoring stations for more than 700 customers with more than 4,000 fields that cover 300,000 acres of land in the American West. The field-monitoring sensors deliver data on moisture levels of the soil, wind, temperature, irrigation status, how much water is getting applied, and how much is actually getting to the crop. It then delivers this information wirelessly to the farmer. It uses both hardware and software to reduce nutrient runoff and the wastage of water. Farmers have more information to make better decisions.

What does this really mean for the farmer and the environment? More than 500 fields where Pure Sense was used were analyzed in 2010–2011, and water savings averaged 16 percent and energy savings averaged 12 percent. This is why this company received the California Agriculture Game Changer of the Year Award in 2011.

This is why we need to invest in new technologies like the Pure Sense monitoring system. An approach like this is supported by farmers and environmentalists alike. The people at Pure Sense think if they could take these savings and apply them to the four million acres of specialty crops in California, we could save two million acre-feet of water and 885,000 megawatts of energy per year, increase agricultural yield by 10 percent, create 2,000 jobs in California, and increase revenue by $2.5 billion.

We have to be realistic. If we're going to shift our food consumption to regional farming, we need to upgrade the technology to scale it up—to make it efficient in the short term without inflicting the long-term damage to our environment that industrial agriculture delivers. We need technologies to help us conserve water and protect and replenish our soil. Let's move some of the engineers and scientists from monoculture and pesticide research to the polyculture crop technology side of things. Smart technology will put a rocket booster on the real food revolution!

One way is to support local nonprofits like Intervale. A good friend of mine, Chuck Lief, tipped me off to this group because he was chair of their board when he lived in Vermont. He is now president of Naropa University and is a very savvy businessperson who puts his business acumen to use for social causes. As he explained it to me, the people who started Intervale wanted to get farmers to switch crops and grow more local, whole, and organic foods. But the farmers always resisted because they did not feel they had a market to sell to, and they still had mortgages and loans to pay back to keep their business afloat.

Chuck said Intervale begins its work by first talking to people who could be potential customers to create some demand for the farmers' would-be new, healthier product. They visit hospitals, colleges, schools, and restaurants to persuade them to agree to buy a certain volume of produce from the farm. Once they piece together enough demand, they go to the local banks and get them to loan the farmer money to transition to the new crop. Bingo! With that support, farmers have little reason to say no, so they're off and running. I'm sure it is not without its bumps in the road, but this is the direction we need to move in.

One of Intervale's other innovative programs is the Food Hub, an online local food market that provides year-round delivery. It builds relationships with farmers and food processors and helps build the local economy for healthy food and healthy farms. Their Farm Program helps to remove barriers to market entry for start-up farmers, such as access to land, capital, and training. They share their knowledge of equipment operation and maintenance. By leasing land, equipment, greenhouses,

irrigation, and storage facilities, they help incubate new farmers and help them grow. They help keep the rent lower for new farmers, assist them in creating business plans, and provide ongoing mentorship.

I feel that part of rebalancing our national agriculture policy is to do whatever it takes to massively expand not-for-profits like Intervale. We have some programs that currently could make this happen, but they get very little money. Just imagine if we had more Intervales sprinkled in regions across America. In less than a decade we could have a good many farms converted to sustainable local farming that produce the kinds of food that keep us healthy and productive. This also keeps money and investments in our local economy: local farming, local jobs, and local control that meet the needs of the local community. No unruly government program, just strategic investments that can change the trajectory of a local food system and, in turn, our national system as well.

> **"You've got to know your food to conquer your health."**
>
> —Vani Hari

We can also create demand for farmers in other innovative, 21st-century ways. We need to find a way to get universities to buy food from local, regional, sustainable farms. We need to persuade the big chains that sell us our food to make more high-quality food available. Luckily some small progress is happening on this front. After years of pressure, Walmart announced in April 2014 that it would be partnering with Wild Oats to provide more affordable organic food in its

stores. There is some concern that the largest retailer in the world selling organic will lead to a degrading of the quality standards for organic, but overall this is a step in the right direction, and it came about because consumers and their advocates let the company know what they wanted.

Consider Vani Hari, the Food Babe, whose story you will hear more about on the next page. If we're going to create widespread markets for better food, we're going to have to bring the campaign to that string of chain restaurants on the strips outside every city and town. She's doing that.

