

MICHAEL POLLAN



Summary of "The Omnivore's Dilemma" by Michael Pollan

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A Natural History of Four Meals

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Introduction

What should we have for dinner? Today, this question seems to be more complicated than ever before. As a culture, our native wisdom about eating has quickly been replaced by anxiety and confusion. Somehow, figuring out something as simple as what to eat for dinner now requires expert health. How is it that we need investigative journalists to tell us where our food comes from? For Michael Pollan, the absurdity began in 2002 when Americans suddenly developed "carbophobia." A wave of new diet books told Americans they could eat the once condemned red meat, as long as they laid off the bread and pasta. These high-protein, low-carb diets became widely popular and restaurants and grocery stores began changing their menus and restocking their shelves to reflect this new nutritional understanding. Suddenly, bakeries and noodle firms became bankrupt as people vilified carbohydrates. As a result, our culture has adopted a national eating disorder. We become shocked to hear about countries, like Italy and France, whose diet consists of the "unhealthy" foods that Americans avoid. Yet, they wind up healthier and happier. We show our surprise at this by calling it the "French paradox," because we find it impossible for people who eat toxic foods like foie gras and triple créme cheese to be slimmer and healthier! Instead, it might make more sense to call it the American paradox - that is, notably unhealthy people obsessed with the idea of eating healthy. Thus, we have created the Omnivore's Dilemma.

With all the advancements of today, we have an abundance of foods available to us. Just walk into your local supermarket, how many items do you see on the shelves? You can pretty much find whatever you want, wherever you are. Unfortunately, this means figuring out what's for dinner has become more overwhelming and even more confusing. Michael Pollan aims to answer the question of what to make for dinner by breaking down the three principal food chains that sustain us today: the industrial, the organic, and the hunter-gatherers. So if you're ready to find out what to make for dinner, then let's begin.

The Corn Takeover

As you walk through the aisles of the supermarket, you are surrounded by foods that are teeming with plants and animals. And no, not just in the meat and produce department. Sure, you have the fruits, vegetables, and even the cows and pigs, but you also have the obscure items: breakfast cereals, condiments, "home meal replacements," frozen peas, soft drinks, even the unclassifiable Pop-Tarts and Lunchables. Where do these foods come from? Plants? Animals? It might be hard to imagine, but each edible item in the supermarket is a link in a food chain that begins with a plant growing in a patch of soil somewhere on earth.

You likely see potatoes from Idaho and onions from Texas. As you move down the meat aisle, the locations become obscure. You see rib-eye steak from a steer born in South Dakota that was fattened in Kansas from grain grown in Iowa. But what about processed foods? They seem even more obscure. How can something like the Twinkie or the nondairy creamer be connected to a plant growing in the earth somewhere? Well, it can be done. When you start to follow the industrial food chain, the one that feeds most of us most of the time, you'll go on a journey to a variety of places. That journey may take you to great states across many miles, but you'll always end up in the same place: a farm in the American Corn Belt.

Corn is what feeds our steer that becomes our steak and the chicken, pig, turkey, lamb, and even our catfish and salmon! It's found in milk, cheese, and yogurt, which once came from dairy cows that grazed on grass. Now, they are eating corn. Processed foods are even more intricate manifestations of corn. For example, a chicken nugget becomes piles of corn upon corn. It contains chicken that has consumed corn, but it also includes modified corn starch that glues it all together. Even more, it includes the cornflour in the batter that coats it and the corn oil that fries it. As if that wasn't enough, you also have lecithin, the mono-, di-, and triglycerides that give it the attractive gold coloring, and even the citric acid that keeps it "fresh." All of these ingredients are derived from corn. Corn can be found in almost every item in the supermarket. It's in the coffee creamer, the frozen yogurt, the canned fruit, ketchup, soups, snacks, cake mixes, mayonnaise, mustard, the salad dressings, and even the vitamins. "There are some forty-five thousand items in the average American supermarket and more than a quarter of them now contain corn." This even goes for nonfood items - toothpaste, cosmetics, disposable diapers, trash bags, batteries, even the shine on the cover of the magazine! Even the supermarket itself, the wallboard and joint compound, the linoleum, the fiberglass. It's all a manifestation of corn.

How Corn Is Bankrupting Farmers and the Government

As you can see, corn is one of the most adaptable crops there is. It produces large harvests quicker than any other crop. In the late 1930s, hybrid seeds came onto the market that created corn with thicker stalks and stronger roots, both of which allowed the corn to stand straight up. As a result, farmers were able to plant their corn closer together, allowing them to fit more per acre and double their yields. George Naylor, a corn farmer in Iowa, explained: "the higher yield of modern hybrids stems mainly from the fact that they can be planted so close together, thirty thousand to the acre instead of eight thousand in his father's day."

