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Growing and Producing Food

Slavery in the Fields

On Thanksgiving Day, 1960, Edward R. Murrow introduced his *CBS Reports* program with these famous words:

> This scene is not taking place in the Congo. It has nothing to do with Johannesburg or Cape Town. It is not Nyasaland or Nigeria. This is Florida. These are citizens of the United States, 1960. This is a shape-up for migrant workers. The hawkers are chanting the going piece rate at the various fields. This is the way the humans who harvest the food for the best-fed people in the world get hired. One farmer looked at this and said, "We used to own our slaves; now we just rent them."

Murrow's documentary, "Harvest of Shame," was talking about migrant farmworkers, primarily African Americans working in the fields of Florida and eventually making their way through the food belt up and down the southern tier of the United States. It aired at a time when the general public was becoming more aware of how food was grown and produced in the United States. Contaminated cranberries, huge fish and bird kills from unrestricted pesticide spraying, chemical food additives identified as possible carcinogens—each generated concern and calls for action. With the Murrow documentary, the horrific working conditions, substandard pay, and health hazards experienced by migrant farmworkers joined the list of concerns. Poverty and hunger were also about to be rediscovered: among the poorest of the poor were the farmworkers. Subject to myriad employer abuses, exploitation, racial profiling, and a history of policies toward immigrant labor that placed them in a kind of no-man's-land and without rights, farmworkers were a core part of a food system whose harvest of plenty masked a harvest of shame.[1]

By the mid- to late 1960s, issues regarding farmworkers had reemerged as a new cause. Thanks to Cesar Chavez and the organizing efforts of the United Farm Workers (UFW) union, farmworkers were seen as food justice champions fighting the poor working conditions in the fields. With their antipesticide campaigns, demands to include protections against pesticides in their labor contracts, and participation in a groundbreaking lawsuit against the use of dichlorodiphenyltrichloroethane (DDT), the UFW and farmworkers were also drawing attention to the environmental hazards of food production. UFW's slogan *Sí, se puede* (Yes, it can be done) inspired a Latino ethnic identity that energized immigrant and nonimmigrant communities alike. When Robert Kennedy joined Chavez in 1968 (just prior to Kennedy's announcement that he was running for president) during Chavez's twenty-five-day fast to bring attention to the farmworkers' bitter struggle with grape owners, it appeared that the struggle for farmworkers' rights had entered a new stage in the United States. As UFW and Chavez biographer Randy Shaw put it, the photograph of Chavez and Kennedy together on the day Chavez ended his fast became "a lasting image of the 1960s."[2]

In 1970, two years after the Kennedy-Chavez meeting and ten years after the broadcast of "Harvest of Shame," NBC aired another documentary, entitled "Migrant," about farm labor abuses in Florida's citrus groves. Touted by NBC as a sequel to "Harvest of Shame," the documentary focused in part on abuses related to Minute Maid, a division of Coca-Cola since 1960. Because of the continuing attention focused on farmworker issues, Coca-Cola first sought to have the documentary changed, but was unsuccessful. Then the company shifted gears to try to overcome the negative press about the role of Minute Maid and its parent company. Coca-Cola chairman Paul Austin, in a Senate hearing on farmworker abuses, proclaimed that the company found the Minute Maid workers' conditions "deplorable" and that he intended to convert the migrant workers from part-time to full-time status with a pay raise and adequate health care, as well as more sanitary dormitories. Austin also asserted that the company would create a national alliance of agribusiness to provide a new approach to migrant worker conditions. With the press now applauding the Coca-Cola chairman (*Time* magazine headlined Austin's speech "The Candor That Refreshes"), the company was able to secure an award for business citizenship from *Business Week*,

even though Austin's promised alliance never materialized. Moreover, the conditions on the ground changed only two years later, when the UFW led an organizing drive, accompanied by the threat of a Minute Maid boycott. The possibility of a boycott and strike terrified the image-conscious company and induced it to sign a union contract, which did far more to change conditions than any prior action by Coca-Cola had.[3]

Despite the UFW's string of victories in the 1970s, the union still represented only a modest percentage of farmworkers. In part, the plight of the farmworkers was linked to the structure of food growing and food production. Important elements of this structure included large, concentrated and industrial-oriented farming operations, below-minimum wages and lack of overtime pay for ten- to twelve-hour workdays, abusive labor contractors, and the systematic exploitation of foreign migrant workers from countries such as Mexico, Fiji, and Haiti and of African American and Native American workers. Beyond the contractors and the industrial farms stood the food industry behemoths—the fast food giants such as McDonald's, Burger King, and Taco Bell, the huge global retailers such as Wal-Mart, and multinational corporations such as Coca-Cola and PepsiCo, whose subsidiaries (among them Minute Maid and Tropicana) constituted the dominant players in the food system. These entities benefited from the abusive conditions on the ground but were permitted to peddle their products free of any responsibility or accountability to the farmworkers.

The idea of slavelike conditions seems as inconceivable today as it did fifty years ago. But stories of similar abuses continue to appear. Food researcher Eric Holt-Giménez recounted the case of labor contractors who had beaten, enslaved, and stolen the wages of twelve workers. These contractors were finally exposed and convicted of their crimes, but, as Holt-Giménez asserts, they were "just one of dozens of labor contractors that serve up poorly-paid day workers to the wealthy tomato growers of Florida . . . [who] supply over 90 percent of the U.S.'s winter tomatoes, and are the main suppliers for McDonalds, Subway, Taco Bell, Wendy's, Burger King, Kentucky Fried Chicken (KFC), Pizza Hut and other retailer and restaurant chains." Holt-Giménez also pointed out that the three main buyers of the state's tomato crop were Cargill, Tropicana . . . and Minute Maid.[4]

Holt-Giménez was describing conditions in Immokalee, a major center of agricultural production in Florida and ground zero for the modern-day slave trade. Immokalee is also where one of the most inspiring contemporary struggles centered on food justice has emerged. It was in Immokalee that a group of Latino, Mayan Indian, and Haitian workers, calling themselves the Coalition of Immokalee Workers (CIW), in early 1993 began exposing the horrendous farmworker abuses and organizing for change. Early in the organizing effort, the CIW also began to understand that bringing about change meant taking on some of the biggest players in the food system.