In 2011, she wrote a piece calling out Chick-fil-A about the harmful ingredients in their sandwiches. She rallied support from her troops and received widespread national publicity, which caused Chick-fil-A executives to invite her to their headquarters in Atlanta. In late 2013 Chick-fil-A announced that they were removing dyes, artificial corn syrup, and—in a huge win for all consumers—they said that in the next five years they would only use antibiotic-free chickens. Chick-fil-A sold 282 million chicken sandwiches in 2010. In a few years, those will all be free of antibiotics, which means of course that they will have to come from farms that raise chickens without antibiotics.

She also took on Chipotle, which has been a very progressive company where food sourcing is concerned. (I encourage you to take a look at their video on YouTube called "Back to the Start." It's got a great Willie Nelson soundtrack, and I love the message.) But the Food Babe is out to keep everyone on their toes, no matter how progressive they've been. So, she started to bug Chipotle about exactly what was in their food. She kept at it with

Making a Difference: Vani Hari, the Food Babe

Vani Hari started out just leading a pretty standard life: she went to college, got a degree, and then got a job. She worked long hours and traveled a lot, which meant that her diet was built around what she could find on the road or around the office. What that meant is that she was eating pretty poorly. This was fine for a while, but soon she started getting sick, which is what kick-started her life as the Food Babe.

She began researching food to find out what's really in it, and she began her blog, Food Babe, to chronicle what she was learning. Her amazing website now has four million unique visitors each month, who go there to learn how they can eat the way they want to eat. She is one of the foremost healthy food advocates in America and has racked up a few heavy-duty success stories, including getting giant corporations—including Kraft, Subway, Chipotle, and Chick-fil-A—to take toxic ingredients out of their products.

Her deeply researched posts, interviews, and articles have gained the respect of her audience, so that they feel empowered to take action—in the form of boycotts, protests, and petition signing. This is what brings about those impressive successes. But her activism doesn't stop at corporations; it also extends into the political realm. In 2012, she was an elected delegate to the Democratic National Convention. During Secretary of Agriculture Tom Vilsack's speech, she stood at the front of the convention center holding signs that read, "Label GMOs!" This brought national attention to a very big issue.

calls, e-mails, and even visits to local stores. One worker accidently gave her some information and she found out that there were preservatives, genetically modified organisms, and trans-fats in their food. She posted all of this information on her website. Chipotle called and tried to explain to her that for secrecy reasons, she couldn't release it. The Food Babe didn't like that and started an online petition. That got their attention and a short time later they made public all of their ingredients, another move that will ultimately help to open markets for producers of healthy food.

Kraft knows who the Food Babe is, too. After finding out that Kraft had potentially harmful food dyes Yellow 5 and Yellow 6 in their macaroni and cheese—but only in America—she started a petition. There are over 350,000 people who have signed and have stopped buying Kraft products because of this.

Subway is also feeling the heat. Here is the petition letter that over 100,000 people have signed.

Dear CEO Fred DeLuca, Head of Global Marketing Jeff Larson, and Director of Operations Joe Chaves, Subway:

> Azodicarbonamide is a chemical used "in the production of foamed plastics." It's used to make sneaker soles and yoga mats. It's also used in almost all of your Subway sandwiches, is banned across the globe, and the World Health Organization has linked it to respiratory issues, allergies, and asthma. Some studies show that when heated, azodicarbonamide turns into a carcinogen.
>
> We ask you to remove azodicarbonamide from all Subway sandwiches, and make your

bread just like you do in other countries. We deserve the same safer food our friends get overseas.

We want to really "eat fresh," not yoga mat.

Boom! This is how we build a revolution!

▪ ▪ ▪

WHAT YOU CAN DO

One of the biggest things you can do to support the farm-to-table movement is simply to buy the products that these producers are making available. If the demand goes up, there will be more opportunities for people to move into production. With the Internet and smartphone apps, there are a lot of easy-to-access, free resources to use. The app Farm Stand (www.farmstandapp.com) can help you find a farmers' market in the U.S., U.K., Australia, or New Zealand. The organization Local Harvest (www.localharvest.org) put together a searchable database of small farms, farmers' markets, and community supported agriculture (CSA) programs that you can join. Plus there are dozens of other apps and websites, so explore and figure out what's right for you!

You can also use the USDA National Farmers Market Directory (search.ams.usda.gov/farmersmarkets), a listing of more than 8,000 farmers' markets (and growing!). Simply enter your zip code to see all the markets within a specified radius. The database is also searchable by a

variety of characteristics, including what types of products are offered.

