Agrarian Dreams

The Paradox of Organic Farming in California

Julie Guthman
Contents

List of Tables ix
List of Abbreviations xi
Acknowledgments xiii
Maps xvii

1. Agrarian Dreams 1
2. Finding the Way: Roads to Organic Production 23
3. Organic Farming: Ideal Practices and Practical Ideals 42
4. California Dreaming: California's Agro-Industrial Legacy 61
5. Organic Sediment: A Geography of Organic Production 89
6. Conventionalizing Organic: From Social Movement to Industry via Regulation 110
7. Organic Regulation Ramified 141
8. The Agrarian Answer? 172

Appendix 187
Notes 199
Glossary 219
References 221
Index 237
CHAPTER I

Agrarian Dreams

Care about social justice issues? Labor and employment practices by agribusiness, health problems related to pesticides [applied] by farm labor, and the security of the small family farmer are related issues. If corporate farms continue their takeover of our food supply, then these businesses and their giant trading corporate partners can set the price of basic food commodities, dictate the wages and working conditions of farmworkers, and put family farms out of business through the consolidation of landholdings and economies of scale. Polluting farming practices and poor labor conditions are cheaper and are more likely to occur if corporations are allowed to continue taking over our food production. Preserving the family and small-scale farm that can employ alternative methods and that can produce food for local consumption ensures food safety and is more environmentally sound than industrialized farming methods, and the organic industry is made up of primarily small-sized producers. We have not fully addressed the issues of sustainability within the growing organic industry, but that question may become moot if these laws [the first set of organic rules proposed by the USDA in 1997] are passed. Lower standards will allow for a greater takeover of organic farming by agribusiness and put the small producer out of work and off the land.

Claire Cummings, commentator on food and farming on KFOA radio

I feel that the motivation of the people growing this way coincides with my concerns about the health of the planet. . . . [Organic farmers] are motivated by belief, not profit margin.

Patricia Utterman, food writer, 
San Francisco Examiner, 1998
Chapter 1

Agrarian Dreams

plain how organic farming has replicated what it set out to oppose. First, however, it is important to take stock of what organic agriculture was intended to be.

THE ORGANIC CRITIQUE

Unfortunately, the only serious critics of industrial farming per se [are] those who comprise what can be loosely called “the organic-farming movement.”

Colin Duncan, The Centrality of Agriculture

At first glance, organic farming seems to represent a clear opposition to industrial agriculture, defined for the moment as that which is made more factorylike in order to be more productive and profitable. Organic farming ostensibly incorporates and builds upon complicated natural systems, in sharp contrast to the simplification and standardization that often characterize industrial agriculture (Iked 2001). Organic producers putatively embrace farm self-sufficiency and whole foods to the certain detriment of agribusiness, which commodifies inputs and processes that were once produced or carried out on the farm or in household kitchens (Goodman, Sorj, and Wilkinson 1987). The organic movement supposedly puts rural livelihoods first, suggesting an attention to the social justice issues that have been shunted to the side in the interest of farm productivity and “feeding the world.”

In truth, it is impossible to divine a singular argument and meaning for organic agriculture. The unification of themes into an organic movement has not been without contradictions and exclusions, and many contemporary understandings of organic agriculture are not even complementary. Moreover, there has always been a tension between those who see organic agriculture as simply a more ecologically benign approach to farming and those who seek a radical alternative to a hegemonic food system. These unresolved tensions continue to surface in ongoing battles over the regulation of “organically grown food,” and as this book will show, even the idea of regulation is contested. But even though the organic movement has never agreed on the extent to which its alternatives should be embedded in noncapitalist forms of production, it has gained coherence and momentum through the shared awareness that the undesirable aspects of mass food production are at least in part the result of profit-driven agricultural industrialization.

Most observers of the organic farming movement would also agree
that its ideological compass derives from four broadly defined social movements: the various campaigns centered on alternative production technologies, the health and pure food crusades, the 1960s counterculture, and modern environmentalism. Also present in each of these movements—although not without controversy—were elements of a more radical interpretation of the industrialization critique. What follows is a brief sketch of how each of these movements has contributed to the industrialization critique.

Clearly the most influential critique, as far as organic farming goes, turns on the consequences of intensive agricultural production. Although interest in the relationship between agricultural practices and soil fertility goes at least as far back as the sixteenth century (Thirsk 1997), strong concern about the effects of modern agricultural practices materialized in the late nineteenth century, when “mining the soil” was associated with a worldwide glut in wheat production. An Englishman, Sir Albert Howard, considered by many to be the father of organic agriculture, was one of the first to articulate an alternative to agriculture as usual, on the basis of his work in India in the early part of the twentieth century. Over the course of his lifetime, he published several books describing composting techniques, touting the importance of humus and the reuse of agricultural wastes on the farm, and urging the elimination of chemical inputs because of their effects on soil fertility (see, e.g., Howard 1940). It was this work that inspired Lady Eve Balfour to found, in 1946, the Soil Association, the United Kingdom’s first organic farming organization (Mergenthaler 1994). In some of Howard’s writings he also made an explicit connection between the quest for profit and the degenerative aspects of modern agriculture (Peters 1979).

In the United States, a critique of productivity-focused agriculture emerged in the 1930s, a confluence of depressed agricultural prices and the ecological disaster of the dust bowl (Worster 1979). A “permanent agriculture” movement arose, calling for soil conservation measures such as terracing and cover cropping. Occasionally those in the permanent agriculture movement made the claim that the problem with conventional agricultural was its dependence on technology and science, which stressed the domination of nature for production and profit (Beeman 1995). In 1940, J. I. Rodale purchased an experimental organic farm in Emmaus, Pennsylvania, to test Howard’s theories, as well as his own ideas about health and nutrition. Although Rodale steered clear of left-wing critiques of agriculture, the raison d’être for his farm was to experiment with techniques that were clearly being shunned by the agricultural research establishment (Peters 1979).

Earlier food movements made a second major contribution to the industrialization critique. The original movement for the U.S. Pure Food Act began in the late nineteenth century to address both intentional and unintentional contamination of food. Its initial concern was food adulteration, a widespread phenomenon when processed foods was first marketed in impersonal, extraregional markets and bulk-producing additives were introduced as a cost-reduction measure. The Pure Food Act established a system of regulation, although that system primarily benefited the major food manufacturers, who could most easily comply with the new bureaucratic standards (Levenstein 1988). It also unleashed a still-to-be-quieted concern that food safety could easily be compromised in the pursuit of profit and productivity. Moreover, the journalistic muckraking (such as Upton Sinclair’s The Jungle) that produced the necessary political momentum for the Pure Food Act suggested an important connection between poor working conditions and compromised food. Recent exposés, such as Nichols Fox’s Spoiled (1997), Schlosser’s Fast Food Nation (2002), and Pollan’s article “Power Steer” in the New York Times Magazine (2002), continue in that vein, driving home the point that intensified methods of livestock production and handling are largely to blame for recent problems with bacterial contamination in food.

The connections between the organic farming movement and the health food movement are even more explicit, as both Belasco (1989) and Peters (1979) show. The most direct connection was first made by Rodale Press, publisher of both Prevention, a popular health-focused magazine, and the magazine Organic Gardening. Each promoted the messages of the other. But there was an important idiomatic association, as well, for organic connoted both “natural” and “whole,” the two words most often used to suggest foods that have been minimally transformed by human manipulation. Starting in the 1830s with the whole wheat crusade, led by Sylvester Graham of graham cracker fame, health food advocates saw a unique value in whole, or less-processed, foods, suspecting that they offer important synergies, undiscovered life-enhancing properties (e.g., antioxidants), and protection from dangerous additives. Adelle Davis, a popular health food writer of the 1960s, lambasted the food processing industry for promoting foods that were nutritionally debilitated, the sort of critique that was furthered in the 1970s by groups such as the Center for Science in the Public Interest, Ralph Nader’s “Raiders,” and a rash of book publications that denounced the
Agrarian Dreams

ferring discount prices to low-income consumers, food-for-work programs, or even free handouts.

During this period, organic most clearly became understood as a critique. According to Belasco, organic and natural were used more or less interchangeably, although organic had “wider implications,” since it addressed not only what happens during factory processing but also what occurs at the farm. Organic agriculture was envisioned as a system of small-scale local suppliers whose direct marketing, minimal processing, and alternative forms of ownership explicitly challenged the established food system. Thus, the “organic paradigm” straddled three countercurrents: “therapeutic self-enhancement, consumerist self-protection, and alternative production... Organically raised food required a completely new system of food production and distribution, and with that, major social decentralization” (1989, 69). So, while the “counter-cuisine” incorporated several different themes—including survivalist (i.e., getting along on little), antimodernist (i.e., valorizing craft production), “health foodist,” or explicit criticism of the food industry—organic agriculture was considered oppositional indeed.

The fourth movement to contribute substantially to the ideology of the organic farming movement is environmentalism, although not as directly as one might imagine. Rachel Carson’s publication of Silent Spring in 1962 is considered by many to be the birth of the modern U.S. environmental movement, but it did not immediately awaken significant interest in organic agriculture. Carson put considerable distance between herself and the organic movement. For its part, the U.S. environmental movement was focused on the conservation of pristine nature at the expense of other environmental considerations and did not take seriously Carson’s pronouncements of the dangers of pesticide use (Gottlieb 1993).

By 1970, the year of the first Earth Day, the environmental movement had broadened its issue base. A groundswell of apocalyptic thinking, sparked by stories of famine in South Asia and Africa, pronouncements of uncontrollable population growth, and the experience of the worldwide oil crisis of 1973, rekindled concerns about energy use and the finiteness of resources in general. These typically neo-Malthusian concerns, along with on-the-ground failures of the green revolution, gave birth to “sustainable development,” the idea that economic development had to proceed with attention to the resource needs of future generations. In some circles, notions of sustainability also incorporated social justice concerns, particularly to the extent that existing poverty was linked with environmental degradation. A key treatise of this era was Francis Moore

food system (Levenstein 1993). Since food processing is such an important source of profit in the American economy, this critique, too, had radical implications.

Utopian experiments and back-to-the-land movements provided a third major influence on the organic farming movement. As early as the 1930s, at least two rural experiments that combined nonchemical agriculture with communal living had emerged. One was associated with Ralph Borsodi; the other with Scott Nearing. Borsodi was avowedly antagonistic to capitalism and favored decentralized subsistence agriculture, not a reinvigoration of the one- or two-crop capitalist family farm (Beeman 1995). Nearing was a disaffected radical academic who through fifty years of “homesteading” with his partner, Helen, became an icon of the counterculture (Jacob 1997). Both served as models for a new back-to-the-land movement that started in the late 1960s.

