The Beekeeper's Lament: How One Man and Half a Billion Honey Bees Help Feed America

(Hannah Nordhaus)

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As befits one who seeks to be a man of wealth and taste (if I have to choose between them, the former), I aspire to live on a vast estate, leading the life of a gentleman farmer. That doesn't seem to be the immediate future, but we do have enough land to keep some chickens and grow some apples. This year, we are planning to add some honeybees, so I figured I should educate myself before taking the first concrete steps. *The Beekeeper's Lament*, a 2010 book by Hannah Nordhaus, which combines talk of bees and beekeeping with modest philosophy about both, seemed like a good place to start. I was not disappointed—I learned a lot, and I also found food for thought about modern agricultural and eating practices.

Nordhaus weaves together three threads: the occupation of commercial beekeeper, the agricultural industries that modern beekeeping largely exists to support, and the biology of bees (including, at the end, information about what most people are most interested in, honey). As part of this project, I have, so far, also read two other books, the lightweight, but not worthless, *Keeping Bees with Ashley English*, and a hyper-technical work, *The Beekeeper's Handbook*. Others are in the mail; I'm a big believer in getting book knowledge before embarking on getting practical knowledge. My wife and I are also taking a daylong class from the local beekeeper's association. From all these things, I figure we should be able to start our project without screwing up too badly, so I am not very worried about our own beekeeping, though doubtless there will be challenges.

I think beekeeping is something both liberals and conservatives can get behind. Not corporatist, globalist Republicans and Democrats, though—they no doubt think we should all stick to our comparative advantages, and buy only cheap honey cut with corn syrup from Wuhan, using cash earned from slaving away at some soul-sucking job that adds no actual value to society, thereby maximizing global GDP, the Omega Point of humanity. Other than for such morons, though, preserving

nature, eating healthy, and better grasping our place in the natural world should all be apolitical, even in these days of overpoliticization.

The focus of the book is a North Dakota-based commercial beekeeper named John Miller, a Mormon whose grandfather, Nephi Ephraim Miller, started the family tradition of beekeeping, and also invented migratory beekeeping, where bees are moved to follow flowers as they bloom. He was a smart man; among other wisdom he passed down was "A successful manager watches all details because the honey business is a detail business if success is to be obtained." Daymond John would agree. Nordhaus originally wrote a magazine article centered on Miller, and later expanded it into this book. While other beekeepers appear (like all American agriculture, it is an industry with ever-fewer, but larger-scale, participants), Miller is used as an exemplar for the type—in short, mostly men with somewhat difficult personalities, who like to do things as they want to do them, and who are in it less for the money, though it is a business, than because it's what they want to do.

The reader learns a great deal about bees, in particular how variable their output can be, depending not only on what flowers they take nectar from, but also weather, disease, competition, and so forth. Until the nineteenth century, beekeeping was a marginal business, done as a sideline by some farmers. Much honey was collected from wild swarms, not farmed. Modern beekeeping dates from Lorenzo Langstroth, a Massachusetts beekeeper born in 1810. It was he who designed the removable frame system for bees with which we are all familiar, recognizing after intensive study that a gap of 3/8 inch between frames ensured the bees would not fill the gap with new comb. Before that, skeps (conical hives, typically made of straw) were used, but those did not permit viewing the bees, and had to be destroyed to harvest honey, thus making beekeeping a mostly unprofitable business. Modern hives are basically unchanged from Langstroth's original—his design cannot really be improved upon, at least for commercial beekeeping (although home beekeepers can select among various modern designs that, at higher cost, allow easy honey extraction, which is something I may use). Langstroth's goal was to make it possible to keep bees as "a branch of the rural economy," and he succeeded beyond his expectations. Nordhaus extensively quotes him, and I have ordered an annotated copy of his classic work, still in print, *The Hive and the Honey Bee*.

Miller is based in North Dakota (from his website, his large operation is still operating in 2020), but he, as nearly all commercial beekeepers today, trucks his bees across the country to earn money by pollinating crops. The majority of target crops are in California, thus, the center of gravity in this book is California, and in particular, the almond industry in California, since that is what makes the entire modern beekeeping industry a viable business. Because of foreign competition in honey, mostly Chinese, an American beekeeper cannot turn a profit without also renting out his bees as pollinators. In fact, pollination earns most of the money, and the honey is a side business.