Are you someone who would consider becoming a farmer, or do you know someone? There are many great resources online to help you get started. For example, www.beginningfarmers.org has links to all sorts of resources that will help you figure out the next step for everything from finding available land to getting funding to subscribing to good agriculture magazines and newsletters. They also provide a handy quiz that can open your eyes to some of the things you may have to face if you make the choice to be a farmer. Do you have what it takes? Find out at www.beginningfarmers.org/the-beginning-farmer-quiz-do-you-have-what-it-takes.

Another good resource for learning how to farm is the Stone Barns Center for Food and Agriculture in the lower Hudson Valley in upstate New York. The center offers volunteer, internship, and apprenticeship opportunities for aspiring farmers. Find out more at www.stonebarnscenter.org/about-us/opportunities/index.html.

Willing Workers on Organic Farms is a network of organizations (WWOOF) worldwide that connect people who want to live and learn on organic farms and small farms with people who are looking for volunteer help. WWOOF hosts offer food, accommodation, and opportunities to learn about organic lifestyles. Volunteers give hands-on help in return. Learn more at www.wwoofinternational.org.

Do whatever you can to elevate the profession of farming to a higher status in this country. Make sure farmers are included in career days at your school. Talk to your kids about the importance of the work they do. Make sure those around you understand what it takes for food to get to your table.

There are young people in the Future Farmers of America who are very enthusiastic about the new way of food. Check out the Facebook page for the FFA members for 100 percent organic, ecologically respectful, sound agriculture at www.facebook.com/FfaMembersForOrganicSustainableAgriculture.

Know Your Farmer, Know Your Food (KYF2) is a program being managed by the United States Department of Agriculture. According to their website (www.usda.gov/knowyourfarmer), their mission is to "support the critical connection between farmers and consumers and to strengthen USDA's support for local and regional food systems." They have great information about funding opportunities, plus they have other tools that can help connect you with your local agriculture purveyors. In fact, they maintain a list of food hubs, organized by state, so you can see what's available in your area (www.ams.usda.gov/AMSv1.0/getfile?dDocName=STELPRDC5091437).

AN URBAN FOOD REVIVAL

More than 80 percent of us live in cities now, and many of our cities are not bearing up under the strain. They need renewal and revival. Fortunately, one of the greatest ways to uplift the character of a city is to bring in more fresh food, at open markets and in urban farms. That's starting to happen in a big way, and we need it to happen in a much bigger way.

When we understand the connection between the food on our table and the fields where it grows, our everyday meals can anchor us to nature and the place where we live.

—Alice Waters

One thing that constantly impresses me about the real food revolution is that its impact will be felt in all corners of our country. When we think of food and farming, we mostly think of rural America. Commercials portray the wholesomeness of country living and use nostalgic pictures of days gone by to sell their manufactured, heavily processed food. But there is a changing perception about how a restructured food system can breathe new life into *urban* America. I see it happening in little pockets all over our country, and now it's time to fire up this part of our movement. The "fields" that Alice Waters is talking about can be, and increasingly are, very near where people live, and we need to see much more of that—not just for upper-middle-class foodies, but for everyone. An urban food revival can be a key element in urban renewal altogether. An exciting urban farming agenda can energize our cities by bringing needed investments and job creation to these hard-pressed areas while also providing the needed healthful food that will prevent illness.

One of the biggest things that has happened in the urban food landscape—and in some rural places—is the introduction of farmers' markets. These are fantastic for consumers, who get fresh food, and producers, who can cut out several layers of middlemen. And farmers' markets have taken care of some of the food deserts we talked about before. The campaign to develop these markets is going so well in some places that the opportunities for new locations are starting to become limited and farmers can only get to so many locations—New York City has 140 markets now, and is still growing!

One of my favorite experiences going to a farmers' market was in February 2014, when my friend Peter

Good, a landscape designer and builder who has lived in San Francisco for almost 35 years, took me to the oldest farmers' market in San Francisco, the Alemany Farmers' Market, which started in 1943 as a wartime measure.

To be in San Francisco is one of the more breathtaking experiences a person can have. The view from the Golden Gate Bridge over the bay is something every American should see at least once. Watching the sunlight dance on the choppy waters while the cool wind blows in my hair stops time for me. Every time I'm there I realize why people went out West to visit and never returned home. This market had the same effect on me.