The situation in Immokalee and the CIW's struggle for changes in labor conditions occupy a central place in the food justice narrative. At the foreground of the Immokalee chapter is the story of three immigrant farmworkers, "Adan Ortiz," "Rafael Solis Hernandez," and "Mario Sanchez" (not their real names), who were set up as citrus pickers by a labor contractor named El Diablo. El Diablo, as a *Texas Observer* story remarked, "had become notorious for illegally hiring migrant workers from Mexico and using manipulation, financial coercion, deportation threats, and even violence (up to and including murder) to maintain a work force of essentially unpaid and terrified slave labor that had little or no recourse to the American legal system."[5] The workers were provided with "filthy crowded quarters [and] were constantly abused, threatened, and under the watch of the contractors," as John Bowe wrote in a 2003 article in the *New Yorker*.[6]

While enduring these conditions, the three immigrant workers were fortunate to become acquainted with Romeo Ramirez, a nineteen-year-old Guatemalan who was also employed by El Diablo and other contractors who worked with El Diablo. In reality, Ramirez was an undercover volunteer for the CIW, and his work in this capacity confirmed for the CIW that the workers were being kept in servitude, a situation similar to others the CIW had begun to document. With the help of the CIW, the three friends were able to escape. Subsequently interviewed by FBI agents, the contractors, including El Diablo, were arrested, charged with conspiracy, extortion, and possession of firearms, and ultimately convicted.

The El Diablo case represents just one of several that the CIW has documented. Following are some other examples:

• In 1997, two agricultural employers were prosecuted by the Department of Justice on slavery, extortion, and firearms charges and sentenced to fifteen years each in federal prison. The slavers had held more than 400 men and women in debt bondage in Florida and South Carolina. The workers, mostly indigenous Mexicans and Guatemalans, were also forced to work ten- to twelve-hour days, six days a week, for as little as $20 per week, under the constant watch of armed guards. Those who attempted to escape were assaulted, pistol-whipped, and even shot. The case was brought to the attention of federal authorities after five years of investigation by escaped workers and CIW members.

• In 2000, a South Florida employer was prosecuted by the Department of Justice on slavery charges and sentenced to three years in federal prison. He had held more than thirty tomato pickers in two trailers in the isolated swampland west of Immokalee, keeping them under constant watch. Three workers escaped the camp, only to be tracked down a few weeks later. The employer ran one of them down with his car, stating that he owned them. The workers sought help from the CIW and the police, and the CIW worked with the Justice Department in the ensuing investigation.

• In 2002, three Florida-based agricultural employers were convicted in federal court on slavery, extortion, and weapons charges. The men, who employed more than 700 farmworkers, had threatened workers with death if they tried to leave, and had pistol-whipped and assaulted at gunpoint passenger van service drivers who gave rides to farmworkers leaving the area. The case was brought to trial by federal authorities from the Department of Justice's Civil Rights Division after two years of investigation by the CIW.

Since 1997, seven slavery operations in Florida involving more than a thousand workers have been brought to light by the CIW.[7] Exposing these episodes contributed to the development of the CIW's extraordinary national campaign. While similar in some ways to the heroic organizing in the vineyards of Delano in the 1960s, the CIW's campaigns have focused on the role of the huge food industry players and fast food companies in influencing the wages, working conditions, and abuses experienced by farmworkers. The workers who picked the tomatoes for the large growers that supply the giant food companies and fast food

chains are still subject to what Laura Germino, the co-founder of CIW, has called the "modern-day version of slavery; [working in] the only industry in America where employers have that level of power and those types of abuses take place."[8] Fifty years after the broadcast of "Harvest of Shame," it is shocking that such abuses still prevail. But as the CIW organizers have also learned, in order for significant change to happen in the fields, the entire range of food industry players needs to be challenged and new kinds of organizing strategies need to be developed.

Farmworkers at the Margins

Immokalee is not an isolated case. Whether African American sharecroppers in the South, Chinese, Japanese, Filipino, Mexican, Haitian, or Mayan Indian workers in California, Texas, or Florida, or Dust Bowl migrants from Oklahoma and Arkansas during the Depression farmworkers have been exploited in the United States for more than a century. In the 1930s, failure to include farmworkers in the National Labor Relations Act (and its provisions regarding the right to form unions) and the Fair Labor Standards Act and the Social Security Act underscored the marginal status of farmworkers in U.S. farm and labor policy. In the heat of the most bitter and often violent struggles between farmworkers and growers during the Depression, major growers from the industrial agricultural heartlands in California and Texas would claim that their labor relations were harmonious. As Miriam Wells notes in her book on work and class issues in the strawberry fields in California, the growers would invoke "the image of the Midwestern hired hand, farmers and farmworkers . . . kneeling together in prayer and eating from the same table [while] unions were portrayed ominously manipulating the nation's food supply."[9]

The push by industrial agricultural interests in California, Texas, and Florida in part has reflected a desire to maintain control over the labor supply by controlling the flow of workers across the southern border of the United States. Immigrant labor has long been part of the farming economy, including in the most industrialized version in California, which dates back to the mid- and late nineteenth century. California food growers and producers first utilized Chinese workers, then Japanese, followed by Filipinos and Mexicans, as well as internal migrants from

the U.S. Midwest and South. Thereafter, and especially from the 1940s on, industrialized food production in the southern tier of states began to rely on a complex system of organized international labor flows that encompassed the guest workers as well as migrant workers, both legal and illegal.