By 1965, the so-called New Left—differentiated from the Old Left by interest in decentralized, utopian, and non-class-based forms of political action—was looking at alternative institutions as a way of modeling social change (Gottlieb 1993). Between 1965 and 1970, disaffected urban radicals formed thirty-five hundred communes in the U.S. countryside, where small groups of individuals and families pooled their resources to create subsistence-style farms (Belasco 1989). Most of these communes practiced what were later codified as organic techniques, not necessarily by intention, but because self-sufficiency was a cornerstone of their ideology. Though their success was marginal at best—many of the failures were attributed to shortages of food—what was radical was the link between an alternative farming system and a collective form of ownership. Following the Nearings’ path, there was also a significant migration to rural areas of individual families who sought a more private existence, mostly on privately owned land (Jacob 1997).

The urban component of food politics was equally critical, not only modeling alternative food-delivery institutions, but also forging direct links with the countryside. Food cooperatives, which involved direct employee ownership and management of retail stores or food businesses (many of which were bakeries), and so-called food conspiracies, in which members pooled money and bought weekly from nearby suppliers, became commonplace in many cities and college towns. Between 1969 and 1979, five thousand to ten thousand such institutions were established, grossing more than $500 million a year (Belasco 1989). Many linked up with nearby organic farms as sources of supply. In addition, many paid at least vague attention to issues of hunger and poverty, of-
Lappé's *Diet for a Small Planet* (1971), an argument for vegetarianism that based its claim on the resource intensiveness of the feed grain–livestock complex and its implications for world hunger. This justification for vegetarianism was particularly powerful in moving the emphasis out of the realm of individual ethics to the international political economy of agriculture. The implicit link between vegetarianism and organic agriculture arguably imbued the latter with similar justification.

Another way in which the idea of sustainable development has influenced organic farming is through the "appropriate technology" movement, emboldened by Barry Commoner's slogan "small is beautiful" (Buller 1994). The gist of the appropriate technology critique is the notion that technology and science have been captured by large state and agribusiness interests. Were the institutions that produce and disseminate technology more decentralized and popularly controlled, they would better serve those excluded from or hurt by so-called big science. The failure of earlier utopian experiments in actually producing food reinforced the idea that more attention had to be paid to the science of agriculture (Levenstein 1993). New Alchemy Institute, a Massachusetts-based ecological think tank formed in the early 1970s, was one such institution established to meet that goal; its purpose was to make small-scale farming and other smallholding ventures viable (Belasco 1989; Peters 1979).

In addition, the organic farming movement has drawn from the more recently articulated environmentalist notion of bioregionalism (Sale 1985; Kloppenberg, Henrikson, and Stevenson 1996). The appropriation of the idea of "foodsheds"—a term that plays on John Wesley Powell's exhortations regarding the importance of watershed-based regions (see Stegner 1953)—is to draw attention to seasonality and other agronomic constraints, which, if followed, presumably would put less pressure on land and other elements of nature. Locally scaled distribution networks might also substantially reduce the number of "food miles" necessary for trading food, leading to a dramatic savings of fossil fuel energy. Insofar as the globalization of food distribution has turned on overcoming obstacles of distance and durability (Friedmann 1994), bioregionalist notions also intersect with a critique of globalization.  

The "scientization" of the environmental movement—as scientific legitimacy has routinely been attached to claims of environmental degradation—has also given organic farming heretofore missing legitimacy (Buller 1992). The energy crisis of the early 1970s opened up scientific discussion of the relationship between energy and agriculture. Subsequently, the National Science Foundation, with a good deal of outside encouragement, commissioned a study that compared organic and conventional farming systems. Its chief investigator, William Lockeretz, had strong credentials in mainstream science (Peters 1979). The study, published in 1975, demonstrated that organic systems use less energy derived from fossil fuels. Then a USDA report in 1980 gave "grudging respect" to organic agriculture by dismissing previous misconceptions and noting the scientific methods being employed in organic farms (Beeman 1995). Separately, the scientific linkage of pesticides with cancer, ozone depletion, and other such horrors, though ceaselessly contested, continued to generate careful scrutiny of agricultural chemicals, even though regulation of these chemicals remained woefully inadequate.

This link to science potentially has undermined the radical critique of industrial agriculture that all four formative movements have in some sense shared. The increased support of science has reinforced a technical approach to environmental problem solving, relegating social issues to the status quo (Buller 1994). But what of the agrarianist vision for organic agriculture? How does it stand in relation to these formative movements?

### THE AGRARIANIST VISION

A mind overloaded with work, which in agriculture means too much acreage, covers the place like a stretched membrane—too short in some places, broken by strain in others, too thin everywhere. The over-loaded mind tries to solve its problems by oversimplifying itself and its place—that is, by industrialization. It ceases to work at the necessary likeness between the processes of farming and the processes of nature and beings to order the farm on the assumption that it should and can be like a factory. It gives up diversity for monoculture. It gives up the complex strategies of independence (the use of manure, of crop rotations, of solar and animal power, etc.) for a simple dependence on industrial suppliers (and on credit).

Wendell Berry, "Whose Head Is the Farmer Using? Whose Head Is Using the Farmer?"

We must see again, as I think the founders of our government saw, that the most appropriate governmental powers are negative—those, that is, that protect the
small and weak from the great and powerful. . . . the governmental power that can be used most effectively to assure the equitable distribution of property, which alone can give some measure of strength and independence to ordinary citizens, is that of taxation. As our present economy clearly shows, the small can survive only if the great are restrained.

Wendell Berry, _The Unsettling of America_

Cutting across all four of the movements mentioned, contemporary agrarian populism shares many of the same elements of this broadly construed “industrialization” critique, in, for example, its concern with corporate power, the role of big science in agro-industrialization, and the implicit links between the social organization of farming and ecological outcomes. A key difference, though, is that agrarian populism specifically locates these problems with the growth and consolidation of the corporate input and food processing sectors at the expense of the family farm. As such, the new agrarianism sees the family-owned and operated, small-scale farm as the locus of, indeed the key to, social justice and ecological sustainability. Moreover, and in contrast to the counterculture critique, it places tremendous value on farmer independence rather than collective action.

The agrarian vision is, of course, deeply rooted in U.S. political and cultural history and has emerged repeatedly as a trope of anticorporate sentiment. It originated with Thomas Jefferson, who opposed the centralized power sought by the Federalists. He preferred a weak federal government and argued that only agriculture and landownership could ensure independence and virtue, thereby providing the basis for a republican democracy (White 1991, 63). The vision of a nation of small, like-sized, and, ultimately, white farmers undergirded the clearance of Indians, as well as the major land giveaways of the nineteenth century, including the Homestead Act of 1862. After the so-called closing of the frontier, agrarianism was revitalized during the populist moment of the 1890s, when western farmers fought the monopoly power of the railroads and middlemen. Agrarianism saw another resurgence after the dust bowl tragedy of the 1930s, when the dust storms were attributed to agricultural consolidation and mechanization, which had pushed poor tenant farmers west to become “sodbusters” (Worster 1979). The link between ecology and farm structure first articulated by the permanent agriculture movement evolved into a call for reinvigoration of the family unit of production.

This battle cry was taken up by Wendell Berry, who became a key spokesperson for the agrarianist vision in the latter part of the twentieth century. He explained the problem of soil degradation specifically in terms of an ecological breakdown of the grain-based family farming unit, which had been compelled to overproduce to make up for falling prices, exhausting its presumably freehold land. Wes Jackson, currently affiliated with the Land Institute in Kansas, became another carrier of these arguments, also emphasizing notions of cultural renewal and ethical revival (Beeman 1995). Jackson and Berry continue to be influential. The coupling of sustainable agriculture with the salvation of the family farm is explicitly spelled out in Marty Strange’s 1988 book, _Family Farming: A New Economic Vision._

Because the agrarianist vision has become so potent within organic agriculture, it is worth elaborating the assumptions underlying the descriptors of “the family-owned and -operated, small-scale farm.” First, freehold ownership is the desired form of land tenure, as it putatively provides the basis of economic security and, hence, farmer independence. Drawing from Locke’s political philosophy positing that he who mixes his labor with land to put it to productive use is the rightful owner, the specific norm here is a yeoman farmer, one who works his own land and nothing more. In newer iterations of agrarianism, notions of individual ownership are also tightly coupled with notions of stewardship; only owners, it is presumed, have interest in the long-term viability of the land. As Strange puts it, the family-owned farm “encourages (imperfectly) the responsible use of resources” (1984, 79). Then, in return for valuing the long-term fertility of the farm and practicing ecological farming methods, the farmer-owner will generate greater returns in the market and stave off the demise of this family-owned farm.

The agrarian ideal is also an owner-operated farm, self-sufficient to the extent that family members provide all the necessary labor, and farm income is sufficient to pay all farm and family needs. In the more explicitly Christian vision of Berry, the household is the last bastion against cultural estrangement (Berry 1986). In the more secularized version, “farms are family centered because the family is the logical unit of production within which to transfer skills and to provide inter-generational continuity in the farm’s management” (Strange 1984, 118). Either way, hiring outside labor is considered a sort of moral failing. The ecological link is that a diversified cropping system ostensibly smooths labor demands, mitigates market risks, and reduces the need for inputs, thereby
improving the possibilities of meeting the condition of family operator-
ship (Strange 1988).

The small scale of such farms is equally critical to this vision. Not only is smallness considered a social good in its own right; this norm also assumes a symbiosis between the scale of a unit of production and its ecological ramifications. “A healthy farm not only will have the right proportion of plants and animals; it will have the right proportion of people. There will not be so many as to impoverish themselves and the farm, but there will be enough to care for it fully and properly without overwork” (Berry 1986, 182). A farm with too many acres will also give way to simplification, the progenitor of ecological destruction. Jackson sees the problem as one of information management. As he puts it, the inevitable loss of biological diversity in a managed farm means that “the price for sustainability must be paid from elsewhere. [One must] substitute cultural information for biological information” (1984, 226). The necessity of a low “eyes-to-crop ratio” is one of the reasons that the family farm is seen as the ideal organizational form. This assumes, of course, that only family members are seen as adequately enfranchised to monitor and act on what happens in the field. 13

Finally, the new agrarianism, like all agrarian populism, is deeply sus-
picious of state intervention, does not question the individuation of mar-
kets, and, most fundamentally, remains a defense of private property (Brass 1997). So, deeply suspect of scientific and bureaucratic rationality precisely for its effect on the social aspects of farming, the agrarianist social vision could be construed as deeply conservative. Yet, these last qualities are exactly what has made it so attractive to the organic farming movement. The organic movement has always been distrustful of government intervention, given the ways that federal farm programs and the USDA have encouraged and even subsidized the worst sort of farming practices. Many back-to-the-landers, moreover, value their inde-
pendence and have become property owners themselves.