The Alemany Farmers' Market sits in a low spot in the shadow of the intersection of routes 280 and 101. You drop down into it off of one of those famous San Francisco hills in the Bernal Heights neighborhood. Pete has been going to Alemany for as long as he can remember. He and his brother John, a physician in Oakland, go there every Saturday to pick up fresh fruits and vegetables for the week. The center of the market is long and wide, with about 15 stalls lining each side. Joe Montana would strain his arm throwing a football the length of this place. It's the perfect spot for strolling around on a Saturday morning.

Pete is like the mayor of the Alemany market. He knows most of the farmers and vendors there and introduced me to many of them. He knows which farmers have the best oranges, strawberries, or almonds—a good turn of events for me. It was fascinating to speak with the farmers and hear the stories involved in the seemingly simple process of setting up a booth at a space in a big city and selling produce. Most of the farms are second- or third-generation family businesses. These folks

love their farms and love providing people with good, healthy food. To come from rural northern California and arrive in San Francisco in time for the market, they have to leave the farm at about 3 A.M. They come early, set up, interact with customers all day, and then load up and head home. It's tough work, but not one of them complained. When they weren't hawking their wares, the farmers were joking around with the customers and teasing their competitors about whose product was better. Farmers' teenage children were working some of the stalls, often half-asleep behind the counters. Getting up that early is not generally on a teenager's agenda.

As we walked around, I couldn't help but take pictures for my wife. She loves going to the farmers' market, and this would have really pleased her. She would have gone crazy at the high piles of leafy vegetables and the riot of color in the bins of root vegetables. We tasted everything that was out: walnuts, almonds, grapefruit, cantaloupe, olives, olive oil, and cheese. And then, we hit the mother lode—honey! I know, honey *is* sugar, but the real stuff is so flavorful, it's like fine wine. You savor it; you don't gorge on it. As I said earlier, I'll never stop appreciating the magical process whereby the honey takes on the characteristics of the flowers the bees pollinate. Jan C. Snyder, who is 80 if he's a day, was selling every different kind of honey you could imagine, as well as bee pollen and royal jelly. And I purchased a jar of each flavor. Orange blossom, alfalfa, sage; you name it, he had it. My wife and I love to put a little honey in our coffee or tea in the morning. Or I'll have a little spoonful before a workout. This honey disappeared rather quickly once I got back to Ohio, and when I asked my wife where it all went, she said, "Your boy here can't walk past the

cupboard without taking a fingerful of it." Alfalfa is Mason's favorite, and he's got to do a little work on the savoring-versus-gorging thing. On the other hand, maybe he's developing some discrimination, because one day Andrea came into the kitchen to find Mason and his friend Albert sitting in front of five open jars of honey, doing comparison tasting!

There aren't any junk food or souvenir vendors at Alemany. It's simply a great outdoor market with good food. Its fans call it "the people's market" for its reasonable prices and to distinguish it from the huge market downtown by the bay, which is a bit of a tourist trap.

I can hear some of you saying that while this sounds great for California, other places don't have its climate and growing season. But there were farmers' markets in Pennsylvania and Ohio long before Alemany showed up in San Francisco. The Lancaster Central Market is the oldest continuously operating market in the country, having been incorporated right into the city's design in the 18th century. Cincinnati's Findlay Market, the oldest in Ohio, dates back to 1855. These old markets have many new friends now. Happily, the USDA started keeping track of farmers' market growth starting in 1994. There's been a healthy increase: from fewer than 2,000 in 1994, there are now more than 8,000, and counting. I'd love to see this number double in the next few years.

And I love the reforms in food stamp programs that my friend and colleague Representative Marcia Fudge is pushing. Marcia is a representative from Cleveland and chair of the Congressional Black Caucus. She is a tenacious and innovative leader who knows the importance

of getting healthy food into our urban centers. She pushes ideas like expanding the Supplemental Nutrition Assistance Program benefits when they're used to buy fresh produce at a farmers' market. These are the kinds of innovative solutions we need to support if we're to grow markets for our local farmers and help get rid of the food deserts that lead to obesity and ill health.