California produces eighty-two percent of the world's almonds, and almonds are eleven percent of California's agricultural output (although, contrary to general belief, agriculture is only a small percentage of California's GDP). In 2010, the crop was 1.5 billion pounds; now it's 2.3 billion. This sounds good; who doesn't like almonds (I'm particularly partial to marzipan, myself)? But, like all modern farming of both crops and animals, the almond industry is entirely artificial and hugely destructive of the natural landscape. Almonds require very specific growing conditions, and several hundred square miles in central California are ideal, as long as massive quantities of water can be supplied by irrigation. And growing them in this way is very profitable. No surprise, for several decades, more and more land has gone to planting regimented lines of almond trees. But, as Nordhaus says, it is not bucolic. "The valley smells like a brew of fertilizer, chemicals, and manure." This is an industrial operation.

It is pollination of almonds that requires bees to be imported by the billions. In a normal ecosystem, local insects and birds pollinate local plants. But almond trees require very intensive pollination—unlike most plants, the more pollination they get the more they yield. All the local insects and birds that might pollinate have either been killed by herbicides and pesticides or driven away by habitat destruction. Thus, this artificial landscape requires an artificial solution to pollination—trucking in bees every spring. This is how John Miller earns his living, and around this activity Nordhaus discusses the mechanics of keeping bees, everything from getting stung to bee breeding to, most critically, bee pathologies, including what we have all heard of, Colony Collapse Disorder.

But before we get to more about bees, let's talk about almonds. Obviously, like all modern agriculture, the almond industry is driven by economies of scale. But that does not answer the key question—to what end do we need economies of scale? The glib answer is in order to get more efficient production, and therefore cheaper goods (or, in some cases, more monopoly profits, but that is not at issue here). But what are the benefits of cheaper food? At one extreme, it prevents starvation or malnutrition, which is good. At the other, it permits fat people to gorge themselves while still having extra money to lead empty consumerist lives. It's pretty clear that the almond industry, and American agriculture as a whole, is very much on the latter side of the scale. Nobody is starving here, and malnourishment is by choice (it may be true that some children go to bed hungry, but that's because they have crappy parents, not some failure in the rest of America). When I was young, almonds (and all tree nuts) were a delicacy. Now, due to economies of scale, I can get five pounds for ten dollars. Is this an improvement? No, for the only upside is the ability to consume large quantities of what used to be luxuries. For the most part, this is just a form of gluttony, which is a vice that erodes moral fiber.

And that's ignoring the direct costs, which are huge, but often hidden or glossed over. As we'll see, migratory beekeeping is probably one cause of Colony Collapse Disorder. But there are other, more direct costs to our society resulting from industrial farming. For example, it's increasingly evident that massive use of chemical pesticides is a bad idea. I have elsewhere extolled Norman Borlaug and the Green Revolution, but let's not forget, that was not about using chemicals but producing better hybrids. We're told that pesticides are safe, but an awful lot of them I'm familiar with from the early 1990s (when I worked summers in a university entomology department that offered services to farmers) are now banned, though we were assured back then they were totally safe. Today, drenching millions of acres, not just crops but lawns and golf courses, in atrazine, a known endocrine disruptor that kills many amphibians, seems like a bad idea. Might the fifty percent drop in human sperm counts, and the general feminization of Western men, have something to do with that? We're not supposed to talk about it, though, just like all the other things our corporatist overlords don't want us talking about, such as mass immigration and the destruction of the

family by compelling women to work to fund a consumerist lifestyle. What all these things have in common is that a slice of the ruling class profits while the rest of society suffers, but is told it's OK, because the plebs can now buy more food, trinkets, and enervating, emasculating entertainment. Almonds are merely one example of this stupid system.

These direct costs are tied to increased risks that impose no costs until they do. For example, both modern apiculture and modern agriculture rely very heavily on the creation of monocultures. In bees, queens are bred for specific characteristics, which means genetic variance is sharply reduced (exacerbated by the destruction of wild bees, which we'll get to later). Monoculture in crops is even more extreme; we're just waiting for the next plant plague (so far, we've beat down several). Again, creating fragility in food production so we can stuff our faces for cheap today is no way to run a responsible society.

The same basic system, with even more moral component, exists in factory farming of animals. Why should billions of chickens, pigs, and cows suffer so Fatty McFatty can eat two half-pound burgers at a sitting, with a giant side of fries cooked in soybean oil (recently found to cause neurological damage, at least in mice), washed down with a Big Gulp made sickly sweet by high fructose corn syrup? No good reason I can fathom. All in all, I think food should be more expensive, at a minimum reflecting in its cost the externalities it imposes, and, in many cases, by forbidding imports to compete with American production, which would have the extra benefit of making sure America isn't overly dependent for staples on others (though I think we are not generally much dependent on others for true staples).