In short, many in the organic movement have come to embrace these elements of the new agrarianism, equating both social justice and eco-
logical sustainability with small-scale family farming. Because of this conceptualization, the movement has come to focus largely on form, in particular the proportionality of big farms versus small farms. Instead, as this book will show, the movement would do better to pay attention to the processes of social and ecological exploitation that gave rise to the organic critique in the first place.

Agrarian Dreams

THE PLACE OF CALIFORNIA

I'm a small family farmer in the Central Valley. . . .

Organic farming is a way of gaining independence from the corporate structures that undermine the agrarian tradition.

Ted Wilsey, T & D Wilsey Farms, California Studies Conference, San Francisco State University, February 1997

California never had much of an agrarian smallholder tradition. Land was never farmed in a mode resembling premodern peasant societies. Most California native groups were not agriculturists, and the relics of mission agriculture were mostly eradicated shortly after statehood in 1848. Nor was California settled by a large class of landowning farmers who had holdings of similar size and nature, where family members performed the necessary labor. Large landholdings became the basis of farming from shortly after the gold rush, when an elite few brought much of its hinterland under monopolistic control (McWilliams [1933] 1971; Liebman 1997). When these landholdings were finally split up in the late part of the nineteenth century, they were made viable by intensive and specialized fruit production, which fundamentally depended on hired labor, racialized and marginalized to ensure the cheapness and flexibility to meet intermittent labor requirements (Almaguer 1994; Daniel 1981; Liebman 1983; among others). In other words, California agriculture was industrial from the get-go, characterized by what Carey McWilliams termed “factories in the field,” an observation echoed by the likes of Walter Goldschmidt and John Steinbeck, two other published critics of California’s industrial agriculture.

Today, California ranks sixth among nations in its agricultural econ-
omy and has been the number-one agricultural state in the United States for more than fifty years. Its 1997 output was $26.8 billion, approxi-
mately 10 percent of total U.S. production, with Texas a distant second at $15.9 billion. This rank is largely due to California’s preeminence in high-value specialty-crop production; that same year it accounted for more than half of all U.S. production in fruit, nut, and vegetable crops and exported 20 percent of what it grew (California Department of Food and Agriculture 2000). Furthermore, all this production took place on only 3 percent of the state’s acreage, suggesting an extraordinary degree of intensification (U.S. Bureau of the Census 1999). California has led the way in technologies that both reduce the risks of nature and speed up crop turnover, from cooperative fruit marketing, plant breeding,
ological control, in-field transplant and harvest mechanization, to the generous use of petroleum-based fertilizers. California has the highest rate of pesticide application in the country (Liebman 1997).

As for the agricultural landscape, it is marked by fields and orchards [that] were designed to produce great quantities of cheap food. And to accomplish that ... there must be high-input industrial efficiency. Fields are laser-leveled as flat as tabletops. Rows are precision-spaced with food crops bred to accommodate machinery and to last on store shelves. First the earth is drilled with synthetic fertilizers developed from the same research that perfected explosives and poison gas in World War II and then it's pumped with herbicides and doused with herbicides to inhibit soil-borne disease and retard the growth of weeds. Crops are sprayed and dusted with broad-spectrum insecticides that kill harmful insects, along with most others, in order to maintain high yields and guarantee consistency of appearance. (Ableman 1993, 74)

You assume these are farms, but this is not what you see when you close your eyes and think “farms.” Farms are in the country and this is definitely not the country ... Only the cars and trucks that occasionally speed by along the two-lane roads that frame these anonymous fields suggest human life. (68)

Finally, virtually all farms are organized as capitalist enterprises, relying heavily on the employment of wage labor. But this sort of observation has never stopped agriculturists from evoking agrarian dreams; to be sure, the rhetoric of the family farm remains pervasive. Victor Davis Hanson, a fruit grower (i.e., de facto employer) and classics scholar, in Field without Dreams (1996), laments, “The American yeoman is doomed; his end is part of an evolution of long duration; and so for historical purposes his last generation provides a unique view of the world—a superior view I will argue—that is to be no more” (xi). Later, “the most perilous family farms seem to be those in our own size range, between 80 and 200 acres” (266).

Organic California

Just as California agriculture has been characterized as “the great exception” (McWilliams 1949), so can the same be said for organic agriculture within California. For alongside this industrial rurality arose one of the most countercultural branches of the organic farming movement. Predominantly urban in origin, many of California’s first organic farmers were first-generation growers who saw organic farming as an explicit antidote to the excesses of industrial agriculture. In the interests of creating a different kind of agrarian dream, these growers carved their farms from the leftover spaces—the hillsides, pastures, abandoned or-

chards, urban sand lots, and tiny river valleys—making “farms” of one, two, or perhaps ten arable acres. Farming to them was not a business but a lifestyle. Having such small farms, some households were able to do all the work themselves; others relied on the occasional support of neighbors, visiting friends, and interested college students. They grew basic fruits and vegetables such as apples, oranges, peaches, lettuce, carrots, and tomatoes. They made their own compost from kitchen scraps, cow or horse manure, and the inedible portions of the crops they grew. They rarely worried about bugs or fungi, content to grow fruit with a few worms and blemishes and vegetables with holey leaves. Most of the produce was sold to local health food stores and food cooperatives, where customers did not expect their purchases to be cosmically perfect. Indeed, perfection would be cause to doubt that they were grown organically.

These farms did not just spring up out of the blue. California had long hosted the sort of experimentation that gave rise to the organic farming movement. Southern California, for example, was a formative center of the health food movement. As early as the 1870s, people suffering from tuberculosis and other such infirmities began migrating to southern California for the sunny climate and restful nights; sanatoriums and health resorts were built all over the region. Many “health seekers” went into small-scale beekeeping and citrus farming, then seen as the perfect profession for the elderly and infirm (Baur 1959). Well before the 1960s revolution, southern California was sprinkled with health food stores.

The San Francisco Bay Area, meanwhile, was a key node for what Belasco called the “counter-cuisine.” The San Francisco–based Diggers gave out free food to urban dwellers in city parks, procuring their produce from Morning Star Ranch, a nearby organic farm. Far-Fetched Foods, a health food store in San Francisco’s Haight Ashbury district, sought organic truck gardeners as sources of supply. Hundreds of other food cooperatives, collectively run bakeries, and alternative restaurants thrived there as well.

Most famously, in 1971 Alice Waters opened a small café in Berkeley, California, named it Chez Panisse, and began to serve simple meals to her friends. Feeling that the best food was made from fresh, local, and seasonal ingredients, Waters bought most of her produce from local farms and was the first to put “organic” on the menu in what later came to be a world-renowned culinary institution. There is little question that Alice Waters pioneered a revolution in food tastes, not only inventing “California cuisine,” but also, through her penchant, bringing local, organi-
cally produced food into the mix. Waters inspired a rash of imitation—many Bay Area chefs trained with Waters and went on to open their own restaurants and become celebrity chefs in their own right—and quite instrumentally contributed to the diffusion of organic consumption.17

The alternative production movement also had its adherents in California. In 1967, Alan Chadwick, a British-born Shakespearean actor, began a garden club at the University of California at Santa Cruz based on the premise that gardening is best done without chemical pesticides and fertilizers (Gaura 1997). Eventually the garden expanded to a twenty-five-acre farm and became the only university-run research and extension service devoted solely to organics. The program was decidedly countercultural; prevailing leftist political sentiments and a cultural milieu of what Belasco (1989) called “communal bare bones living, vegetarianism, and sexual and pharmaceutical libertarianism” created an image for organic farming that lasted long after the 1960s had passed. Nevertheless, the program played an important role in diffusing organic farming. Not only were many organic technologies tried, tested, and extended through the now-named Center for Agroecology and Sustainable Food Systems, but also its apprenticeship program spawned many private farms as well as public service gardening and farming programs.

As a result, Santa Cruz, in particular, was to become a center for the California organic farming movement as it began to take more institutional forms. The first certification agency, California Certified Organic Farmers (CCOF), began there in 1973 as a grassroots organization of small organic farmers. In 1990, Bob Scowcroft and Mark Lipson, formerly of CCOF, started the Organic Farming Research Foundation with the purpose of fostering the improvement and widespread adoption of organic farming practices (OFRF 1999).

Somewhat later, a second node of the California organic farming movement materialized in Yolo County, in proximity to the University of California at Davis (in spite of its teaching and research emphasis on industrialized farming).18 In the late 1970s, graduates of UC Davis started the California Action Project—later to become the California Action Network (CAN)—to promote organic and sustainable agriculture. So that CAN could focus on advocacy and legislative work, a second organization was created to be the research arm: the California Institute of Rural Studies (CIRS), under the leadership of Don Villarejo. With the aid of California Rural Legal Assistance, these two organizations brought a lawsuit against the University of California for failing to fulfill its land grant mission by solely promoting large-scale chemical-intensive agricul
ture. Although the plaintiffs lost in appeal, as a result of this suit, the university created the Small Farm Center at UC Davis and funded the agroecology program at UC Santa Cruz.

Later, CAN was to change its name to CAFF (Community Alliance with Family Farmers) and take on a more explicitly agrarian agenda, emphasizing “family farms as the cornerstone of healthy communities.” CAFF was also active in getting the federal Sustainable Agriculture Research and Education bill passed. When it received its first congressional appropriations in 1988, CAFF helped start the Sustainable Agriculture Research and Education Program at UC Davis (UC-SAREP), an organization dedicated to expanding and disseminating technical knowledge on ecological methods, as well as promoting socially responsible practices and policies. Following a divergent course, CIRS bolstered its focus on farmworker justice, although all of these Yolo County–based organizations continued to collaborate, especially in the area of ecological farming and pesticide reduction.