> "It is a lot cheaper to feed [people in need] and give them good nutrition than it is to take care of them on the other end."
>
> —Rep. Marcia Fudge

Another effort that is helping address a lack of food in urban centers is actually based on growing food in our cities. And I'm proud to say that the upper Midwest has become a hotbed (and a seedbed) for innovative urban agriculture projects. There are important programs in Milwaukee, Chicago, Cleveland, and Youngstown, plus so many more. Detroit in particular has made some real strides in this area. This town used to have a population of 1.9 million; now it's 700,000. They have 30,000 acres of distressed land in the city. These are pretty challenging times, but over the past few years Detroit has seen a number of urban growers and farmers begin to transform the city, including a Whole Foods urban program that I will discuss in the next chapter. The heartland is leading the way in urban agriculture in many ways. (Okay, so that's some serious regional pride, I know, but what can I say? I dig my bioregion.)

If we're going to drive ag investment into our urban areas, we need to turn old dilapidated neighborhoods

into vibrant centers of production, just like they've been doing in Detroit. And I don't believe we need any new money to do this. We simply need to shift some of the money that's going to make bad food cheap and use it to increase production in our urban areas. Plus we need to make laws and policies easier to navigate. Interestingly, Peter Good, the same friend who took me to the Alemany Farmers' Market, has helped two of San Francisco's urban ag innovators, Brooke Budner and Caitlyn Galloway, install an irrigation system at Little City Gardens, the small farm they established in the Mission Terrace neighborhood. Budner and Galloway were instrumental in causing the city to abolish restrictive zoning laws that inhibited the setting up of urban farms, and Little City Garden folk—along with many others urban farmers—successfully fought for the passage of California's AB551, which incentivizes the use of private land for urban ag, by allowing urban land where food is grown to be taxed at a lower rate.

The biggest mover and shaker I can think of in the urban ag movement, however, is Will Allen—he's like the head coach of urban farming. I met Will a few years back when he came to Youngstown to teach and inspire the people leading our urban ag efforts. He's a former professional basketball player, and he's super tall with a huge smile and a cool, engaging demeanor. He's a no-nonsense guy who will not sugarcoat the fact that it takes hard work and grit to make a farm work in an urban area. He was the son of a sharecropper and the first African American to play basketball at the University of Miami, so he knows how to face difficult odds and bring about change. He was one of *Time* magazine's top 100 most influential people in the world in 2010,

and has been honored by the Clinton Global Initiative. He's also a MacArthur Foundation fellow and one of the first people to show how urban farming can be a catalyst for growth in hard-hit cities like Milwaukee.

Growing Power, Inc., his nonprofit, supports communities in their efforts to grow safe, high-quality, affordable food. In addition to its inner-city farm, it has a 40-acre farm west of Milwaukee in Merton, Wisconsin; a project in Chicago run by his daughter Erika; and satellite training sites in Arkansas, Georgia, Kentucky, Massachusetts, Cleveland, and Mississippi. Altogether, Growing Power houses 20,000 plants and vegetables, and thousands of fish, chickens, goats, ducks, rabbits, and bees.

> **"If we can make small farming economically viable again, and if we can involve young people in this work, we can go a long way in teaching lessons of character that will produce more resilient and capable citizens."**
>
> —WILL ALLEN

It all began when Will retired, first from basketball and then from a corporate career, and took over responsibility for running his wife's family farm. In 1993, he went looking for a place to sell his produce in the city and stumbled upon a garden center with an adjacent three acres that turned out to be the last tract of land in Milwaukee still zoned for agriculture. As he began to work the land there, something wonderful happened: neighborhood kids, including some who lived in the largest low-income public housing project in Milwaukee, began to ask him for advice and assistance with growing their own vegetables. He saw that teaching and training

people in the neighborhoods to farm empowered them and helped to develop food security: supplying healthy food at affordable prices. Growing Power, which now has a staff of 65, has three main areas of focus:

1. In their six greenhouses, year-round hoop houses (structures that create a controlled growing environment, much like a greenhouse), and animal pens—and in their satellite locations—they demonstrate high-yield growing methods they've developed that can work in urban environments, using composting, vermiculture (using worms to enrich soil), and aquaponics (growing fish and food plants in a closed system).
2. They provide education and technical assistance worldwide for people who want to develop the skills to replicate what they're doing.
3. They're a substantial producer and distributor of produce, grass-based meats, and value-added products. They supply many restaurants and small grocery stores in Milwaukee, Madison, and Chicago. The Rainbow Farmers Cooperative they started gives a leg up to 300 small family farms across the United States in finding reliable markets for their products.