The most elaborate of those systems was the Bracero or Mexican Farm Labor Program, initiated in 1942 to meet the need for manual labor during World War II. The Bracero Program represented a huge migratory flow; it sponsored nearly 4.5 million border crossings of sanctioned guest workers from Mexico into the United States from 1942 to 1964, when the program was officially discontinued. The number of *braceros* in the program peaked at 450,000 in 1956, with more than 90 percent working in the Imperial Valley and other Southern California counties on labor-intensive crops that required a seasonal workforce, such as tomatoes, lettuce, strawberries, and sugar beets.[10]

The Bracero Program was notable for its large size and because it established a type of linked legal, semilegal, and illegal status for farmworkers that could be used to keep wages low, allow for abuses, break any organizing or strike effort, and take advantage of the fear of deportation to maintain control. As farmworker historian Varden Fuller puts it, the Bracero Program "was the closest that California farm employers ever came to realization of the labor supply dream they cherished; it was an even better arrangement than the slave owners of the South had." *Braceros* were used when needed, were under federal authority (but saw only limited intervention by the government regarding conditions on the ground), and were fearful of complaining, given the real possibility of deportation.[11]

Even though the Bracero Program was discontinued, the use of a similar linked system of "illegal" and "legal" migrant labor in agriculture is still widely prevalent. The counties where migrant farmworkers are utilized are among the poorest in the United States, with the highest unemployment rates, the most people living below the poverty line, and the most severe forms of food insecurity. The uncertain legal status of farmworkers further marginalizes them, making them more vulnerable to poverty and food insecurity. Even when legal provisions are added, such as the Special Agricultural Worker provision in the 1986 Immigration Reform and Control Act, it remains an essential part of a cheap

labor system in which legal guest workers become undocumented ("illegal") workers if they fail to return to their country of origin or if they cross the border again looking for employment in the North.

The development of this multitier migrant labor system, particularly in California, where large-scale industrial agriculture first took root, came to mean that farmworkers, as historian Cletus Daniel puts it, would be subject to "irregular work, constant movement, low wages, squalid working and living conditions, social isolation, emotional deprivation, and individual powerlessness so profound as to make occupational advancement a virtual impossibility. To the typical large-scale farm employer in California, seasonal farm laborers had become faceless, nameless units of production."[12]

Of the three million people currently employed in agriculture in the United States, nearly a third, or one million, are undocumented farm laborers, mostly of Hispanic origin from Mexico and other South and Central American countries. Raul Delgado Wise, executive director of the International Network on Migration and Development, refers to this phenomenon as the "Mexicanization of U.S. agriculture." A majority of these migrant workers take seasonal jobs and are employed in three major food sectors: farming and fishing, meat and fish processing, and food service. These workers experience far higher rates of unemployment than other workers. Women farmworkers, for example, are three times more likely to experience unemployment than women workers in general. Almost all farmworkers—more than 90 percent—are also without health insurance.[13]

Mike Anton in an article profiling grape pickers in California's Coachella Valley, states that when they are on their own, farmworkers share stories of being cheated out of pay, forced to skip a rest or lunch break, and even fired if they discuss these issues outside the fields. In the sweltering fields, farmworkers are often without drinking water or shade, a situation that has led to severe illness and death. Women farmworkers in these fields have been sexually harassed by their employers and have been too afraid to complain for fear of losing their only livelihood.[14]

The hazardous conditions of farmworkers in the United States are further worsened by the exploitation of the most vulnerable of those workers in the fields: children. Children as young as fourteen years are allowed by federal law to work in agriculture, and children as young as

sixteen years are allowed to perform field work defined as particularly hazardous, whereas the minimum age for performing hazardous work in all other industries is eighteen (and sixteen for nonhazardous work). Often children as young as nine or ten accompany their parents to the fields, with the only restriction being that such work not occur during school hours. Since 1938, exemptions in the federal child labor law, the Fair Labor Standards Act, have excluded child agricultural workers from many of the protections afforded almost every other working child.

Although there are few estimates of how many children are working in agriculture, a 1998 study by the Government Accountability Office identified 155,000 youths between the ages of fifteen and seventeen years working in the fields, nearly all from Hispanic or other minority families. Farmwork is difficult, physically demanding, and sometimes backbreaking, creating particular health burdens for children that could become chronic physical ailments. Children are more vulnerable to pesticides and chemicals sprayed on fields than are adults. Yet there are no additional protections for children working in the fields.[15]

Where farmworkers are housed has also become part of the system of abuse and unhealthy living conditions. When employers have provided housing for farmworkers, the conditions have at times been scandalous, including barbed wire encampments and even five-by-five caves that the workers had to dig themselves, as a California Rural Legal Assistance lawyer documented. There continue to be problems of enormous overcrowding, leading to farmworkers' suffering from poor sanitation and proximity to pesticides. Such overcrowded units have included garages, sheds, barns, and various temporary structures. A California Agricultural Workers Health Survey (CAWHS) found that nearly half of the housing of California farmworkers was overcrowded and a quarter extremely overcrowded. In fact, nearly one-third of that housing was not even recognized by the local county assessor or by the U.S. Postal Service. "Many of these dwellings are irregular structures not intended for human habitation, and one-sixth (17 percent) lack either plumbing or food preparation facilities, or both," researchers Don Villarejo and Marc Schenker said of the CAWHS survey results. They also noted the handful of studies that have linked substandard or overcrowded conditions to such health problems as "gastro-intestinal illnesses associated with the

lack of a refrigerator and significantly elevated levels of anxiety and depression associated with poor living conditions."[16]

The poor status of farmworkers and the hazards and abuses they are subjected to receive scant attention compared with the attention lavished, relatively speaking, on food quality, food safety, accessibility, and affordability concerns. When food is purchased for home consumption or ordered at a restaurant, the conditions experienced by the farmworkers are not a visible part of the consumer's experience. Even for food advocates who seek out local and organic foods and are willing to pay a higher price for those qualities, ensuring justice at all levels of the food system has not become as central as the UFW, the CIW, and other farmworker organizing campaigns would like. For example, at Slow Food Nation 2008, a first-of-its-kind event in the United States that drew thousands of food activists and other attendees to taste and advocate for what the slow foodies call "good food," advocacy for farmworkers still remained a marginal issue. While applauding the concept of good food and opportunities for food advocacy, *Fast Food Nation* author Eric Schlosser pointedly asked the audience, "Does it matter whether an heirloom tomato is local and organic if it was harvested with slave labor?"[17]

It is a question that lies at the core of food justice advocacy.

