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The Way We Live Now

## **You Are What You Grow**

By MICHAEL POLLAN

A few years ago, an obesity researcher at the [University of Washington](#) named Adam Drewnowski ventured into the supermarket to solve a mystery. He wanted to figure out why it is that the most reliable predictor of obesity in America today is a person's wealth. For most of history, after all, the poor have typically suffered from a shortage of calories, not a surfeit. So how is it that today the people with the least amount of money to spend on food are the ones most likely to be overweight?

Drewnowski gave himself a hypothetical dollar to spend, using it to purchase as many calories as he possibly could. He discovered that he could buy the most calories per dollar in the middle aisles of the supermarket, among the towering canyons of processed food and soft drink. (In the typical American supermarket, the fresh foods — dairy, meat, fish and produce — line the perimeter walls, while the imperishable packaged goods dominate the center.) Drewnowski found that a dollar could buy 1,200 calories of cookies or potato chips but only 250 calories of carrots. Looking for something to wash down those chips, he discovered that his dollar bought 875 calories of soda but only 170 calories of orange juice.

As a rule, processed foods are more “energy dense” than fresh foods: they contain less water and fiber but more added fat and sugar, which makes them both less filling and more fattening. These particular calories also happen to be the least healthful ones in the marketplace, which is why we call the foods that contain them “junk.” Drewnowski concluded that the rules of the food game in America are organized in such a way that if you are eating on a budget, the most rational economic strategy is to eat badly — and get fat.

This perverse state of affairs is not, as you might think, the inevitable result of the free market. Compared with a bunch of carrots, a package of Twinkies, to take one iconic processed foodlike substance as an example, is a highly complicated, high-tech piece of manufacture, involving no fewer than 39 ingredients, many themselves elaborately manufactured, as well as the packaging and a hefty marketing budget. So how can the supermarket possibly sell a pair of these synthetic cream-filled pseudocakes for less than a bunch of roots?

For the answer, you need look no farther than the farm bill. This resolutely unglamorous and head-hurtingly complicated piece of legislation, which comes around roughly every five years and is about to do so again, sets the rules for the American food system — indeed, to a considerable extent, for the world's food system. Among other things, it determines which crops will be subsidized and which will not, and in the case of the carrot and the Twinkie, the farm bill as currently written offers a lot more support to the cake than to the root. Like most processed foods, the Twinkie is basically a clever arrangement of carbohydrates and fats teased out of corn, soybeans and wheat — three of the five commodity crops that the farm bill supports, to the tune of some \$25 billion a year. (Rice and cotton are the others.) For the last several decades — indeed, for about as long as the American waistline has been ballooning — U.S. agricultural policy has been designed in such a way as to promote the overproduction of these five commodities, especially corn and soy.

That's because the current farm bill helps commodity farmers by cutting them a check based on how many bushels they can grow, rather than, say, by supporting prices and limiting production, as farm bills once did. The result? A food system awash in added sugars (derived

from corn) and added fats (derived mainly from soy), as well as dirt-cheap meat and milk (derived from both). By comparison, the farm bill does almost nothing to support farmers growing fresh produce. A result of these policy choices is on stark display in your supermarket, where the real price of fruits and vegetables between 1985 and 2000 increased by nearly 40 percent while the real price of soft drinks (a.k.a. liquid corn) declined by 23 percent. The reason the least healthful calories in the supermarket are the cheapest is that those are the ones the farm bill encourages farmers to grow.

A public-health researcher from Mars might legitimately wonder why a nation faced with what its surgeon general has called “an epidemic” of obesity would at the same time be in the business of subsidizing the production of high-fructose corn syrup. But such is the perversity of the farm bill: the nation’s agricultural policies operate at cross-purposes with its public-health objectives. And the subsidies are only part of the problem. The farm bill helps determine what sort of food your children will have for lunch in school tomorrow. The school-lunch program began at a time when the public-health problem of America’s children was undernourishment, so feeding surplus agricultural commodities to kids seemed like a win-win strategy. Today the problem is overnutrition, but a school lunch lady trying to prepare healthful fresh food is apt to get dinged by U.S.D.A. inspectors for failing to serve enough calories; if she dishes up a lunch that includes chicken nuggets and Tater Tots, however, the inspector smiles and the reimbursements flow. The farm bill essentially treats our children as a human Disposal for all the unhealthy calories that the farm bill has encouraged American farmers to overproduce.

To speak of the farm bill’s influence on the American food system does not begin to describe its full impact — on the environment, on global poverty, even on immigration. By making it possible for American farmers to sell their crops abroad for considerably less than it costs to grow them, the farm bill helps determine the price of corn in Mexico and the price of cotton in Nigeria and therefore whether farmers in those places will survive or be forced off the land, to migrate to the cities — or to the United States. The flow of immigrants north from Mexico since Nafta is inextricably linked to the flow of American corn in the opposite direction, a flood of subsidized grain that the Mexican government estimates has thrown two million Mexican farmers and other agricultural workers off the land since the mid-90s. (More recently, the ethanol boom has led to a spike in corn prices that has left that country reeling from soaring tortilla prices; linking its corn economy to ours has been an unalloyed disaster for Mexico’s eaters as well as its farmers.) You can’t fully comprehend the pressures driving immigration without comprehending what U.S. agricultural policy is doing to rural agriculture in Mexico.