Will's organization has gone far beyond being a local initiative. It's a national (and even international) resource for city dwellers, including many underprivileged people, that enables them to make a transition

from being a consumer to a producer. When he visited Youngstown, he talked with us, among other things, about "food racism." In a similar way that banks redline poor neighborhoods, African American and Latino neighborhoods are denied wholesome food. He gave us the gospel of urban agriculture with the fervor of a preacher. I get really pumped up by that. Tilling soil, bending over plants, deepening our connection to the land and the animals that sustain us, feeding others—these can be deeply spiritual acts. In some ways, the food revolution is a revolution of the spirit.[3]

About the same time that Will Allen was setting up his organization, Les Brown, of the Chicago Coalition for the Homeless, set up Growing Home, in that city. Now run by Harry Rhodes (since Brown passed away in 2005), the organization operates a training program for homeless people to work at three sites: the Wood Street Urban Farm, the Su Casa Market Garden, and the Les Brown Memorial Farm in Marseilles, 75 miles south of the city. The produce is sold at a farmers' market in downtown Chicago and at on-site farm stands. It's also served in top Chicago restaurants and distributed in weekly food baskets through a CSA.

Rhodes is a founding member of the Chicago-based Advocates for Urban Agriculture, and he's very upbeat about the future of urban agriculture. In particular, he sees it as offering educational opportunities and a means of turning lives around. He told a reporter, "Experiential education can make a big difference. It helps people see food in ways they haven't before. When people come to

3 Will and I clearly see eye to eye, since he titled his 2012 memoir *The Good Food Revolution*, a poignant account of how he came to be a leader in this movement.

our farm stand in the inner city, or an open house, or a cooking workshop, they have a hands-on experience. Slowly attitudes change. Our graduates are different people than when they started. Not long ago, one of them said, 'When I first came here, I didn't even know how a vegetable grew. Now I'm growing my own.'"

> **"There's nothing like working in the soil to give you roots and a sense of belonging."**
>
> —HARRY RHODES

In Cleveland, the Rid-All Green Partnership operates an urban farm and educational center right in the heart of one of Cleveland's toughest neighborhoods. I visited it in the spring of 2014 and met Damien Forshe, one of three childhood friends who grew up in the old Kinsman neighborhood, a part of Cleveland known as the Forgotten Triangle. They've now returned to transform it. I toured their place with him and Marc White, their site manager and head farmer. I was blown away. As eight or nine young kids played basketball across the street, they laid out their vision for where they want to take Rid-All, which is one of Growing Power's regional training centers.

Rid-All has three acres, two greenhouses, and four hoop houses, and plans to expand across the street. In addition to growing fruit and vegetables, they make compost for their own land and to sell to local partners, and they raise tilapia. They run the greenhouses and hoop houses in the winter by mixing piles of compost full of beer waste (they make their own beer, too!), coffee grinds, and wood chips. The combination creates a

Making a Difference: Will Allen, Bringing Farming to the City

Will Allen, at 6'7", agile and muscular, was perfectly suited for basketball. He helped take his team to the state championship at Richard Montgomery High School in Rockville, Maryland, where his parents had a small vegetable farm and adjacent house allotted to them by the woman who employed his mother as a domestic servant. Both his parents had lived in South Carolina as sharecroppers, tenant farmers who gave up half their crop in return for the right to pick it. In his book, *The Good Food Revolution*, Allen recalls, "I didn't like the work of planting and harvesting that I was made to do as a child . . . I fought my family's history. Yet the desire to farm hid inside me."

After becoming the first black player at the University of Miami, he went on to have a short career in the American Basketball Association, and overseas. At 28, he left basketball and moved to Milwaukee, his wife's hometown, and eventually to her family's farm outside the city. While working as a star salesman, he began farming before and after work. One day, on a sales run for Procter & Gamble, he passed a derelict greenhouse with a FOR SALE sign near Milwaukee's largest public housing project. Not long after, at 44, he left his job. He was competitive and proud of his accomplishments in business, but work was "a project of my wallet rather than a project of my heart."

Allen nurtured his funky greenhouse into Growing Power, now an internationally recognized innovator in urban farming. "The work of my adult life," Allen says, "has been to heal the rift in our food system," which puts healthy food and the income from growing it out of reach of the disadvantaged, and "to create alternative ways of growing and distributing fresh food."

biomolecular reaction inside so it heats the pile to 150 degrees and keeps the inside of the houses warm.