Eventually, corn became king of Iowa thanks to the cheap prices and the invention of the tractor. According to Naylor, "Growing corn is just riding tractors and spraying," so as farms grew, the people who couldn't keep up went elsewhere. Furthermore, the government began lending a hand to those who grew it. As corn has gotten cheaper and cheaper, farmers have fallen deeper into debt and thousands of them file for bankruptcy each week. According to Iowa State University, it cost roughly \$2.50 to grow a bushel of Iowa corn; in October of 2005 Iowa grain elevators were only paying \$1.45. In other words, the Iowa farmer is selling corn for a dollar less than it costs him to grow it. *How is this possible?*

According to Naylor, farmers facing lower prices only have one option if they want to maintain their standard of living and pay their bills: they must produce more. Yet, the more bushels each farmer produces, the lower prices go and so the cycle continues. As impoverished farmers work to continue growing more corn, they are degrading the land, polluting the water, and bleeding the federal treasury. In fact, farmers like Naylor receive about twenty-eight cents a bushel, no matter the market price of corn. So if the bushel price falls to \$1.45, as it did in October of 2005, then the government would send farmers another \$0.42 in "deficiency payments." These federal payments account for nearly half the income of the average Iowa corn farmer. Additionally, these payments represent roughly a quarter of the \$19 billion U.S. taxpayers spend each year on payments to farmers.

With subsidies like this, the farmers have no choice but to flood the market with corn. Meanwhile, the price of corn keeps dropping.

The Surplus of Corn Goes into Processed Foods and the Animals We Eat

The landscape corn has made in the American Middle West is unmistakable. The plant itself has colonized some 125,000 square miles of the American continent, an area twice the size of New York State. You can even see this area from space, you can't miss it. But what happens to all that corn?

Today, farmers are producing so much corn, that they are creating more than the population can eat. As a result, the food industry has come up with ways to put corn into the bellies of Americans. Since there is a surplus in corn, much of it goes into what is called *wet mills*, where the corn is repurposed to create artificial ingredients like high fructose corn syrup and hydrogenated fat. Both of which end up in a variety of foods, like soft drinks, breakfast cereals, and dairy-free creamers. This use for corn makes it incredibly profitable for the food industry, who can extend the shelf life of its products, thus allowing food corporations to go home with more money in their pockets.

Of course, much of that corn goes to feed farm animals as well. Animals that later make it into supermarkets all around America. In the high plains of western Kansas, you can find where America's first feedlots were built. The landscape itself is full of cattle pens that stretch across the horizon, each one home to a hundred or so animals. Each one standing dully or lying around in grayish mud, that you eventually realize is not mud at all. The rhythmic sound of the chugging feed mill sounds twelve hours a day seven days a week, noisily converting America's river of corn into cattle feed.

The cow is used to help dispose of America's corn surplus. In fact, about 60 percent of the American corn industry goes to feeding livestock, and much of that feed America's 100 million beef cattle. Since World War II, America's food animals have undergone a revolution in lifestyle. No longer do they live on farms and ranches; instead, their new lifestyle is so different

that it needed a new term: CAFO - Concentrated Animal Feeding Operation. To maximize their efficiency, CAFOs cram as many animals as they can into cages and pens and automate much of the farm work, including the feeding. Of course, the economic logic is hard to argue with. The meat produced here has made the meat so cheap that Americans can now eat their favorite burger 3 times a day if they want to.

The Cost of CAFOs

While eating your favorite burger that is both delicious and affordable sounds great, that burger comes at a much greater cost than we realize. You see, raising animals the old-fashioned way made simple biological sense: You can feed them the waste products of your crops, and you can feed their waste products *to* your crops. Today, however, when animals live on farms like CAFOs, the idea of waste doesn't even exist anymore. The price we pay for these farms comes in the form of animal rights, sustainability, and even public health.

The entire process of these farms is biologically absurd. "Cattle, which have been naturally selected to live on grass, must be adapted by us - at considerable cost to their health, to the health of the land, and ultimately the health of their eaters - to live on corn, for no other reason than it offers the cheapest calories and around and because the great pile must be consumed." And it's not just cattle that are being fed this animal feed. Even carnivorous fish like salmon are being reengineered to tolerate corn.