Meanwhile, Paul Muller and Dru Rivers, the latter of whom had helped found the organic student farm at UC Davis, met at the 1982 annual ecological farming conference, held at the Asilomar conference center. They began full Belly Farms, choosing the Capay Valley, on the west side of Yolo County, for its beauty, pockets of rich soil, and relatively clean water from Cache Creek. The modal size of Capay Valley farms also suggested the possibility for a community of like-minded farmers (Kraus 1997). In 1989, Muller and Rivers took on as partners Judith Redmond, former executive director of CAFF, and Raoul Adamchak, who also had worked in organic farming organizations. Together, they pioneered the subscription farm, a version of community supported agriculture (CSA), which was to become the California model for directly linking farms with consumers.19

In short, California played a formative role in the development of the organic farming movement, as the site of several key institutions that were critical in diffusing the techniques and meanings of organic farming, and as the place where regulations for organic production first evolved. And though agrarian populism tended to dominate the more broadly defined U.S. sustainable agriculture movement, the California organic movement was, at least initially, more countercultural, borrowing heavily from the New Left critique of the 1960s. This ideological sway was largely the result of the California organic movement’s growth from urban sources, reflecting California’s high degree of urbanization and the deep economic conservatism of much of the state’s farming pop-
ulation. Arguably, it also resulted from California agriculture representing the very pinnacle of the sort of agricultural industrialization that the organic movement sought to criticize.

Today, California holds far more organic farms than any other state (extrapolated from Klonsky and Tourte 1998b), is second to Idaho in the amount of certified organic cropland, and grows 47 percent of the certified organic vegetables in the country and 66 percent of the organic fruits (Economic Research Service 2000b). It is safe to assume that California is a world leader in the value of organic crops sold, given both the high value of produce crops and the projection that the United States as a whole was to have 40 percent of world sales in 2000 (El Fekri 2000). California’s organic agriculture, in this way, has come to parallel the economic success of the state’s agriculture in general. The possibility that California’s organic agriculture is as exceptional as the state’s style of industrial agriculture, which it seeks to counter, speaks to its importance in setting wider trends for the rest of the world. For that reason alone, it is important to examine the outcome of this experimental cross between a putatively radical social movement and the most industrial agriculture in the world.

THE STUDY

This book draws from the first extensive, in-depth social science study of organic production in California. The project emerged from earlier, more preliminary research on northern California’s organic vegetable sector that I conducted with two colleagues in the fall of 1995 (Buck, Getz, and Guthman 1996, 1997). At the time, we found a significant disjuncture between the discourses of organic farming and what was taking place in the fields, warehouses, and markets that constitute the organic vegetable commodity chain. Our impression was that the highest-value crops and the most lucrative segments of such chains were being appropriated by agribusiness firms, many of which were abandoning the putatively sustainable agronomic and marketing practices associated with organic agriculture, such as composting and direct marketing.

The much larger study on which this book is based was designed to examine that apparent anomaly in more depth: to understand how the organic sector evolved in the way that it did, to see if obvious patterns exist in the organization and practices of production, and, finally, to look at how the regulatory mechanisms that define what it is to be organic influence the structure of the sector and the ways in which production is individually managed. My findings modify our original insight considerably. For one thing, traditional agribusiness entry has been fairly protracted and remains limited. However, the organic movement has sprouted its own industry, raising the question of how agribusiness came to be replicated in the organic sector. For another thing, and more important, the original study suggested that agribusiness producers are the only ones altering the practices of organic farming. This study shows that agribusiness’s impacts are more far-reaching. One might ask how agribusiness involvement in organics affects even those who strive to do things differently.

In 1997, the baseline year for the statistical portion of this study, there were 1,533 organic growers registered with the state of California, 374 (32 percent) more than the first official count in 1992 (Klonsky et al. 2001; Klonsky and Tourte 1995). There were 67,826 acres in organic production, 22,553 (49 percent) more than in 1992, and reported gross sales of $158 million, $83 million (111 percent) more than in 1992.20 Fruit, nut, and vegetable crops accounted for 92 percent of total organic sales and 74 percent of organic acreage (Klonsky et al. 2001). In certified acreage, grapes were the most prevalent crop, followed by rice, mixed vegetables, safflower, lettuce, tree nuts, citrus, and tomatoes (Economic Research Service 2000b).

The study involved compiling survey and archival data on all 1,533 growers. The qualitative portion was primarily based on interviews with 150 growers, attendance at industry conferences, and interviews with regulatory agents, technical experts, and industry advocates. Virtually all interviews took place in 1998 and 1999. It is important to note that the grower interviews were not taken from a random sample. Instead, the sample was purposefully stratified according to region, crop mix, scale of operation, and certification status, precisely to evaluate the ways in which these variables matter in terms of practice. Most significant, a large number of what I call mixed growers (i.e., growers with both conventional and organic acreage) were sampled to better understand the dynamics of conversion to organic production, as well as to assess this prior claim of agribusiness appropriation. Moreover, the sample of mixed growers serves as a proxy to compare conventional and organic growers. Readers should refer to the appendix for a further discussion of the research approach.
THE BOOK

The story of organic agriculture's origins presented so far was designed to account for the radical origins of organic farming. Yet, embedded in the movement I have just discussed were people and ideas that brought heretofore missing legitimacy to organic agriculture. Most significant among them was the growing acceptance of environmentalism. As suggested above, increased public concern with the environmental and health effects of industrial farming was already generating support for organic farming in the late 1970s and early 1980s. This concern was sharpened with two chemical-related food scares in the late 1980s, regarding the use of Aldicarb and Alar.

In addition, the 1980s saw significant changes in diet and food taste, generated by a complicated interplay of the growth of a higher income-earning professional class, breakthroughs in nutritional science, heightened global travel and migration (leading to interest in exotic and ethnic foods), and enhanced concern with bodily health (Levenstein 1993). Organic food became more desirable for its association with health food, to be sure, but also for its association with gourmet food, thanks to chefs' advocacy of organics. In particular, the gentrification of organic food, spurred, in part, by the Alice Waters diaspora, gave organic food entirely new meanings, ultimately imbuing it with more market value as well (Guthman 2003). These changes, along with the hard work of organic advocates bent on institutional legitimacy, substantially modulated organic farming's contrarian bent. Effectively, the way was cleared for an entirely new set of actors to participate in organic production.

This, then, is where my analysis picks up again, to investigate the material forces that generated such unprecedented growth and, consequently, change in the organic sector. For, I argue, it is only because these ideational shifts articulated so strongly with changes in agrarian capitalism and its regulation that erstwhile conventional growers began to experiment with organic production beginning in the 1980s. Chapter 2 details the motivations for these conversions in the context of major restructurings and regulatory changes within the global agrofood economy. Chapter 3 looks at the structure and practices of the actual existing organic sector—outcomes of this recent growth—in regard to how organic agriculture is often imagined.

Still, the analysis previewed thus far addresses only the proximate causes of organic agriculture's transformation. One might be left wondering if organic agriculture would have strayed from its ideals without these grower conversions. The ensuing analysis seeks to answer this question. It delves into the respective logics of agrarian capitalism (as it evolved in California) and regulation (as it evolved within the organic sector) to illustrate how they directly shaped organic production, particularly when they intersected in unexpected ways.

Chapters 4 and 5, accordingly, focus on the development of agrarian capitalism in California and its legacies for organic farming. Chapter 4 recapitulates California's agrarian history through the lens of three processes that have characterized industrialization in California agriculture—what I will call intensified, appropriation, and valorization. Chapter 5 considers the uneven spatial development of California agriculture to illustrate how it has affected organic agriculture.

Chapters 6 and 7 turn to the effects of regulation. But, as opposed to consideration in chapter 2, which looks at how regulation external to the organic sector helped spur its growth, these chapters consider the effects of a regulatory framework that was largely of the organic sector's own choosing. Chapter 6 describes the origins and current character of organic regulation, in both its substance and its institutional support. Chapter 7 analyzes the ramifications of these now-codified definitions of organic, in terms of both grower practices and industry structure.

As the organic sector has transformed to become what Michael Pollan dubbed "the organic-industrial complex" (2001b), two responses have emerged. Some, notably those who identify with an organic industry, counter that organic agriculture was never meant to engender a systemic reconstruction of the entire food system but instead had the more modest goal of a more ecologically benign and healthier food supply. The effort to promote a positive alternative is laudable, yet adherents of this perspective ignore the crucial question of how the existing structural conditions of agriculture potentially limit organic farming's success even in these more modest terms.

The other response comes from those who identify with the movement. Disappointed with the direction organic agriculture has taken, they offer a particularly agrarian answer, saying that the resuscitation of the small family farm will make for healthier food, better working conditions, and locally scaled distribution (e.g., Cummings 1998). This book challenges the agrarian vision as well. My contention is that the new agrarianism, while representing the most currently popular alternative vision of organic farming, is off the mark in its critique of agricultural industrialization, including that applied to organic agriculture. The conclusion of the book, chapter 8, is effectively a retort to both positions. In
addition, I ask if there are other, more productive roads toward a more ecologically benign and socially just agriculture.

This occasionally harsh treatment of organic agriculture, and by implication many who advocate it, is likely to create a good deal of controversy, for there are people who would like to discredit organic agriculture permanently. I do not count myself among them, nor is that the purpose of this book. The fact is that I do buy and eat organic food—with a good deal of conviction, at that. Despite the inconsistencies in what are considered allowable inputs, there is no question in my mind that, as a rule, organic producers are exposing farmworkers, neighbors, and eaters to far less toxicity than their conventional counterparts are. The reader will discover that I am not convinced, however, that organic agriculture as it is currently constructed provides a trenchant alternative to the interwoven mechanisms that simultaneously bring hunger and surplus, waste and danger, and wealth and poverty in the ways food is grown, processed, and traded. This is the primary question I wish to explore in this book.

CHAPTER 2

Finding the Way

Roads to Organic Production

Variations in individual farmers’ attitudes toward agriculture are key to understanding what influences some farmers to adopt alternative methods.

Leslie Duran, “A Pragmatic Study of Conventional and Alternative Farmers in Colorado”

A generation of growers entered into organic production because of deeply held political, environmental, philosophical, and/or spiritual values. Many came out of the counterculture or were influenced by environmental ideas in their college years and decided to try their luck at farming. Some followed the writings of the philosophical or practical giants in sustainable agriculture (e.g., Wes Jackson and Robert Rodale, respectively) and deliberately made the effort to put these written ideas into practice. Others were less circumspect and simply felt that organic agriculture was somehow “the right thing to do.” Whether they “always have been and always will be” organic growers or whether they converted to organic farming out of clear conviction, these early entrants set the tone for organic farming by developing a set of idioms around organic food provision that were initially impenetrable by mainstream America, perhaps by design. These growers are most accurately ascribed to the organic movement. Before the 1980s, they were virtually the only growers to populate the organic sector.