In Youngstown, millions of dollars from the Neighborhood Stabilization Program (NSP), a granting program managed by the U.S. Department of Housing and Urban Development, have been spent to knock down 4,000 homes, focusing on the building up of a famous old neighborhood that used to be the home of Idora Park, which was an amusement park and a venue for big bands. As the steel mills closed and the city declined, this precious little amusement park and the neighborhood around it fell into a deep decline. Now, the city of Youngstown, along with the Youngstown Neighborhood Development Corporation (YNDC), have knocked down some old homes, refurbished a few others, and moved in new homeowners. YNDC, under the leadership of Presley Gillespie, the nephew of the great jazz trumpeter Dizzy Gillespie, brought some of the swing back into the Idora neighborhood. When you walk into his office, you should be prepared to be motivated either by a book he's reading or a saying he has up on his wall. He is pure inspiration. He comes out of the banking world and didn't want to run a nonprofit unless it could eventually sustain itself. He believes NGOs should use grants to help them get off the ground or supplement programming, but they need to create value by selling products or services that can keep them afloat.

One of the key elements of the Idora revival is to fill open spaces with hoop houses and raised plant beds and have kids work there in the summer as a learning experience. We were able to secure a few federal grants for YNDC, but what I love about Presley is that he drove the organization toward self-sufficiency. For example, they're growing lots of root vegetables in their lots.

Why? Because they get a premium price for them. For urban ag to work, it needs to be economically viable. If government can give a leg up by supplying funds to buy equipment, hoop houses to extend the growing season, and more land to increase yields, it can be done.

Of course, urban neighborhoods are not only deficient in agriculture. As I mentioned in chapter 4, they are also deficient in grocery stores, and particularly stores that offer fresh food. These food deserts lead to poor nutrition, and they also decrease the quality of life by decreasing opportunities for social connection. The market is not only a place to acquire food; it's a place to meet and greet. It's a center of community. The actor Wendell Pierce from the HBO series *The Wire* (where he played detective Bunk Moreland) and *Treme* (where he played trombonist Antoine Batiste) has started a grocery store in his native New Orleans, called Sterling Farms. He was motivated to do so, he says, because his hometown "was populated with food deserts and underserved communities where people didn't have access to fresh produce and fresh foods."

Pierce goes on to say that many people in America are used to hopping in the car and going to the grocery store, but for many others that means "hopping on a bus, having to walk, or having to go a little farther because they don't have one in their neighborhood. That shouldn't happen in America. So we see those neighborhoods as emerging markets instead of depressed areas. It's proving to be true."

Beyond the value of bringing more fresh food to people in underserved areas, Pierce sees great benefit in re-creating the market as a gathering place. One of

his greatest memories, he says, is "as we say in New Orleans, 'making groceries' with my mother on a Friday night. It was a ritual to go there . . . Seeing the men and the women getting off work—they had a little bar and restaurant in this place—and knowing the fishmonger, knowing the butchers, and having our favorite cashier. It was the equivalent of a town square. That neighborhood grocery is something that we take for granted; we don't realize it until we lose it."

In chapter 9, I talk about Whole Foods' initiative to have a store in inner-city Detroit, because I want to highlight the food education work the company is doing there. It's also good to see people like Wendell Pierce and his partners in Sterling Farms taking on the risk involved in entering the food marketplace because they want to see their city thrive again. May there be many more markets like Sterling Farms in cities across America.

ROOFTOP GARDENS

Rooftop gardens are a great source of fresh food in the city—and an energy saver. A University of Michigan study in 2006 compared the expected costs of conventional roofs with the cost of a 21,000-square-foot (1,950 m^2) green roof and all its benefits, such as storm-water management and improved public health from the absorption of nitrogen oxides. The green roof would cost $464,000 to install versus $335,000 for a conventional roof in 2006 dollars. However, over its lifetime, the green roof would save about $200,000. Nearly two-thirds of these savings would come from reduced energy needs for the building with the green roof.

A rooftop garden's key environmental benefits are impressive. Researchers estimate that a 1,000-square-foot (93 m^2) green roof can remove about 40 pounds of particulate matter (PM) from the air in a year, while also producing oxygen and removing carbon dioxide (CO_2) from the atmosphere. Forty pounds of PM is roughly how much 15 passenger cars will emit in a year of typical driving.