Dr. Mel Metzin, a veterinarian, helps treat cattle in Kansas who are sick. According to Dr. Metzin, most of the health problems that afflict feedlot cattle can be traced to their diet. He explains, "They're made to eat forage, and we're making them eat grain." Of course, cattle can adjust, but at what cost? One of the most common ailments cattle experience in this grain diet is bloat. This bloat isn't just like any bloat, it can become so intense that their internal organs inflate like a balloon until it presses against the animal's lungs, which results in suffocation. Additionally, a corn diet gives a cow acidosis. Think of heartburn so intense that it can sometimes kill the animal. Usually, acidotic animals go off their feed, pant and salivate excessively, paw and scratch their bellies, and eat dirt. As a result, the animals experience diarrhea, ulcers, bloat, and many other diseases - even pneumonia and feedlot polio. In fact, cattle can only live on feedlot diets for no more than 150 days. Their systems can only tolerate so much. So how can farmers keep their cattle healthy, or healthy enough? The answer is antibiotics. Not only are cattle fed grain diets, but they are also pumped with antibiotics to reduce bloat and acidosis. Their unnatural diet of corn combined with antibiotics is leading to the development of antibiotic-resistant superbugs, which can eventually negatively affect the human population as well. After all, we are what we eat.

You see, many microbes that reside in the gut of the cow find their way into our food. These microbes get killed off by the strong acids in our stomachs; however, since the cows are now being fed a highly acidic diet, new acidresistant strains of *E. coli* have evolved. These bugs can survive the acids of our stomachs, then go on to kill us. By acidifying the diet of cattle and many other animals, we have broken down one of the food chain's most important barriers to infection. A USDA microbiologist, Jim Russel, found that switching a cow's diet from corn to grass or hay for a few days before slaughter reduces the presence of these acid-resistant strains of *E. coli* by as much as 80 percent. Unfortunately, this solution was seen as wildly impractical; instead, they simply try to sterilize the manure getting into the meat!

Growing Organically Seems Like the Perfect Solution but the System Still Needs Improvement

When you browse the aisles of supermarkets like Whole Foods, you find something different than your ordinary supermarket. You find food that is generally high quality, much of it "certified organic," "humanely raised," or "free-range." These labels are just that, a story. For example, take the "range-fed" sirloin steak, which is sold as a former part of steer that spent its days "living in beautiful places" ranging from "plant-diverse, highmountain meadows to thick aspen groves and miles of sagebrush-filled flats." Compare that to the usual sirloin you pick up at an ordinary supermarket that only comes with a number: a price. Which are you more likely to buy? Even if the range-fed sirloin is more expensive, shoppers are willing to pay a premium for a good story.

Whole Foods is a great example of how far the organic food movement has come. Originally the movement started as a grassroots initiative to solve the problems caused by industrial agriculture, including pollution, pesticides, and fossil fuel needed to ship produce all over the country. In the beginning, organic farmers simply sold their produce from stands on the side of the road and used natural, local compost or manure versus dangerous pesticides and chemical fertilizer. It was more expensive, but the benefits of organic produce were twofold: better for the environment and healthier for people. In fact, organic produce tends to taste better as well. For example, when tomatoes grow at their natural pace versus being sped up with chemicals, they develop thicker cell walls. As a result, the tomatoes have a more concentrated, delicious flavor.

While the organic movement and the range-fed beef all sound like great solutions to the problem of industrialized farming, organic doesn't always mean what we think it means. You see, as the organic movement continued to gain traction, the small organic farms selling produce on the side of the road couldn't keep up. They were forced to expand, which meant sacrificing the movement's original principles. The organic label that once conjured up images of simpler agriculture is now being substituted for tremendous warehouses that buy produce for dozens of stores at a time.

The organic industry has become worth over \$11 billion, and it grew rapidly thanks to the U.S. Department of Agriculture. The USDA helped move the organic movement along by developing lax standards that allowed companies to cut corners while still being able to use labels like "organic" or "free-range" that consumers are willing to pay more for. For example, some organic milk comes from factory farms where thousands of animals never encounter a blade of grass. Their days are confined to a fenced "dry lot," where they eat "certified organic" grain and are tethered to milking machines three times a day. Additionally, the reason much of this milk is ultrapasteurized is so those big companies can sell it over long distances.

Another example is that of Rosie, the chicken plastered on packages of organic eggs telling the story of her idyllic cage-free life on a farm. Turns out, the idyllic life is just another animal factory where she lives with twenty thousand other Rosies. Aside from her certified organic feed, Rosie's life is eerily similar to that of any industrial chicken. What about the free-range lifestyle advertised on the label? Well, there's a little door in the shed that leads to a narrow grassy yard. In this case, the term *free-range* seems like a bit of a stretch. In fact, Rosie isn't even allowed outside until at least five or six weeks old. After that, she is slaughtered just two weeks later.