The explosive rise in organic production came after 1980, however, amidst a major restructuring in the world’s agrofood economy. Marsden (1992) and others have referred to this new period of food regulation as “post-productivist” in juxtaposition with a period when national food security was the basis of state intervention in agriculture (particularly in Europe) before the crises of overproduction—the so-called farm crisis—that occurred in the 1980s. Though the distinctions are possibly overdrawn,
Organic Farming

Ideal Practices and Practical Ideals

On the drive back to Boise, I thought about why Heath’s farm remained the exception, both in Idaho and elsewhere. Here was a genuinely new paradigm that seemed to work. But while it’s true that organic agriculture is gaining ground, few of the mainstream farmers I met considered organic a “realistic” alternative. . . . Heath’s type of agriculture doesn’t leave much room for the Monsanto of the world: organic farmers buy remarkably little—some seed, a few tons of compost, maybe a few gallons of ladybugs. That’s because the organic farmer’s focus is on a process, rather than on products.

Michael Pollan, “Fried, Mashed, or Zapped with DNA?”

Between 1987 and 1997, the beginning year of this study, approximately seventeen hundred California growers entered into organic production for the first time, and the amount of acreage in organic production grew more than tenfold. Many entered not because of any particular ties to the organic movement but because they felt compelled to change the way they farm or were lured by high prices and the promises of buyers. Whether they approached opportunistically or were pulled along, this wave of growth was unimaginable ten years prior. On the surface, then, it would appear an astounding success on the part of the organic movement.

Yet, to presume that such rapid transformation would not affect how organic agriculture is practiced would be folly. With their arguably more tepid motivations and their background in conventional agriculture, converted growers brought a different set of structures and practices, some of which instantiatted the very qualities that organic agriculture is supposed to counter. Indeed, a sizable percentage of these new organic growers continue to grow some, even most, of their crops conventionally (again, I refer to these as mixed growers). Nor can it be assumed that the earlier movement growers, or “all-organic” growers, were not affected by these changes or, for that matter, that their practices ever conformed to the organic imaginary. In this light, this chapter examines what organic agriculture actually looks like in California in relation to how it is imagined. I begin with the more structural features of the sector, then move to practices, and end with grower motivations.

STRUCTURES

As we have seen, organic growers are often portrayed as small-scale family farmers on freehold land, a characterization that draws from the agrarian populist strains of the organic farming movement. At first glance at the organic sector, scale, ownership, and land tenure—the structural foundations of agriculture—conform to this agrarian populist ideal. As one measure of scale, Klonsky and colleagues (2002) reported a median organic farm size of five acres in 1997, drastically smaller than the typical Californian farms that Carey McWilliams ([1935] 1971) termed “factories in the field.” Median gross sales, arguably a better measure of scale, were eight thousand dollars that same year.1 Similarly, organic production seems to be the terrain of the family farmer. The Organic Farming Research Foundation makes much of the 1997 statistics compiled from respondents to their survey of U.S. certified growers: 72 percent were sole proprietors, 15 percent were family partnerships, and 6 percent were corporations (OFRF 1999); in California, 66 percent were sole proprietors, 27 percent were family partnerships, and 7 percent were corporations (OFRF, personal communication, 1999). Along the same lines, my study found a substantial proportion of landownership among organic farmers; only 15 percent of those interviewed were tenant farmers.2

Unfortunately, these statistics, which imply a wealth of small farms, do not do justice to portraying the sector. Statistics compiled by Klonsky and colleagues (2001) describing the distribution of revenue among farms of different size show that gross revenue from organic operations is highly concentrated. In 1997, for example, over half of the value of organic production was captured by 2 percent of organic growers—those who grossed over $1 million annually from their own crop sales. This statistic does not even count sales of others’ crops. Hardly aligning with the Jeffersonian imaginary of like-sized farms, these data demonstrate a major imbalance in market share and further suggest a symbiotic relationship between large and small farms.
Even more important, the state-collected data that are the basis of Klonsky and Tourte’s statistical study are very misleading, for they include only the organic portion of operations that may also have had conventional acreage. If OFRF’s national survey is at all representative, approximately one-quarter of all organic growers have mixed operations (OFRF 1999). Data I collected from pesticide use permits (see appendix) show that some of these mixed operations may be operations of very large acreage. To give the reader a sense of the magnitude of this problem, I identified six operations with over twenty thousand acres that had from thirty to five hundred acres in organic production. These include American Protection Industries, operating as Paramount Citrus Association; Cadiz International, operating as Sun World/Superior Farms; Harris Farms; and farms held by the Abatti, Gill, and Salyer families. At the time of the interviews, because some of these growers were not even selling all of their organically grown crops as organic, they were placed in the very smallest-scale category in the statistical survey of Klonsky and colleagues (2002). These misleading data are just the tip of the iceberg; other large-scale conventional growers who were dabbling in organic production similarly are treated as smaller-scale growers in their survey. In short, the sizable proportion of organic farming done by large-scale conventional farms is buried within these statistics.

Nor do the truly small-scale farms that populate the organic sector live up to the meanings with which they are imbued. Most of the 79 percent of organic growers with sales under $50,000 were not full-time growers or at least did not receive their primary income from farming, contributing to this remarkably low median farm size compared with California’s conventional farming operations. Some were working farms that provide a modest living, but the vast majority were fruit orchards and backyard gardens on residential real estate, providing their owners with tax breaks (write-offs, agricultural property taxes) and inconsequential income. Only organic farms midsized in sales—say, in the range of $100,000 to $1 million per year (which makes them quite large by census standards)—came close to the ideal: viable economically and, often, remarkably independent. Significantly, many of these growers identified themselves as small farmers.

In short, the California organic sector is extraordinarily bipolar in its structure, with a veritable oligopoly (i.e., a small group of buyer firms) at the top. At the time of my study, there were a dozen or so pioneers in the California organic industry that had drawn a substantial proportion of market share. These included Pavich Family Farms, Bornst Family Farms, Lundberg Family Farms, Eco Farms, Rainbow Valley Orchards, Purepak, Cal-Org, and Earthbound Farms/Natural Selection. All but two were conventional growers who had converted to organic production early on. The exceptional two (Eco Farms and Earthbound) moved backward into handling “ecologically grown” conventional crops as a way to sustain growth in the business. Significantly, all of these players were handling crops of other growers, substantially adding to their revenues. In addition, a handful of conventional firms had enthusiastically entered into organic handling, including Grimmway, Missionero, Cappuro & Sons, and Victor Packing. After interviews were completed, this upper end of the California industry consolidated even more, with several of the pioneers combining forces with or contracting to others.

The issue of farm ownership is similarly misread. As it turns out, the structure of farm ownership in the organic sector is almost identical to that of California as a whole. In 1997, only 6.5 percent of all California growers were organized as corporations, that is, with the vast majority existing as sole proprietorships or as family partnerships (Department of Finance 1997). Almost all small farms are organized as sole proprietorships, but even the larger ones organized as corporations tend to be closely held family corporations (S corporations). Grimmway Enterprises, the largest vegetable grower-shipper in the United States, is, in fact, a family corporation. As a rule, there are very few corporations that are not closely held in the California crop-farming sector and only a handful of publicly held corporations.

What is most remarkable in terms of ownership within the organic sector is not the predominance of the family-owned farm but, rather, the lack of alternative ownership structures. Of the 1,533 registered growers in 1997, only 17 were not-for-profit organizations. Of these, nine were run as independent NGOs, with research and education constituting part or all of the mission, five were affiliated with colleges or universities, and one was part of a detention facility. That leaves two that claimed to be collectives or cooperatives—a far cry from the alternative food delivery institutions that spawned the organic sector in the 1960s.

Finally, patterns of tenure in the organic sector also roughly parallel those of California’s agriculture as a whole. According to the 1997 Census of Agriculture (USDA 1999), 13 percent of California growers are tenant farmers, the same percentage that were tenant farmers among those I interviewed. That said, I did find higher rates of landownership for all-organic growers than for mixed growers.

The preponderance of landownership among all-organic growers is not
surprising given the number of small-scale back-to-the-landers who populate the sector. Many of these all-organic growers are first-generation growers who by necessity started farming in California's interstitial spaces: the small valleys, hillsides, and other unlikely spots, often on less-than-prime farmland, and many were the first to bring this land into crop production. To this, add growth from residential real estate holders and gentleman farmers, who by definition own their own land but for whom farming is an avocation.

Leasehold arrangements are much more prevalent among those growers who converted to organic production from substantial conventional operations. Many in this group are descendants of multigeneration farm families whose land has been divided among numerous family members over time. Although these growers may have inherited (or bought out) some of the family holdings, many of them have felt their holdings to be insufficient, forcing them to lease land. They also tend to farm in the prime agricultural zones, where there are other historical and economic reasons for particular tenure arrangements.

The higher proportion of tenancy among mixed growers also reflects the higher proportion of large growers in that category. In fact, once we control for size, there are no other substantial differences between growers who are all-organic and those who are mixed. In my sample, 97 percent of growers with ten acres or less owned or mainly owned their farms, whereas only 47 percent with more than a thousand acres owned or mainly owned the land they farmed. Large-scale vegetable growers have come to prefer leases in a high-cost land market to maintain flexibility (FitzSimmons 1986; Leibman 1983), as do those involved in commodity crop production for the processing market. Only large-scale operations farmed by the original settlers, held primarily for investment purposes and/or devoted to perennial crops, tend to be owned. Nevertheless, since organic conversion entails an investment similar to that of perennial crops, most mixed-tenure growers with any intention of staying with organic production put their organic operations on owned land or at least on land with longer-term leases.

AGROECOMIC PRACTICES

Agroecology, "the science of sustainable agriculture," provides the putative scientific basis of organic farming. According to Miguel Altieri, the central principle of sustainable agriculture is the minimization of energy and resource use by recycling resources within the farming system or at least within the local region. From a technical viewpoint, the basic components of such a system are: (1) the use of cover crops, mulches, and no-till practices as soil- and water-conserving measures; (2) the promotion of soil biotic activity through the regular addition of organic matter such as manure and compost; (3) the use of crop rotations, crop-livestock mixed systems, agroforestry, and legume-based intercropping systems for nutrient recycling; and (4) the encouragement of biological pest control agents through biodiversity manipulations and the introduction and/or conservation of natural enemies (1995, 92).

To what degree do organic farmers conform to this agroecological ideal—organic agriculture's most central claim? Not to the extent one might think. As part of this study, growers were assessed on the degree of adoption of agroecological precepts (with slightly different criteria for annual and perennial crops) and assigned an aggregate rating (see appendix). A rating of 0 was assigned to growers if they were in obvious violation of organic codes and practices; a 1 was given to those who took no affirmative steps but merely replaced disallowed inputs with allowable organic inputs; a 2 through 4, to those who attempted to put some of these principles into practice; and 5, to those who managed the entire operation by design with minimal outside inputs and maximum attention to processes (see Hill 1985).