In addition, a modeling study for Washington, DC, examined the potential air quality benefits of installing green roofs on 20 percent of total roof surface for buildings with roofs greater than 10,000 square feet (930 m^2). Under this scenario, green roofs would cover about 20 million square feet (almost 2 million m^2), and remove annually about six tons of ozone (O_3) and almost six tons of PM of less than 10 microns (PM10), or the equivalent of the pollutants that could be absorbed by about 25,000 to 33,000 street trees.

One of the unexpected things that also comes from urban farming and having fresh food outlets and restaurants that serve local food is the development of regional delicacies. *Terroir* (from *terra*, Latin for "earth") is a French word usually used to refer to the environmental conditions, like soil and climate, that food is grown in that give it unique characteristics. It's mostly used when talking about grapes from a certain region that impart a character to a given wine. A Bordeaux has a certain taste based on its *terroir.* A Napa Valley cabernet or even the alfalfa honey that Mason likes is influenced by its *terroir.* I find it very exciting to think of how we can take classic American cities like Baltimore, Cleveland, Milwaukee, Detroit, Pittsburgh, Toledo, Minneapolis–St. Paul, and many others and breathe new life into them by making

some key investments into their *"terroir"* and the goods that they produce.

Each of these places has a different climate, different soil, and different ways they prepare the local food they grow. Let's start celebrating these great American cities and stop looking the other way and hoping the challenges they face will simply go *poof.* For one thing, let's reclaim depressing, blighted, and crime-ridden blocks and convert them into usable land. They won't be populated again, but they can be put to good use. The federal NSP has given billions of dollars to local communities to knock down dilapidated homes, clearing entire blocks, making the way for urban agriculture projects. But for the many cities that have lost their tax base and need assistance to make way for urban ag projects, there is not enough money to go around. We need more of this type of investment if we're going to ramp up the urban farming programs to a level where they can have an impact on the local food system.

■ ■ ■

WHAT YOU CAN DO

The most direct thing you can do to spur urban farming is to start doing it yourself! Everyone can start a garden. Even if you're in an apartment and only have a windowsill or a balcony, you can grow a variety of vegetables or herbs. (Basil, parsley, tomatoes, beans, lettuce, and turnips are just a few possibilities.) Search "growing herbs in small landscapes" or "growing herbs in an apartment,"

and you will find some great information to get you started. It's very easy.

Before you jump in, take a look at www.urbanfarmonline.com, which links to a great USDA zone map and crop profiles so you can find which crop varieties would grow best in your region. It even has a calendar for when you should plant your crops!

If you don't want to start from scratch, you can take part in community gardening. The American Community Gardening Association (communitygarden.org) provides would-be gardeners with all the information they could want, including a search function that can help you find a community garden near you.

If you're interested in starting a community garden, the American Community Gardening Association website can help you there, too. It outlines steps to organize a garden committee and the tools you'll need, plus it has considerations for finding a site for your garden. It also lays out helpful items such as garden agreements that can help you establish a community garden and best practices. You can also reach out directly to your city or town. Ask your city council or town council whether there are any ordinances in place for using vacant land as temporary or permanent gardens.

The EPA has a "Brownfields Program," which gives money to develop community gardens from abandoned properties. They've had a great deal of success already, with programs in all 50 states. One is the Allen Street Community Garden in Somerville, MA. The Allen Street

Community Garden was a former contaminated zone, which has now been developed into an oasis of flowers and vegetables. The garden even has a plot accessible for disabled individuals. There are so many residents wanting to join that there are more than 25 people on the waiting list. See http://www.epa.gov/brownfields.

To get involved in a brownfields garden, check out the "Where You Live" section at the EPA brownfields website to see if there are any clean-up programs or gardens near you (http://www.epa.gov/brownfields/bfwhere.htm).

To create a brownfields site in your community:

- Contact your state environmental agency, agricultural extension office, or state brownfield team to see if they have any assessed or prospective sites that would be applicable for funding. You can find a list of useful contacts here: http://www.epa.gov/brownfields/contacts.htm.

- If you already have a site in mind (and it needs to be assessed or cleaned), you will need to have your town apply for a brownfield grant fund.

- You can go to the EPA brownfields website to learn more about the program—they even have a business plan to help you along the way: http://www.epa.gov/brownfields/urbanag/pdf/urban_farm_business_plan.pdf.