The Canary's Song: Chemicals in the Factories and on the Land

When two young filmmakers made their way to the Occidental Chemical pesticide manufacturing plant in Lathrop, California, they intended to document chemical exposures in the workplace. The year was 1977, seven years after the passage of the Occupational Safety and Health Act. An emerging worker health and safety movement, allied with unions and environmentalists, was beginning to bring attention to the problem of toxic overload in the workplace. The toxic exposure came from the large number of chemicals being introduced each year and the more than 70,000 chemicals that were then already on the market and that had not been adequately evaluated for toxicity.

That huge volume of chemicals, including pesticides, had already emerged as a critical issue fifteen years earlier, when Rachel Carson presented her dystopic vision of a world in which pesticides and insec-

ticides were ubiquitous, "robins, catbirds, doves, jays, wrens, and scores of other bird voices" were silenced, and "the earth itself" was under threat. Carson was writing in a period when the extraordinary growth in chemical use and the lack of any effective regulations had created the kinds of huge and visible environmental and health impacts she so eloquently described. Many of the new pesticides, fungicides, and chemical fertilizers had been developed for military purposes during World War II, and their introduction for commercial purposes was a key element in the postwar agricultural restructuring and related environmental and community impacts on the land, the water, and the ambient environment. The huge fish kills and the deaths of hundreds of thousands of birds and other wildlife that resulted could be seen as an indicator, foreshadowing the kinds of issues the filmmakers would soon encounter in Lathrop regarding those who were producing and utilizing those same chemicals.[18]

Fast forward to 1977. As the filmmakers made their way to the homes of the workers and the bars where workers hung out in Lathrop, their filming unexpectedly developed into something like investigative journalism. At one home, a union shop steward spoke about the different pesticides that had been manufactured at the plant, from DDT to, more recently, 1-2-dibromo-3-chloropropane (DBCP), a soil fumigant produced in the United States since 1955. As he talked to the filmmakers, the shop steward kept trying to stop his nose from bleeding, an indication that exposure to these chemicals was involved. Interviews with workers in the plant over the next few days uncovered even more health problems. As the interviews accumulated, the filmmakers began to piece together a key pattern—workers seemed no longer able to have children. The filmmakers, along with the union local, decided to have the workers, all men, tested. The result: nearly all the workers were sterile. As they continued pursuing the story, the filmmakers realized they had stumbled on explosive information. They soon learned that research funded by the DBCP manufacturers that had been published in an obscure journal in 1961 (and known to the company but not the workers) indicated that DBCP exposure could lead to potentially irreversible testicular damage. Subsequent studies would link high DBCP exposure to other health impacts, such as stomach cancer and toxic effects on the female reproductive system.[19]

When the test results were released, all hell broke loose. First the local television stations, then the national networks, and then multiple news organizations picked up the story. Hearings were held about who knew what and when they knew it. Subsequent tests by the Environmental Protection Agency (EPA) found trace elements of DBCP in groundwater wells throughout California. Soon thereafter, recognizing that DBCP represented a water quality problem as well as an occupational hazard for the manufacturing workers, the EPA decided to ban DBCP, although the ban applied only to its manufacture and use in the United States. DBCP could still be manufactured for export to other countries. Absent from this whirlwind of activity were those who had been most exposed and most at risk, the farmworkers who had applied the DBCP in the fields.

When the filmmakers released their documentary, *Song of the Canary*, the DBCP story buttressed their argument that worker health and safety was as a critical social and environmental problem in an era of inadequate regulation, which focused on controls rather than on prevention (or on finding alternatives to pesticides, in this case). Meanwhile, exposure to hazardous toxic chemicals, including during pesticide manufacture and use, continued to increase as the number of chemicals introduced each year without significant toxicity review increased. The canary's song in the filmmakers' title referred to the accepted belief among mine workers that signaled danger when the canary they brought with them into the mine stopped singing. . The canary's song was the early warning system, and, as the filmmakers suggested, the workers at the Occidental Chemical pesticide manufacturing plant were the canaries, their sterility a warning of the presence of toxic chemicals in the workplace and fields.

But the warning signals from Lathrop were not fully heeded. The production of DBCP for use outside the United States continued after the Occidental Chemical plant male sterility scandal was exposed. Production was earmarked for Central American and African countries, where the chemical was used on various crops, including bananas. The volume of exports of dangerous chemicals from the United States remained staggering and included pesticides (among them banned pesticides, such as DBCP), even after their hazardous impacts became widely known. In 1995–1996, almost twenty years after the Occidental Chemical workers' interviews, 21 million pounds of the banned pesticides, or

an average of 14 tons per day, still left U.S. ports for other countries. This amount represented as much as two-thirds of the DBCP that had been produced for use in the United States at its peak shortly before the pesticide was banned by the EPA. Other pesticides, not banned but identified as extremely toxic, were also exported during 1995–1996 in large volumes—more than 48 million pounds or 24,000 tons. As two scientists wrote in the *International Journal of Occupational and Environmental Health*, most of the pesticides were shipped to developing countries, "despite extensive evidence of the need to restrict [their] export."[20]

In the United States, the production and use of toxic chemicals continued, with many applied to food, including DBCP substitutes such as ethylene dibromide (EDB), a soil fumigant that was identified as a carcinogen and mutagen and was banned by the EPA in 1983–1984, and 1-3-dichloropropene (Telone), also a fumigant and a significant air quality hazard. Other DBCP substitutes included metam-sodium, whose use became a major issue after an accident in which a tank car filled with the pesticide spilled into the Sacramento River and killed all aquatic life up to forty miles downstream from the spill, and methyl bromide, which was also an ozone depleter and contributor to global warming. Although methyl bromide was banned by the EPA in 2005, the agency continued to exempt it for use on certain crops, such as strawberries.[21]