As shown in table 2, the modal rating was a 2, suggesting that many growers rely on what Rosset and Altieri (1997) have called an "input-substitution" strategy to manage their organic program. Nevertheless, there were noticeable differences between mixed growers, who disproportionately achieved a 1 to 3 rating (about 96 percent of those interviewed) with a modal rating of 2, and all-organic growers, who achieved a 2 to 4 rating (about 94 of those interviewed) with a modal rating of 3. (When further disaggregated to those who had always been organic, the modal rating went up to 4, or 41 percent in that category.) Likewise, 90 percent of growers in the two largest-scale categories received ratings of 1 to 3, while 90 percent of growers in the two smallest-scale categories received ratings of 2 to 4.

In many cases, the half-hearted adoption of agroecological principles, particularly among mixed growers, simply reflects a lack of commitment. Yet, there are formidable obstacles to whole-hearted adoption. The case of cover crops is illustrative in this regard. Cover crops are annual or herbaceous plants that are not grown for harvest but rather to fill gaps in either time or space when cash crops would leave the ground bare (Altieri 1993). Planted sequentially between cash crops, they are supposed
to restore fertility, increase biomass, and reduce soil compaction and erosion. Beyond the benefits they offer to soil, they also help in moisture retention, weed control, and if they are flowering, are useful for pest management by creating beneficial insect habitat. Depending on the need, many growers use a combination of species in their covers, ranging from the leguminous nitrogen fixers (e.g., bell beans, vetches), to the more biomassive (e.g., sudan grass), to the more flowery. Cover crops are usually mowed and left as “green manure” or discarded; rarely are legumes harvested.

For cover cropping to work in vegetable systems, any given piece of land must be without a cash crop for at least four months out of the year. Even the best intentioned growers have difficulty ensuring this sort of following, hindered both by the organizational complications of rotating different blocks in and out of production and by the economic costs of having land out of production. Thus, besides those growers who plant only one cash crop per year anyway, growers who most often reach the ideal of having every part of the farm in cover during one point in the year farm on cheap or fully subsidized land (by inheritance or outside support) and/or farm very intensively. The rest see cover crops as a luxury (particularly in areas where water is expensive) or claim that cover crops cause more problems than they solve. Some of these latter growers squeeze in as many cash crops as possible.

A similar situation exists for compost, organic farming’s most symbolic material. The purpose of compost is to recycle agricultural waste back into the system, so that a minimum of energy and nutrient transfer occurs away from the farm, aside from the food produced. In an ideal system, compost is composed of crop residues, livestock manure, and organic household waste. It is supposed to be “cooked” for a few months’ duration to stabilize nutrients, neutralize pesticide residues, and kill weed seeds and pathogens (CCOF 1998b). In practice, few farms meet the ideal of on-farm composting. First, only a handful of farms integrate livestock into their production system; at best manure is purchased from nearby dairies or chicken farms, where livestock have been fed non-organic grain, treated with antibiotics, and so on. Even then, not all growers compost or properly age such manure, and tree crops are often fed with so-called raw manure. Mostly, the ideal is extraordinarily difficult to meet, because composting is land extensive itself and necessitates bringing in material to make sufficient compost. As one grower presented it, “With the amount of land, water, and monitoring it takes, making compost is like growing another crop.”
Accordingly, large-scale mixed growers are particularly inclined to rely on input substitution. Few plant cover crops because of the expense; instead, they use the controversial sodium (or Chilean) nitrate and other purchased fertility inputs. Those tied to production contracts also do large-acre plantings of single crops, for even a minimal temporal or spatial rotation would entail operating at a loss or developing additional markets. While they may release predator insects via helicopters, implementing a biological pest control of sorts, they never plant noncash crops to act as trap crops, beneficial insect harbors, or fertility enhancements.

Yet, some growers do not fully implement agroecological principles simply because they can get away without them. They are dubbed by others as organic by neglect because they do not actively manage their organic operations. They often market their crops to processors, where qualities such as cosmetic perfection are less important. Or they grow crops that are particularly easy to grow. The legality of the controversial sulfur dust to control bunch rot makes raisin grapes one of the easiest crops to grow organically, even on a relatively large scale.

Many (but not all) growers who started off in organic production more actively incorporate agroecological practices, although not always to an ideal. Some are particularly innovative in their approach, using the latest in organic techniques, such as bug vacuums, plastic mulches, and microbial inoculants, but remain input dependent. In contrast, some of the smallest-scale all-organic growers are able to integrate a full range of highly labor-intensive design elements into their farming systems, mainly because they operate as hobby gardens. It is rare, however, for a professional farm (i.e., one that supports at least one household's livelihood) to come close to the agroecological ideal, where external inputs are minimized and the farm operates in a “balanced” and “self-regulating” manner. Growers who integrate livestock, intercropping, and/or intense mosaic cropping designs with a high degree of on-farm input development, are few and far between, although some clearly work in that direction.

Those professional farms that come close to the agroecological ideal are almost always organized as subscription farms. Although they occasionally rely on allowable “natural” pesticides or purchased compost, their otherwise integrative production style is very much intertwined with their marketing strategy. Direct marketing, through subscription boxes and farmers' markets, requires as diverse a crop mix as possible, with the timing of harvest smoothed so that an array of choices is always available to the buyer. At the same time, such diverse (and ecologically conscientious) operations are also strikingly intensified. Their produc-

LAVOR PRACTICES

Those who posit organic farming not only as an environmental movement but also as one for social justice imply that the movement includes the concerns of rural workers. Although farm labor concerns were deliberately shunted aside in the political construction of organic rules, as will be discussed in chapter 6, organic production might still differ from conventional in several ways in regard to labor. For one, organic production arguably requires more careful attention in the field. This applies to more than just the so-called artisanal production of certain crops (e.g., baby vegetables); in an organic system, all crops must be handled in compliance with organic regulations. A second difference, related to the putative cropping styles of organic production (e.g., sequential cropping and multicropping), is the need to spread labor more evenly throughout the year. A third is that growers might have a stronger ideological commitment to improve the conditions of farm labor insofar as they see themselves as part of a larger social movement. If these hold true, one would expect to find, inter alia, labor recruitment strategies that secure worker commitment, more year-round and permanent employment, and improved remuneration all the way around. Perhaps growers would even adopt a pro-union stance and make efforts to restructure typical relations of agricultural production.

The use of labor contractors, for example, is arguably anathema to the maintenance of an ongoing, committed labor force. Yet, the use of labor contractors is quite common in organic production, as shown in table 3, largely having to do with established patterns of labor recruitment in the prime agricultural regions. Mixed growers rarely employ separate crews for their organic parcels, so whatever they do in conventional production carries over into organic. While all-organic growers tend to be more cautious of their use of labor contractors, knowing their workers need familiarity with organic rules and techniques, a surprising number, particularly those with cropping systems that have a short harvest period, do not think twice about recruiting their labor force this way.

Not all organic growers provide full-time year-round employment for the majority of their employees, also seen in table 3. Large
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<td>Family only</td>
<td>8</td>
<td>10.4</td>
<td>1</td>
</tr>
<tr>
<td>None</td>
<td>28</td>
<td>36.4</td>
<td>7</td>
</tr>
<tr>
<td>1-25% of workforce</td>
<td>17</td>
<td>22.1</td>
<td>32</td>
</tr>
<tr>
<td>26-75% of workforce</td>
<td>13</td>
<td>16.9</td>
<td>23</td>
</tr>
<tr>
<td>Over 75% of workforce</td>
<td>11</td>
<td>14.3</td>
<td>2</td>
</tr>
<tr>
<td>Pay and Benefits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>21</td>
<td>43.8</td>
<td>36</td>
</tr>
<tr>
<td>Above minimum</td>
<td>19</td>
<td>39.6</td>
<td>14</td>
</tr>
<tr>
<td>Unusual</td>
<td>8</td>
<td>16.7</td>
<td>2</td>
</tr>
</tbody>
</table>

growers use contractors; small growers do not have the volume, relying instead on casual labor. Yet, there are marked differences between mixed and all-organic growers. More all-organic farms than mixed are managed solely with family labor, but those few farms that do provide year-round employment for at least 75 percent of their workers are almost all solely organic farms with diverse crop mixes, particularly subscription farms.

As for remuneration, the need for workers' care and commitment, along with more job stability, potentially reduces their vulnerability so they can demand higher wages. In turn, growers might be ideologically inclined to offer more wages as part of their political engagement. Nevertheless, wages remain low in the organic sector, with 57 percent of those interviewed paying the minimum wage. Although some growers at least recognize that workers' pay is insufficient ("you can't pay them enough"), few actually manage to pay wages of more than $7.50 an hour, far below what several municipalities have established as a living wage. Again, of the few growers that offer substantially higher pay and/or benefit packages are in the all-organic category.

When organic growers are considered together, it is clear that only a handful have systematically worked toward improved labor practices. Those that have experienced some success with this are, with few exceptions, the ultradiversified farms whose cropping and direct-marketing strategies fundamentally alter the organization of production. Sequential cropping strategies substantially smooth labor demands and allow workers to be involved in a number of different tasks. Therefore, fewer people are employed, but they can be employed for all or most of the year. Flipping typical racialized labor arrangements on their head, seasonal work in these situations tends to be done by white interns (often at less or no pay), with Latinos receiving the more secure jobs. Moreover, a high ratio of sales per acre, a product of significant intensification and a direct-marketing focus, gives these particular growers the capacity to pay somewhat higher wages.

It is nevertheless striking that ideological proclivities have not led more organic growers to construct alternative labor relations. Although a few organic growers are sympathetic to the cause of agricultural unionization—indeed the first UFW strawberry contract was signed by an organic farmer in Santa Cruz County, the only existing union contract for an organic operation and the only strawberry contract—most maintain the air of the "patrón", claiming to treat their workers as family and boasting about worker longevity, echoing the rhetoric of conventional growers. At best, organic growers take pride in exposing their employees to less toxicity and providing more year-round employment. One deeply committed organic grower expressed anger at people questioning how much he pays labor. "We do the best we can given the prices. People should be willing to pay more for their food... Agriculture is getting a bad rap for labor but conventional agriculture deserves it with the pesticide exposures and short-term labor influxes. With the program we do, we can provide year-round jobs." Finally, no California organic farms are operated as employee-owned collectives, although a few are nonprofit organizations, illustrating how unquestioned the social relations of production remain.