The Solution Might Be Management-Intensive Grazing

So if corn is wreaking havoc on the health of animals, harming the environment, and impacting the health of humans, then what's the solution? The answer is management-intensive grazing. Originating in New Zealand, this farming technique involves moving animals to different pastures each day to promote optimum grass growth using the plant's natural growth cycle. When Allan Nation, the editor of *Stockman Grass Farmer,* went to New Zealand in 1984 and heard sheep ranchers refer to themselves as grass farmers, something clicked. He began to view the growing of food in a completely fresh light.

Grass farmers grow animals, whether it's for meat, eggs, milk, or wool but regard them as part of a food chain in which grass is the keystone species. They view farming in a completely different way and take advantage of the co-evolutionary relationship between cows and grass. A relationship that is completely ignored in industrial agriculture. You see, cows view grass much differently than the average person. When you see grass, you might just see the color green. A cow, however, sees the nice tuft of white clover, the emerald-green in the corner of her eye with the heart-shaped leaves, or the grassy spray of bluish fescue tightly cinched at ground level. To a cow, these grasses are as different as ice cream and broccoli. Cows have a favorite kind of grass the same way humans have a favorite kind of food. And when cows get to eat grass, and even their favorite grass, they aren't consuming harmful corn that makes them sick and bloated. They become healthier cows that produce healthier meat.

Even better, management-intensive grazing is also better for the environment. That is, they only rely on the energy of the sun. One such farmer states, "We should call ourselves sun farmers. The grass is just the way we capture the solar energy." One principle of modern grass farming is that farmers should rely on the contemporary energy of the sun instead of the fossilized sun energy contained in petroleum. In fact, "All agriculture is, at its heart, a business of capturing free solar energy in a food product that can then be turned into high-value human energy. There are only two efficient ways to do this. One is for you to walk out in your garden, pull a carrot and eat it...The second most efficient way is for you to send an animal out to gather this free solar food and then you eat the animal." In other words, keep it simple.

The Cost of the Perfect Meal

Of course, turning the industrial agricultural industry into more sustainable farming will take time, effort, and a complete rehaul of the system. However, there is something you can do today to help. You can begin by buying your meat and produce from small, local farms instead of large, industrial ones. Not only does buying locally reduce the amount of fossil fuels needed to transport food to consumers (sometimes spanning countries or even continents) but it also helps sustain small business owners and farmers rather than giant corporations.

Even better, the small, local farms don't need to produce large quantities of food. This means they don't need to rely on pesticides or other unnatural farming techniques to produce more food. Instead, they simply grow their produce seasonally and rely on the natural ecosystem rather than forcing the ecosystem to work for them. And lastly, local farmers are less likely to resort to unethical practices, like treating animals poorly to make a profit. Overall, buying locally is better for your health, the environment, and society as a whole.

Once author Michael Pollan completed his research on the farming industry, he went out in search of "the perfect meal." This simply meant that each item on the menu must have been hunted, gathered, or grown by him. He also made the rule that he must not spend any money and the guest list would be limited to those who helped him in his foraging and their significant others. Of course, he would cook the meal himself. In the end, preparing the meal took weeks and resulted in dangerous tasks like foraging for abalone off Northern California shores, a risk that could result in being slammed against rocks, being attacked by a shark, or suffering from hypothermia. He then spent the day of the dinner cooking for roughly ten hours.

Is this perfect meal something that you can do all by yourself? Certainly not. Even Pollan had help from others to create just one meal that was

made completely from the earth itself. He admits this meal is almost impossible to make, it is neither realistic nor applicable. But the story itself calls into question some remarkable ideas. Wouldn't it be incredible if we knew exactly what we were eating and where it came from? And how it found its way to our table, and what it *truly* costs. Imagine a world in which we simply eat by the grace of nature, not industry, and that what we're eating is never anything more or less than the body of the world.

Final Summary

Most of the food we buy from supermarkets today is produced industrially. This often means that the companies we choose to support are engaging in unethical practices that are damaging the environment and producing food that contains processed corn as a result of excess farming. By forcing animals to adopt a grain diet, they are becoming sick and unhealthy. Even worse, antibiotics are pumped into the animals to keep them healthy enough until slaughter. When humans consume these sick animals filled with corn and antibiotics, they risk becoming sick themselves. To solve the problem of the agricultural industry, farmers have turned to a more sustainable practice of organic farming to create healthier food. However, the USDA has made it so organic farmers can cut corners just so they can have the "organic" label on their food. In the end, the best solution to ensure you are buying ethical, healthy meat and produce is by buying from small, local farms that are less likely to engage in unethical farming practices.



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