Yet soil fumigants such as DBCP are just one group of the many hazardous substances and routes of exposure when it comes to chemical inputs in the fields. Deaths and injuries from spraying, handling, and even inadvertent ingestion of toxic chemicals are a constant risk. Workplace exposures and community exposures are linked: workers bring pesticide residues home on their clothing and may live in homes adjacent to fields and exposed to pesticide drift; and water and air contamination turn those homes and their communities into an extension of the hazardous workplace. Non-chemical-related hazards such as heat exhaustion and lack of water or adequate bathroom breaks are pervasive in the industry as well. A few of the more egregious field-related hazards have been successfully challenged by farmworker advocates. In one case, California Rural Legal Assistance's efforts led to a ban of the short-handled hoe. That tool had been used in California for several decades to thin lettuce, and its use had resulted in numerous serious permanent

injuries, with one survey reporting that nearly 90 percent of workers who had used the hoe suffered health problems. But even with such successes new problems have arisen, such as the continuing use of stoop labor or the new DBCP substitutes, as workers often fail to report problems out of fear of losing their jobs or other forms of retaliation.[22]

Although numerous studies on farmworker hazards exist, including studies on chemical exposures, new kinds of health impacts are identified on a regular basis. For example, scientific studies now link pesticide exposure to a neurodegenerative process that leads to Parkinson's disease. A 2009 study documented exposures to two pesticides within 500 feet over a twenty-five-year time frame that resulted in as much as a 75 percent increased risk for Parkinson's disease. The researchers also reported that such exposures could have occurred a number of years before the onset of symptoms leading to a diagnosis of the illness, so that young children exposed while working in the fields (or exposed in utero) would also be more vulnerable to Parkinson's disease later in life.[23]

The hazards in the fields, including those associated with rapidly expanded pesticide use, have become an even more extensive global phenomenon. In the rural community of Kamukhaan, Philippines, for example, banana plantation workers and local residents reported symptoms such as skin diseases, weakness, dizziness, vomiting, coughing, and difficulty breathing, as well as other serious ailments such as asthma, goiter, and cancer. A 2003 clinical study of 170 residents confirmed what the residents had been saying. Yet the plantation failed to support medical assessments or treatments, and the workers, who were paid as little as $1.10 a day, could not afford it themselves, leaving their health issues untreated.[24]

The pesticide poisonings in Kamukhaan and elsewhere have led to an international grassroots campaign to ban the aerial spraying of pesticides on banana plantations not just in the Philippines but throughout Southeast Asia. This effort has involved more than 150 groups in eighteen countries. Various farmer groups and antipesticide advocates have also held a People's Caravan—"Citizens on the Move for Land and Food Without Poisons!"—to expose the effects and dangers of pesticide use as one major theme threatening farmer livelihoods, food security, and the production of safe food. A pattern can be identified. Whether they are workers at the Lathrop chemical plant, farmers in Kamukhaan,

farmworkers in Immokalee, or strawberry field workers in the Central Valley of California, those who grow and produce our food, both in the United States and abroad, have become, as the *Song of the Canary* filmmakers suggested, the new sentinels, warning of the hazards of how food is grown and produced in the contemporary food system.[25]

Turning Farms into Factories

There is a strong tradition in the United States of supporting the small family farmer, who is seen as having a special relationship to the land. This tradition is often linked to the Jeffersonian concept of the yeoman farmer. However, family farming as a vocation and a livelihood has been under stress in the United States for more than a century. Periodic downswings in the economy have had major impacts on small-scale farming and rural economies, leading to bankruptcies and migrations, at first from rural areas to the cities, and then from farm-dependent states and regions to other parts of the country.

Migrations in which farms were abandoned in places like Oklahoma and Arkansas and those who left became migrant workers in California, described in Steinbeck's *The Grapes of Wrath* and captured in Dorothea Lange's photographs of Dust Bowl farmers taken in the 1930s, became the visible manifestations of the economic decline of the small family farm. But even with periods of relative prosperity and increased farm production, the number of small farms, along with midsized multigenerational farmsteads, has continued to decline, up to the most recent Census of Agriculture in 2007. For example, between 1940 and 1960, when the industrialization of agriculture became more pronounced, the number of operating farms in the United States declined by more than half, from more than six million to three million. During the 1980s a further restructuring of the farm economy and changes in key sectors such as poultry and beef coincided with the most widespread crisis in small farm viability since the Great Depression, this time reflected in Hollywood movies, poignant new folk songs, and musical fundraising efforts.[26]

The decline then leveled off, with a small, 4 percent increase in the number of farms, particularly very small farms, reported in the 2007 Census of Agriculture. The 2007 data also indicate a growing diversity among farm operators, including more women farmers and more

Hispanic, Asian, and Native Hawaiian farmers. Some of the recent growth in farming can be attributed to beginning farmers or farms that started operating between 2003 and 2007, which tended to be smaller (200 acres or less) and to have much lower annual sales (averaging approximately $71,000).[27] Many small farmers, particularly those new to farming, are also engaged in occupations other than farming and generate income from non-farm sources. Whereas the large commodity growers and other globally oriented food players involved in turning crops into products are highly subsidized, the emerging and smaller-sized farms are not. How, then, can these small-scale farms, which sustain women farmers, people of color, lower-income farmers, and immigrant farmers, continue to remain viable and compete in the marketplace?

The stress on farming as a vocation and the disappearance of the family farm cannot be separated from the changes in the dominant system of agricultural production that has evolved since the late nineteenth century. The industrialization of agriculture took root more than a hundred years ago with the huge wheat farming operations in California and the West that were marked by large land holdings, efforts to monopolize water supplies, a dominant role played by finance capital and the railroads, and the use of temporary or seasonal labor in the form of successive waves of migrants working in the fields. Industrial agriculture in places like California was also a potent political force influencing state and local governments and, when challenged by organizing in the fields, proved capable of developing into a virulent, vigilante-like organization. This could be seen with groups like California's Associated Farmers organization, which in the 1930s relied on violence and political strong-arm tactics such as antipicketing and anti-assembly ordinances.[28]