**Marketing Practices**

Tied to the bioregionalist critique of agricultural industrialization, claims about the locality of organic markets abound in organic discourse. From an agroecology perspective, "exporting" food too far from the farm is energy intensive and defies the ideal of recycling energy on or near the
farm, including the energy metabolized by eating. Besides the environmental benefits, more attenuation in marketing arrangements may benefit growers. Such arrangements allow them to exert greater control over what and how they grow and to capture a higher proportion of crop value. Direct marketing, in that way, becomes part of the discourse of saving the small family farm and also a strategy for regional development. As for consumers, direct-marketing arrangements are supposed to produce knowledge and, hence, trust in their food supply.

So, to what extent do organic growers adhere to this bioregionalist ideal? In certain respects, regional food provision is flourishing, as evidenced in the unprecedented growth of farmers' markets. In California, there are well over three hundred ongoing certified farmers' markets (California Service Agency 1997). These markets provide an important sales outlet for organic farmers. As shown in table 4, 24 percent of growers in this study sold at farmers' markets, and 35 percent of the all-organic growers did. Farmers' markets are a particularly important venue for small and medium-sized growers, who otherwise experience more difficult access to usual marketing arrangements. In California, restaurants are also an important group of buyers. While high-end restaurants are known to "forage" at some of the best markets, most restaurants set up direct relationships with specific growers to supply them. Restaurant buyers are fairly particular about what crops and varieties they desire; however, they also expect high standards of quality, which often put the grower at considerable risk. Table 4 also shows that many growers sell directly to retailers, and, in fact, much of the food sold to regional distributors stays within the region, given the existence of a substantial home market for organics in California.

In terms of marketing control, two-thirds of the growers interviewed in this study handled their own marketing, meaning that they actively participated in sales activities beyond arranging contracts. Significantly, 78 percent of the all-organic growers did their own marketing compared with 52 percent of the mixed growers, a difference that increases with the exclusion of raisins (a common organic product that is federally regulated and almost exclusively sold through packers). In part, the percentage is lower for mixed growers because many were coaxed into organic production by buyers. The difference may also point to a greater degree of freedom and profit potential among organic growers or, in less rosy terms, undeveloped and more uncertain markets for them. Many of the smallest growers, for example, do not even bother marketing their crops in any but the most casual ways.

At the same time, much organic produce, like all California produce, is shipped throughout the United States and, as also seen in table 4, exported internationally. Export produce crops are primarily citrus, dried fruits, and nuts. The 17.2 percent figure for total exports is actually understated, for many growers were unaware of the final destination of the products they sell to packers and shippers. Furthermore, if the 1999 OFRF survey holds true for California, on an acreage basis 80 percent of organic product was sold through wholesaling, with handlers/brokers being the most common outlet (34 percent). Even the largest grower-shippers were involved in some sort of wholesale arrangements, although they can presumably make up for the various handling fees and other extractions in sheer volume of sales. Nonetheless, this is a far cry from the control and immediacy that is assumed to be intrinsic to organic markets.

For most growers, marketing practices are not a "choice" independent of other factors. Marketing both shapes and is shaped by crops grown, personal networks, and, ultimately, production practices. Less desirable and/or less perishable crops tend to be sold in bulk to packers and processors, often considerably decreasing growers' profits. In some cases, handlers share revenue and selling expenses on a percentage basis. In most cases, the terms are more beneficial to them than to growers. Either the grower gets a small remainder after the handler pays selling ex-
penses and takes a cut, or, as in the case of processing ingredients, the grower gets a tonnage price set in advance by the buyer. Consequently, large-acre growers specializing in contract production for processing markets make their income through economies of scale, especially because many "commodity crops" can be machine harvested. Still, large-acre, all-organic growers tend to do their own sales more often than mixed (or conventional) growers of the same size. For some, this has come as a matter of necessity, arising from undeveloped markets. For others, it has involved an explicit decision made with the realization that it was the only way to retain more production value.

For most experimental farms, direct marketing is the crucial component of the operation. Some sell a portion of their high-value crops to wholesalers, but the majority of sales occur through farmers' markets, farm stands, and subscription operations. In the last case, members-subscribers agree to participate for a specified amount of time and, for a weekly or monthly fee, receive a box of food every week. To entice customers to join and stay, these growers offer a wide variety of produce and continual supply. Therefore, this method of marketing works only with farms large and well-managed enough to maintain healthy and varied rotations. Most of them willingly integrate livestock, not only because of its agronomic benefits, but also because of the opportunity to offer subscribers a well-rounded market basket, containing eggs or even goat's milk. In other words, there is a synergistic relationship between this sort of marketing and the agroecological ideal, even though subscriptions are not the only, or even the most lucrative, sales outlet. In general, subscription farms garner the most devoted customers, who so trust the growers that some subscription growers are not certified organic, and others have dropped the organic designation altogether.

In sum, the marketing strategy that holds the most promise (other than for the large grower-shippers themselves) is direct sales of fresh produce in regional markets, a strategy which is most faithful to the organic doctrine. It is most often followed by the mid-sized growers and a few microgrowers who sell to restaurants from which they receive extraordinarily high margins on a small volume of crops. For these growers, organic farming can seem a panacea, indeed. Yet, the strategy also depends on an expanding market and/or highly committed consumers, because growth in production volume is starting to exert competitive prices on these growers. In any case, on an acreage basis, most of organic production is being funneled into an increasingly oligopolistic industry structure—albeit sometimes on a concessionary basis—with marketing controlled by a small group of intermediary firms for any given commodity or group of commodities. Although larger growers who sell to these firms are brought in with attractive prices, they are still reduced to making their money on volume, not a particularly easy task with organic production. The many small apple, citrus, date, and avocado growers who sell to packers have virtually no bargaining power and are lucky to make any profit at all.

IDEOLOGICAL DISPOSITIONS

Perhaps the most all-encompassing claim made about organic agriculture relates to the internal processes of organic growers themselves—specifically, that they are motivated by different values from those of conventional growers, even that they operate under a different "paradigm" (see Beus and Dunlap 1990, 1994; Allen and Bernhardt 1995; Chiappe and Flora 1998; cf. Jackson-Smith and Buttel 1998). If they no longer operate in explicit opposition to "the food system," organic growers are thought to strive to provide alternatives to conventional food delivery. The flip side of this claim is that conventional growers seek only to make money and are ignorant of or flagrantly disregard other concerns.

More than one interviewed grower attacked the organic/conventional divide as a false dualism, noting that organic agriculture is constructed on deliberately created barriers, promoted, as one grower said, by "a very verbal and articulate cohort of hobby farmers." Such dualistic thinking also ignores how motivations evolve with differing degrees of individual agronomic and financial success or with regard to the changes that the organic sector undergoes.

There is no question that organic growers who began their career with organic farming—primarily first-generation farmers—identify most strongly with the notion of organic agriculture as a social movement, as compared with those who descended from farming families. It is also true that smaller growers more often voice social movement ideals, and it is virtually axiomatic that larger ones are more business-oriented. In addition, those who have farmed organically for a longer time tend to be more committed than those who are neophytes.

Yet, given the number of growers who do not fit these characterizations, we should take them with a grain of salt. A surprising number of small growers in this study became involved in organic production solely to reap value from residential real estate or down-sized farming operations. Many of these growers expressly doubt the validity of or-
oganic precepts. For example, a small fruit grower, who said he was told he could get more money from his grove if it were organic, supposed organic agriculture to be the equivalent of saccharine or margarine in its food-faddist origins. Likewise, growers who have been organic farming for years can be quite cynical about their involvement. One large-scale commodity crop grower and part owner of a chemical distribution company had been growing organically since the late 1970s, having started out as a contract rice grower for macrobiotic-oriented Chico-San. Despite such longevity with the organic industry, this grower produced organically only when he could get a lucrative contract. As he said, “Some are into it for the concept; I’m into it to make money.”

Nor can it be presumed that all-organic growers are necessarily advocates. A two-hundred-acre fruit grower fell into organic while on the verge of farm foreclosure. Not being able to afford inputs at the time, he discovered that he could do without them. For him, organic production kept him in business. Yet, as he put it, “I’m not out to save the world; I just happen to grow organic food. . . . We are about feeding people organic food for a profit. . . . Hell, my politics are way to the right of center.” Even one of the oldest organic operations in California—listed as a Rodale certified grower (in Steffen, Allen, and Foote 1972)—claimed to farm organically primarily because it was a very profitable niche market. Other than her appreciation of organic techniques, she defied stereotypes of the organic grower and, in particular, was adamantly opposed to the rhetoric against genetically engineered organisms (GEOs) that was then starting to emerge in the organic movement.

More typical are mixed or converted growers who fall somewhere in the ideological middle. Some who were attracted to organic agriculture primarily for business purposes eventually found other reasons to farm organically. Some became concerned with the ecological degradation or safety risks associated with conventional production, and others became cognizant of some of the agronomic benefits, such as improved soils, from certain organic farming practices. Even growers who came in early on “only for the money” realized the importance of the integrity of the organic name as a key to their success and eventually were convinced of the integrity of organic production in ecological terms. One such grower noted how he had increasingly bought into the organic philosophy over time. Although organicics used to represent a challenge of new practices and economic promise, he had come to realize that it is a practical way of living. A like-minded grower, noting that all his decisions are market driven, claimed he did not know of any grower who would not be too per-

cent organic if it were economic, a truism if there ever was one. Yet, many of these growers remain economically tied to conventional agriculture in ways that have made them cautious entrants, although they claimed to incorporate as many practices as they can in their conventional fields.

By the same token, some well-entrenched in the organic community are ambivalent about their movement roots. A sales manager for one of the largest all-organic operations (who had been involved in conventional agriculture much more recently than the company he worked for) was bluntly patronizing about the small growers who had been formative in developing the sector. “A serious grower can’t be a part-time picker with overgrown sideburns and expect to compete,” he said. “There’s a place in organic for mom-and-pop operations if they would school themselves and have ambition and desire for excellence. . . . Those guys are screaming now; they thought they had niche in market and now they are resentful.” The context for his vitriol was that this company had been involved in a series of expansion-oriented deals in which it was simultaneously curtailing buyer relations with small growers. Although short on social vision, the company had a five-year plan to be “totally self-sustaining and earth friendly,” hoping to incorporate on-farm recycling, alternative fuel use, and even livestock operations into its way of doing business. (Soon after my interviews, the company became a contract supplier for another, even larger organic grower-shipper.) Of the all-organic megaoperations that had moved into conventional production as a way to sustain company growth, one justified the shift as a broad move toward sustainable production; another claimed to be merely apolitical, having been involved with organic production because of personal inclinations but not necessarily as a company philosophy.