And though we don’t ordinarily think of the farm bill in these terms, few pieces of legislation have as profound an impact on the American landscape and environment. Americans may tell themselves they don’t have a national land-use policy, that the market by and large decides what happens on private property in America, but that’s not exactly true. The smorgasbord of incentives and disincentives built into the farm bill helps decide what happens on nearly half of the private land in America: whether it will be farmed or left wild, whether it will be managed to maximize productivity (and therefore doused with chemicals) or to promote environmental stewardship. The health of the American soil, the purity of its water, the biodiversity and the very look of its landscape owe in no small part to impenetrable titles, programs and formulae buried deep in the farm bill.

Given all this, you would think the farm-bill debate would engage the nation’s political passions every five years, but that hasn’t been the case. If the quintennial antidrama of the “farm bill debate” holds true to form this year, a handful of farm-state legislators will thrash

out the mind-numbing details behind closed doors, with virtually nobody else, either in Congress or in the media, paying much attention. Why? Because most of us assume that, true to its name, the farm bill is about “farming,” an increasingly quaint activity that involves no one we know and in which few of us think we have a stake. This leaves our own representatives free to ignore the farm bill, to treat it as a parochial piece of legislation affecting a handful of their Midwestern colleagues. Since we aren’t paying attention, they pay no political price for trading, or even selling, their farm-bill votes. The fact that the bill is deeply encrusted with incomprehensible jargon and prehensile programs dating back to the 1930s makes it almost impossible for the average legislator to understand the bill should he or she try to, much less the average citizen. It’s doubtful this is an accident.

But there are signs this year will be different. The public-health community has come to recognize it can’t hope to address obesity and diabetes without addressing the farm bill. The environmental community recognizes that as long as we have a farm bill that promotes chemical and feedlot agriculture, clean water will remain a pipe dream. The development community has woken up to the fact that global poverty can’t be fought without confronting the ways the farm bill depresses world crop prices. They got a boost from a 2004 ruling by the [World Trade Organization](#) that U.S. cotton subsidies are illegal; most observers think that challenges to similar subsidies for corn, soy, wheat or rice would also prevail.

And then there are the eaters, people like you and me, increasingly concerned, if not restive, about the quality of the food on offer in America. A grass-roots social movement is gathering around food issues today, and while it is still somewhat inchoate, the manifestations are everywhere: in local efforts to get vending machines out of the schools and to improve school lunch; in local campaigns to fight feedlots and to force food companies to better the lives of animals in agriculture; in the spectacular growth of the market for [organic food](#) and the revival of local food systems. In great and growing numbers, people are voting with their forks for a different sort of food system. But as powerful as the food consumer is — it was that consumer, after all, who built a \$15 billion organic-food industry and more than doubled the number of farmer’s markets in the last few years — voting with our forks can advance reform only so far. It can’t, for example, change the fact that the system is rigged to make the most unhealthful calories in the marketplace the only ones the poor can afford. To change that, people will have to vote with their votes as well — which is to say, they will have to wade into the muddy political waters of agricultural policy.

Doing so starts with the recognition that the “farm bill” is a misnomer; in truth, it is a food bill and so needs to be rewritten with the interests of eaters placed first. Yes, there are eaters who think it in their interest that food just be as cheap as possible, no matter how poor the quality. But there are many more who recognize the real cost of artificially cheap food — to their health, to the land, to the animals, to the public purse. At a minimum, these eaters want a bill that aligns agricultural policy with our public-health and environmental values, one with incentives to produce food cleanly, sustainably and humanely. Eaters want a bill that makes the most healthful calories in the supermarket competitive with the least healthful ones. Eaters want a bill that feeds schoolchildren fresh food from local farms rather than processed surplus commodities from far away. Enlightened eaters also recognize their dependence on farmers, which is why they would support a bill that guarantees the people who raise our food not subsidies but fair prices. Why? Because they prefer to live in a country that can still produce its own food and doesn’t hurt the world’s farmers by dumping its surplus crops on their markets.

The devil is in the details, no doubt. Simply eliminating support for farmers won’t solve these problems; overproduction has afflicted agriculture since long before modern subsidies. It will

take some imaginative policy making to figure out how to encourage farmers to focus on taking care of the land rather than all-out production, on growing real food for eaters rather than industrial raw materials for food processors and on rebuilding local food economies, which the current farm bill hobbles. But the guiding principle behind an eater's farm bill could not be more straightforward: it's one that changes the rules of the game so as to promote the quality of our food (and farming) over and above its quantity.

Such changes are radical only by the standards of past farm bills, which have faithfully reflected the priorities of the agribusiness interests that wrote them. One of these years, the eaters of America are going to demand a place at the table, and we will have the political debate over food policy we need and deserve. This could prove to be that year: the year when the farm bill became a food bill, and the eaters at last had their say.

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