By the 1950s, industrial agriculture had expanded its reach and established new relationships that further transformed the nature of food growing and production. New fossil fuel–based energy and capital-intensive inputs such as pesticides, fertilizers, and more advanced machinery, combined with long-distance transportation and more extensive marketing, helped change the face of agriculture throughout the country. Industrial farming operations became dependent on off-farm corporations for farm inputs and marketing avenues. Farming itself was reconfigured as an activity whose product—the food grown—became a type of industrial input for the increasingly processed, reformulated, and packaged end

product. By the 1950s, growing food thus was just one element in what increasingly came to be called agribusiness, in which control of farm production and distribution was exerted by a few firms that had integrated the more specialized operations such as food processing and marketing. As Kendall M. Thu and E. Paul Durrenberger point out in their discussion of the transformation of hog farming, such a massive change in control of the farm means that "ownership becomes separated from the community so that profits are externally defined and assigned with a purely economic denominator while local benefits and costs that include quality of life, the environment, and human values such as mutual trust and sharing, are largely ignored."[29]

Perhaps the clearest illustration of the transformation in how food is grown and produced can be seen in the dairy, meat, and poultry sectors. For example, the huge cattle operations of the nineteenth century and the rise of the massive and highly concentrated meat-processing industries of the early twentieth century in places such as the stockyards and packing houses of Chicago prefigured the more recent reconfigurations of animal production. Upton Sinclair's *The Jungle*, published in 1906, was a chilling yet generally accurate portrayal of the raw, brutal, and hazardous conditions both animals and workers faced in the Chicago stockyards. Packingtown in Chicago was an environmental disaster zone, and the working conditions for many of the Polish, Lithuanian, and Slavonian immigrant workers who filled the slaughterhouses, the primary focus of Sinclair's novel, were not just dangerous but horrific. But conditions in the meatpacking industry also provoked major organizing campaigns and political debates that eventually led to antitrust intervention to break up some of the concentration in the industry and reduce some of the worst abuses and hazards.[30]

Up through the 1940s and 1950s, animal farming, whether of hogs, cattle, or chickens, remained a distinct and relatively small operation that allowed the farmer to maintain some degree of independence even though subject to the uncertainty and instability of production and marketing. Drastic industry changes in the 1950s, 1960s, and again in the 1980s, however, redefined what it meant to be an animal farmer. In each of these sectors a massive industrial system arose, complete with vertical integration from farm to market that extended globally, with highly concentrated ownership and enormous changes for the workforce that

included a degree of exploitation and hazards sufficient to pose a modern-day version of Packingtown. Industrialization was accompanied by a geographic shift from Midwestern urban centers like Chicago to rural towns in the Southeast and the Great Plains, and the creation of new environmental disaster zones that extended into waterways, the land, and the ambient environment. This new system in turn recruited an unskilled workforce and paid wages "so low that few local residents [would find] the jobs attractive," and therefore relied on predominantly immigrant workers with few or any rights. Living and working in environmental disaster zones further subjected these workers to an array of adverse health impacts. For the dominant forces in the food industry, then, the farm has become the factory, and the examples of dairy, hogs, and chickens, discussed in the next sections, show why.[31]

Cows: "A Great Place to Live"?

"What attracts people to Tulare County?" asked a 2009 promotional document entitled "A Great Place to Live" and issued by the county's Department of Education. The answer: "A great environment for new and growing business . . . a thriving alternative for families looking for small-town charm with big city advantages."[32] Yet Tulare County is also the site of controversial mega-dairies that produce more milk and have more cows per dairy than any other county in California. The half million cows in the county outnumber the people. Many of these cows are kept in confined places, creating an unbearable stench that can drift some distance. The manure storage in large tanks or unlined ponds or lagoons, the confinement of large numbers of cows in free-stall barns or outdoor dry lots, the use of purchased feed instead of the hay or other fodder typically fed to cows in small dairies, and the use of a largely immigrant labor pool exposed to a wide range of hazards have fundamentally transformed the landscape of Tulare County in little more than three decades.[33]

The conditions of daily life in Tulare County have changed along with the growth of the mega-dairies. The county's poverty rate is the highest of any county in California and among the highest in the United States. Residents are subject to unhealthy air, including ammonia emissions and particle pollution from the mega-dairies that can inflame respiratory

tissues and trigger asthma, bronchitis, and allergies. Tulare's schoolchildren become ill from pesticides sprayed on fields close to their classrooms, and the county has the highest number of pesticide poisonings in the state. The health and environmental impacts from the mega-dairies, and the wide array of pesticides and other hazards associated with food growing and food producing, make Tulare County not such a great place to live.[34]

For Tulare County, the mega-dairy is a relatively new phenomenon. In the 1950s and 1960s, the rise of what was then called "industrialized drylot dairying" tended to be concentrated on land at the urban edge or in nonresidential areas within city limits, in places such as Los Angeles County in California and Maricopa County in Arizona. These drylot dairies differed from the small dairies of the Midwest and Northeast in the use of confined lots, feedstock imported from outside the region, land concentration, and a greater number of cows. Such urban-edge dairies averaged between 300 and 600 cows but were smaller than the huge operations of 10,000 cows or more that subsequently came to characterize the contemporary mega-dairy.[35]

From the mid-1960s to the 1980s, many of the Los Angeles County operators sold their land to developers as new housing developments at the urban edge extended to the dairy farms. Some of the dairy operations then relocated or were purchased by large landowners in California's Central Valley. As a result of this shift, by 1993 California had surpassed Wisconsin as the largest dairy producer in the country. Between 1974 and 1997, the number of milk-producing cows in Tulare County doubled even as the county lost about 40 percent of its dairy farms. This growth in milk production in California and Tulare County occurred despite U.S. dairy policy, through programs such as the Dairy Herd Buyout, which were designed to reduce rather than increase milk production.[36]

As this expansion continued, legendary environmental justice lawyer Luke Cole received a call in 1998 from residents of Arvin in Kern County, south of Tulare. Cole was told about plans involving the Borba Dairy, which sought a site in an area that was already subject to multiple health and environmental hazards from pesticide exposures and whose residents had previously been represented by Cole's environmental justice organization, the Center on Race, Poverty and the Environment (CRPE). With a group of interns, Cole decided to investigate, and proceeded to uncover

some astonishing information. To begin with, the Borba Dairy, with its plans for 14,000 cows and their potential health and environmental impacts, was not required to undergo an environmental impact review (EIR), an exemption that was itself "blatantly illegal," according to Caroline Farrell, one of CRPE's attorneys. Moreover, an even larger operation that initially involved as many as 55,000 cows in adjacent Kings County was also requesting a Negative Declaration suggesting no significant environmental impacts as a way to avoid an EIR. CRPE immediately and successfully filed suit to force an EIR process for both operations.[37]