The counter-argument usually offered relies on the myth that it is expensive to eat healthy, so making food more expensive would harm the poor. This is a total falsehood, on display in the popular 2009 documentary *Food, Inc.* There, a four-person family in California seeks their dinner. An obese father and mother drive their two daughters around, one about sixteen and normal, the other about twelve and morbidly obese. Their dinner is six sandwiches and three drinks (no fries, which seems unlikely), for $11.48. They realize full well that eating like this is unhealthy, and offer ever-shifting excuses instead of what is clearly the real reason—fast food tastes good, because it's engineered to appeal to human addictions (which is one of the main points of the documentary).

The parents say they only have a dollar to spend per person, but they spend more than $2 per person on a meal (and if ordering as their body size makes it clear they normally eat, they would probably spend more like $5 or $6). They claim, "We don't have time to cook," because they work fifteen hours a day—but both children are clearly capable of cooking by themselves for the whole family. They then go to the grocery store. "Look at the broccoli. Too expensive, man." It's $1.29 a pound. They say pears are also too expensive, even though the younger daughter wants some. They're ninety-nine cents a pound; you could buy seven for the cost of one of the burgers. The simple reality is that this family could save a large amount of money, and help the father's Type II diabetes, by cooking simply at home. But they don't want to do it. If, though, each burger cost five dollars, as they should, they would. The current system is topsy-turvy and benefits nobody—except our noxious neoliberal overlords.

Those who profit from this aren't local farmers, for the most part. True, almond farming seems to still be largely a profitable family enterprise. But Gackle, North Dakota, Miller's home base, is dying like most of the small towns of the Northern Plains. Agricultural profits go to giant corporations, which further goose their profit by importing cheap, compliant labor from across our southern border. The effect is to destroy the invisible webs of our society. It is true, no doubt, that all mighty civilizations are built around cities (leaving aside whether ours qualify as centers of civilization any longer). But that must be balanced by power and prestige existing in the provinces, and a thriving working class in smaller towns and villages. Over-centralization of power leads to neither a humane nor a successful society, but organizing agriculture for economies of scale creates exactly that centralization, even though the land being worked is far from the halls of power—because to the cities is where the money generated goes. This is a big part of why we are now ruled by corrosive coastal elites, whereas in the past power was distributed across the country.

And, back to bees, we wouldn't need to truck bees around if not for destructive industrial farming. The honeybee itself is an import to the United States and irrelevant to agriculture until recently; it is only modern agricultural practices that require intensive, deliberate bee pollination. Even so, honeybees used to be mostly ignored, but in the

past fifteen years have gotten much attention because of the advent of Colony Collapse Disorder. Bees have long been subject to pests, but most, in the modern era, could be controlled when antibiotics arrived, and before that, spread was rare, as most bees didn't travel, and when they did, not at nearly the scale and concentration of today. The tracheal mite inaugurated the modern pestilences, followed by the ferocious varroa mite, both imported from Asia, and now CCD, which regularly kills a significant percentage of a beekeeper's bees, in an unpredictable pattern. If it appears that new pests are coming with greater frequency, that is correct, and Nordhaus blames the almonds, which also appears correct. It appears generally agreed today that CCD has not one cause, but several, including pesticides, pathogens carried by mites, and, as Nordhaus says, simply that migratory bees are forced into patterns of work versus dormancy that are unnatural—distorted patterns of "stimulation and dearth." Perhaps, too, the diet that arises from monoculture; different flowers produce very different honey, and no doubt there are unknown effects on bees from monoculture. Whatever it is, it appears here to stay, at least until we change our ways.

True, CCD is not quite the existential crisis that we are sometimes told it is. Doomsayers tell us that the result of CCD will be massive crop failures. But that's not true, because, as I learned to my surprise from this book, there are no wild, or feral, honeybees left in the United States, or none to speak of. They all disappeared before CCD arrived, in the 1990s, courtesy of the varroa mite. That is, no crops except a few intensively pollinated, and most of those are almonds, are currently pollinated by honeybees. All the honeybees we have left in the United States are commercial colonies, and they are not declining in number, they are increasing. So if those disappeared, it would not lead to starvation, merely declining production in some specialty food products.

In fact, it has been suggested that the cure for the varroa mite, and to allow wild colonies to rebuild, is simply to let it kill all the bees—except those fortunate few genetically resistant (not to disease, since it is not a disease, but because they have behaviors that lead to rejection of the mite from the hive). But we can't do that, because we'd have to pay more for almonds for a while, and not get cheap apples from Washington State. The horror. So we keep doubling down on excessive artificiality, without weighing costs and benefits. It will likely bite us.

In the meantime, though, I'll be making my own honey, and planting a wildflower meadow to encourage variety. Maybe I will set up some kind of drawing for readers to have a chance at winning free honey. Check back with me in a year!