By then, several community groups had begun to mobilize and had joined with CRPE and similar groups, such as the California Rural Legal Assistance and the Sierra Club, to mount challenges around new dairy proposals and the planning process that had failed to address their impacts. In 2000, Tulare County imposed a moratorium on new mega-dairies, which remained in place until 2004. But although these actions slowed dairy developments, expansion continued, and it didn't stop the county from proudly celebrating its status as the headquarters for the mega-dairies.[38]

While the community mobilizations in Tulare and other parts of the Central Valley helped energize and bring together environmental justice and food justice advocacy groups, the challenges for these groups remained enormous. "The dairies are still the power in Tulare County. They pride themselves having more cows than people and maintaining their status as the number one dairy county in the state," argues Farrell. While the development of new dairies has been slowed, the continuing manipulation of the market that intensified with the milk glut and sharp decline in prices in 2009 has continued, as has the squeeze on small dairies and further dominance of the mega-dairies. For change to come to Tulare, to make it at least a better place to live, would require, as Farrell puts it, "a change to the way dairying and agriculture have come to be practiced."[39]

Swine: Stench and Sludge

Similar to dairy cows in California, hogs provide another cautionary story in places like eastern North Carolina, the Tulare County of hog production and also the home of predominantly poor African American

communities. Food production and farming in North Carolina, including hog farming, had been associated with small, independently owned farms scattered throughout the state, many of them serving as a home-based source of food. In the early 1980s, a rapid shift began to occur with the growth of large concentrated animal feeding operations (CAFOs) for hogs, a substantial loss of small farms, particularly in African American communities, a decline in tobacco, the state's major crop, and the dramatic expansion of industrial hog production that brought to the state the top hog producers in the country, including Smithfield, Tyson, and ConAgra. It also brought to the state the world's largest meat-processing plant in Bladen County, operated by Smithfield, which processed as many as eight million hogs a year. As a result of these changes, by the mid-1990s North Carolina had become the largest industrial hog producer in the country outside Iowa, with nearly all the production based in the eastern part of the state.[40]

These new industrialized operations brought with them multiple hazards that made it nearly impossible to work or live near the plants without suffering health problems and a diminished quality of life. Communities adjacent to the hog facilities, like those downwind of the Tulare mega-dairies, had to contend with massive amounts of waste generated from the open waste lagoons and spray fields, the odor from the confined lots, and the potential for major water quality and air quality problems. The raft of odors alone made community residents experience "more tension, more depression, more anger, more fatigue, and more confusion," as well as "increased occurrences of headaches, runny nose, sore throat, excessive coughing, diarrhea, and burning eyes," as different studies have noted. Thus, while chronic or long-term community health problems remained significant, the North Carolina hog operations also generated the kind of acute health hazards that could have a devastating impact on daily life.[41]

The CAFOs were also responsible for huge environmental impacts that affected the communities adjacent to them. In the summer of 1995, for example, an eight-acre swine-waste lagoon in Onslow County, eastern North Carolina, collapsed, releasing approximately 25 million gallons of feces and urine into the New River. The spill polluted as much as twenty-two miles of river, causing fish kills, algal blooms, and fecal bacteria contamination. Massive contamination also occurred over the

next several years when Hurricanes Fran, Bonnie, and Floyd hit the North Carolina coast in the 1990s.[42]

It was during this period that the rapid entry of the industrial hog producers became the focal point for the community organizing that began to take root in eastern North Carolina, an effort that paralleled similar efforts in states such as Iowa and Missouri. The organizing first emerged in Halifax County to stop the siting of a facility that would affect the historic town of Tillery. An existing social and environmental justice–oriented community group, Concerned Citizens of Tillery, led the organizing around the hog production and its community impact, and also joined in opposition to the development of Smithfield's Bladen County facility on the banks of the Cape Fear River. Adding the Smithfield operation to an area that was already the home of a variety of polluting industries and companies such as DuPont would situate a massive new source of pollution in a place one business magazine characterized as "the nearest thing you'll find to the 'chemical alleys' of New Jersey or West Virginia." The organizing in eastern North Carolina eventually led to the development of the Hog Roundtable, a statewide coalition of groups that included some of the mainstream environmental and animal rights organizations. Environmental justice organizers decided to make visible the research regarding the hazards of industrial hog production to counter the huge lobbying and political influence of the industrial hog operators, who denied that any adverse effects were connected with their operations.[43]

Perhaps the most easily identifiable hazard for the neighbors of hog CAFOs were the "horrible odors that permeated even their clothes and furniture." For example, Browntown, a Greene County working-class community of predominantly African Americans, had a large swine facility located only a few hundred yards from the town's main thoroughfare. Odor from the facility was so strong it would enter the local church on a Sunday and hang "oppressively, clinging to church robes [and] winter coats," as a Pulitzer prize–winning news story by the Raleigh *News & Observer* described it.[44]

With effective organizing, new research, and dramatic illustrations of the community and environmental impacts, pressure mounted on state officials to respond. A two-year moratorium on new hog operations in the state was adopted in 1997, but with only limited changes required

for the existing facilities, including Smithfield's Bladen County operation. The Hog Roundtable itself began to fracture over what demands to make and what deeper issues to address regarding the long-standing racism in eastern North Carolina, of which the industrial hog facilities were just the latest illustration. This divide deepened when the environmental justice groups invited the United Food and Commercial Workers International Union (UFCW) to the Roundtable to obtain support for the UFCW's organizing drive at the Smithfield facility. But some of the organizations in the coalition objected, wanting to keep the group's focus on issues such as the spills and the need for reforms to improve hog production practices.[45]

As a result, the Hog Roundtable finally dissolved, with the member groups pursuing their separate agendas. The state moratorium on new hog farms was maintained, but efforts to address the problems of the existing facilities remained limited. The political influence of Smithfield and the hog industry itself, or "Boss Hog," as one writer characterized their role, continued to remain strong. Despite that, the UFCW, after more than ten years, finally succeeded in organizing Smithfield's Bladen plant. Given the odds against it, which included the company pitting Hispanic and African American workers against each other and against the community groups, it was an important if modest victory. At the same time, the environmental justice groups have continued to fight at the community level on multiple fronts: "from justice for Black Farmers, to health care to environmental justice."[46]

Chickens: The Tyson Way

The industrialization of poultry farms has also become a well-known narrative about how such farms have been turned into factories. The Chicken McNugget story told by Eric Schlosser and others is particularly noteworthy in demonstrating the role of upstream global food players. In the early 1980s, when McDonald's began its efforts to create the Chicken McNugget, it turned to Tyson Foods for its guaranteed supply, and contributed to Tyson becoming one of the giant food behemoths. Tyson had by that time already moved away from being a commodity producer of chickens to a company that developed new kinds of reconstituted products, representing a major change in the relationship among

the farm, the producer, the plant workers, and the fast food giants and food retailers.[47]

The Tyson story further illustrates how this system of food injustices has evolved. This Arkansas-based company got its start during the Depression when its founder, John Tyson, would buy chickens from other farmers and sell them in Chicago at a profit. After expanding by raising its own chickens as well as continuing its middleman role, Tyson furthered its route toward vertical integration when it established its first processing facility in 1957, and continued to expand by buying up smaller companies and adopting industrial production methods. These methods included the use of poultry-based CAFOs in which thousands of chickens were squeezed into small enclosed lots and subjected to conditions that became the most visible manifestation of changing poultry production. The poultry CAFOs were typically windowless sheds, cages, gestation crates, or other systems designed to keep the animals cramped inside confined spaces, where they often were unable to move or turn and needed antibiotics simply to remain alive. As Tyson's operations expanded, it increasingly came to dominate downstream operations by contracting with chicken farmers, who were poorly paid and highly exploited. Tyson's own workforce at its processing facilities, which experienced as much as a 75 percent annual turnover, came from a low-paid immigrant labor pool and was also subjected to hazardous working conditions, constant abuse, and the threat of firing and deportation.[48]

During the 1970s, Tyson began to diversify its product line with several dozen types of products—chicken bologna, chicken hot dogs, breaded chicken patties, its Chick'n Quick" chicken parts, and, after its arrangement with McDonald's, the ever-present chicken nuggets, as well as numerous ready-cooked items. By the 1990s Tyson had gone global, establishing joint venture operations and facilities in Mexico, China, and South Asia, and eventually in more than ninety countries. Already the largest chicken producer in the world, with its acquisition of IBP Inc. in 2001 Tyson became the world's largest red meat company.[49] IBP (formerly Iowa Beef Processors) had also secured a reputation for food and social injustices that rivaled Tyson's. IBP had become a dominant force in the meat industry by initially selling low-margin bulk meat and then subsequently "boxed beef" or "case ready" cuts of meat to fast food

chains and supermarkets—an approach that was particularly attractive to Wal-Mart, which was the major buyer of both IBP and Tyson products. For Wal-Mart the case-ready packaged and sealed meat also fit into its own low-wage labor strategy where meat cutters could be replaced by stock boys at one-third the salary. IBP, which followed a strategy similar to Tyson's in the poultry business, came to rely entirely on a low-wage immigrant workforce. Many of the workers were undocumented and subjected to enormous stresses and occupational hazards such as repetitive motion injuries and high accident rates. The poultry workers at the Tyson plants, by way of example, suffered from such injuries as claw hand (in which fingers lock in a curled position) or fluid deposits under the skin.[50]

As Tyson has grown, so has its reputation as a primary contributor to food injustice. Farmers under the Tyson contract are squeezed and reduced to powerless contract labor supplying the vast Tyson production apparatus. According to one estimate, as many as 71 percent of those contract farmers earn below poverty-level wages. Tyson employs more than 100,000 workers throughout its vertical operations, whether at the meat or poultry CAFOs or in the processing and manufacturing plants, where employees face serious health impacts and dangerous and demeaning working conditions. The environmental toll of CAFOs has also become obvious, including extensive adverse impacts on water and air quality, with nearly all these operations situated in the most impoverished areas.[51]

Interestingly, the reputation of Tyson and other large meat industry operators and fast food chains has suffered most with the exposure of their inhumane treatment of animals. In July 2004, a *CBS Evening News* report, based on an investigation led by the animal rights group People for the Ethical Treatment of Animals (PETA) regarding a slaughterhouse in Moorefield, West Virginia, supplying KFC, showed video footage of workers stomping, kicking, and violently slamming chickens against floors and walls, ripping off the animals' beaks, twisting their heads off, spitting tobacco into their eyes and mouths, spray-painting their faces, and squeezing their bodies so hard that the birds expelled feces—all while the chickens were still alive.[52]

Each of these types of injustices, whether wrought against the farmers, the processing workers, or the animals, has contributed to the

development of the industrial chicken product. As these products enter the market, they transform what was once been considered a healthier food, leaner, lower-fat chicken, into highly processed, reconfigured products that are a significant contributor to the huge health crisis we face today and to an unjust food system, symbolized by the Tyson way of putting chicken on our plate.[53]

While animal abuses have gained notable attention and are important, the food justice argument is more comprehensive and systemic when it comes to how food is grown and produced. Whether the food product comes in the form of a Tyson-branded product or as the tomato slice inside a Big Mac bun, a food justice orientation critiques and assesses the changing nature of food production and processing. It focuses on the need to reverse the disappearance of small farmers or remedy the condition of exploited contract farmers and farmworkers, along with the need to craft a different way to relate to the land and grow food. At the center of the food justice ethos is the demand for justice in the fields and workplaces that produce and process foods, and for recognition of the dignity of work and basic human rights for those who have been denied such rights. Food justice advocacy urges respect for the land and the environment where the dominant food industry players abuse land, water, and air. From a food justice perspective, the lessons are clear: the exploitation and abuses of the dominant food system have become a central battleground in how we grow and produce the food we eat.