Even among those who consider themselves ecological farming advocates, their motivations are not as visionary as one might think and, indeed, are often quite singular. Some I spoke with were more impressed with soil quality; others were more concerned about pesticide use. A few were also farm activists, involved in agricultural land preservation issues or rural development generally. Yet, only a small number of growers claimed to be involved in organic production for an alternative or radical vision (usually well-articulated), whether centered on lifestyle, personal health, social justice, or, in one case, “practical Christianity.” Flying in the face of organic agriculture’s putative historical roots, even fewer had adopted a systemic critique of the agrofood system. Nevertheless, of the handful of growers who had combined political vision with actual farming, almost all were subscription farms. By adopting this model, they
at least hoped to address working conditions, equitable food access, and grower security, along with the more conventional goals, as it were, of organic production: ecological farming and healthy food delivery.

Taken together, few organic growers see organic farming as a means to alternative institution building, although many are explicitly distrustful of the worst of conventional agriculture. More significant perhaps, even dyed-in-the-wool all-organic movement growers are becoming less ideologically radical and are adopting practices they might have otherwise shunned. With a handful of buyer firms controlling market share— with the organic sector looking a lot like an oligopsony—a few players are able to set prices and effectively limit how production is carried out. Moreover, the rapid growth these firms generate is bringing competition that had heretofore been absent in the organic sector. Consequently, even those who are external to this industry structure are being pushed into capitalist decision making as the industry grows and changes.\textsuperscript{19} No matter how committed they feel to organic farming qua social movement, they increasingly have to weigh their political goals against their livelihoods. In that way, they are caught up in a deeper logic of agrarian capitalism, particularly as it has evolved in California. The next chapter more closely examines these forces of agricultural industrialization in California and how they have affected the organic sector.

Chapter 4

California Dreaming

California's Agro-Industrial Legacy

In no other state has farming so quickly lost its traditional character and become an established industry as in California. Today, “farming” in its accepted sense can hardly be said to exist in the State. The land is operated by processes which are essentially industrial in character. \ldots To understand how farms have become factories in California, it is necessary to trace the rise of typically capitalist patterns of industrial operation in California agriculture.

Cary McWilliams, \textit{Factories in the Field}

Michael Pollan’s 2001 exposé of the organic-industrial complex in the \textit{New York Times Magazine} has generated increased awareness of what some are now calling the corporate takeover of the organic food system.\textsuperscript{1} As chapter 3 showed, the sizable presence of agribusiness-like firms in the organic sector has transformed the structure of the sector. Their entry has also shaped the way organic agriculture is practiced, for conventional agriculturists’ habits die hard. Yet, this transformation was not the doing of conventional agribusiness per se. Nor is it the case that agribusiness entry was intended to subvert the organic sector. Instead, the pioneers of the organic industry have grown and expanded to become effectively agribusiness themselves, drawing in these conventional firms with them. Along the way, the upper echelon of the sector has consolidated significantly.

Although such prima facie evidence of agribusiness participation and intra-industry consolidation is cause for concern, I argue that the focus on the presence of “big” players is off the mark. For the problem with agribusiness is its legacy of social and ecological exploitation rather than its scale of production per se. Additionally, such an analysis elides how
CHAPTER I


1. Even among those fully versed in the structural dynamics of the world food system, there is a tendency to frame organic agriculture as a binary opposite to industrial agriculture, and organic food to fast food, as if organic agriculture were immune to these broader dynamics (Friedmann 1992; Goodman 1999; Heffernan and Constance 1994; Whatmore 1995; cf. Friedland 1994a).

2. *Industrial agriculture* is not a straightforward term and is often conflated with *corporate agriculture*, for example. Chapter 4 will give more sustained attention to some of the various definitions and spell out the one favored in this book.

3. See James 1993 on the multiple meanings brought to organic food.

4. See Peters 1979 for an early social history that focuses on the first three of these threads.

5. The critique of industrial farming is not necessarily what motivates growth in the organic sector—at least in the United States. It appears that most organic food purchases are guided by vague health and environmental concerns and amorphous notions of quality, as a few studies (Hartman Group 1997; The Packer 1996) and a great deal of anecdotal evidence suggest. My own anecdotal
evidence includes shoppers’ and diners’ comments I overhear, as well as those I receive when I tell people about my work. A typical comment would be, “I don’t care who produces it, just that it’s grown without pesticides.” Many others within the industry or movement corroborate these perceptions with similar anecdotes. Nevertheless, consumer perceptions and practices in regard to organic food remain strikingly under-studied, and it would be premature to interpret such surface understandings of organic agriculture among consumers as the product of either false consciousness or deep reflexivity (see DuPuis and Goodman 2002).

6. Beeman (1995), Blakesley (1990), Hartwood (1990), and Mergenthaler (1994) have all written histories of the organic or sustainable agriculture movements that focus on the production aspect of the critique.


8. Although the first efforts to ban or limit chemicals were administered under the 1966 Pure Food Act, support for nonchemical agriculture was not integral to the pure food movement or its progeny. On the contrary, many agroecological ideals fly in the face of pure food notions. For instance, using natural enemies to fight pests or developing a “living soil” that stimulates microbial action are both anathema to efforts to sanitize food. Thus, even though notions of food safety undergird the movement for organic agriculture, this coupling remains uneasy, and controversy over it continues to manifest in regulatory battles.

9. See Blakie 1985 and Watts 1983 for seminal academic contributions to these ideas.

10. The provincialism inherent to bioregionalism has not gone unopposed. More damningly, organic farming has appealed to the worst of nationalist movements, precisely for its bioregionalist meanings. The appeal of organic farming to the British Nationalists in the 1930s was that it would be part of a program of national self-sufficiency (Reed 2001); for the Nazis, it was a recognition that it was dangerous to depend on imported agricultural inputs during war (Bramwell 1989).

11. The sustainable agriculture movement more generally has come to the inordinate attention to scientific research, scientific research institutions, and agricultural research policy, an emphasis that reinforces the privileged reference and “the shorthand postulate that technology shapes social structure rather than vice versa” (Buttel 1994, 31). Thus, “sustainability has been defined in terms of bolstering productivity (through reduction of use of purchased inputs) within a larger capitalistically or instrumentally rational framework” (33).

12. There is ample criticism of the notion of sustainability itself, which has been construed to mean sustainable economic growth for capitalist states (see Sachs 1992). For this reason, Allen and colleagues (1991) justify the continued effort to define sustainable agriculture just so its successes are not denied solely by farm level resource conservation and profitability.

13. In marked contrast, Colin Duncan (1996) argues that the key to effective stewardship in England’s period of high agrarian capitalism was a separation of management and land control. Landowners’ long-term interests in the fertility of the land compelled them to require extensive rotations in lease contracts, while owner-operators were solely led by market conditions, and thus tended to overintensify production. Thus, the larger questions of whether landownership elicits sustainability or, reciprocally, whether sustainability demands ownership are both complicated and can only be answered historically and empirically.

14. “The modern failure of marriage that has so estranged the sexes from each other seems analogous to the ‘social mobility’ that has estranged us from each other, and the two are historically parallel. It may even be argued that these two estrangements are very close to being one, both of them having been caused by the disintegration of the household, which was the formal bond between marriage and the earth, between human sexuality and its sources of sexuality in the Creator” (Berry 1986, 14).

15. There is some evidence for this presumed reciprocity between the scale of the operation (i.e., sufficiency to support one household without the use of hired labor) and the ability to implement certain sustainable technologies. In the midwest corn belt, for instance, full-time family farms (as opposed to part-time family or quasi-capitalist farms) have been most likely to adopt a low chemical input tilling system, which involves a sequentially complex set of field operations (Lighthall and Roberts 1995, 325).

16. David Vaught’s (1999) recent intervention, for example, which refutes the industrial character of specialty-crop agriculture by claiming that early horticultural growers had special moral commitments, does not undermine the essential class character of specialized fruit production in an analytical sense.

17. Through this inspiration, she also altered the meaning of “organic” in ways that, quite unintentionally, were clearly implicated in the trend that shifted farming from a movement to an industry.

18. A technical counterpart in southern California never really existed. The Division of Biological Control, once based in Riverside, was one of the University of California’s flagship programs for its early success with controlling coton rotation scale, a disease that affects the cosmetics of oranges. Although the Division later came up with technologies that helped organic farmers, such as Bt (an antibiotic composed of the bacterium Bacillus thuringiensis), most of the Division moved to a radical position. The problem was that biological control was an expensive potential, and much of the work done through the division was needed to supplement chemical-based farming (Sawyer 1999).

19. A by-product of this was the era of “CSAs,” as they are called, consumers become equity investors so that they can potentially share the risk of farming.

20. The California Organic Foods Act of 1990 (COFA) requires all growers of organic crops to claim to be organically grown to register with the California Department of Food and Agriculture (CDFA), whether or not they choose to certify. Although the basis of Klonsky and Tourte’s reports, these figures are widely assumed to be understated. First, growers were not counted when registration fees were not paid up. Second, I counted at least fifty growers who were certified but not registered (which is technically illegal) and, thus, not counted. These
were primarily wine grape growers who were not selling the finished product as organic but who accounted for a significant amount of acreage. For this reason, the USDA's Economic Research Service reported a much higher amount of certified acreage (1,026,819) for that same year, although little could be done to control for multiple certifications (Cathy Greene, personal communication). Third, as noted by the authors, there were additional reporting incentives and procedural problems that encouraged understatement of scale. Finally, there are always growers who follow organic standards but refuse to participate in those regulatory schemes and, consequently, are never counted at all. Many in the organic industry hope that such discrepancies in data collection will eventually be rectified by the federal rule that went into effect in fall 2002.

21. In 1985, several growers were found to have used the highly toxic Alar in their watermelon fields. Then, in 1988, stories started leaking out regarding the Natural Resources Defense Council's 1988 report condemning the use of Alar as a growth regulator—ripening agent for apples on the basis that it was found to be highly carcinogenic.

22. Here it must be said that during the time that I was researching and writing this book, a federal rule for organic production was being negotiated, finalized, and implemented. As you will learn, aspects of this new regulatory scheme could substantially alter the dynamics of the organic industry. For this reason, I have chosen to end my analysis with the implementation of the federal rule. Because much of the basic regulatory framework remains intact, I do not expect the federal rule to alter the direction in which organic agriculture is headed. If anything, the federal rule is likely to exacerbate existing tendencies within the California organic sector.

**CHAPTER 2**


1. One must also consider those growers who have adopted most, but not all, of the practices now codified as organic. Some of these "near-organic" growers readily joined the fray when they realized it would require only one last step (usually eliminating herbicides), or a sea change in the way they were farming. Others chose to limit or even shun their involvement with organic production per se, seeing no market advantage or simply preferring to retain their "last resort" tools. Still others felt there were other, perhaps deeper, ways to promote sustainable agriculture than the organic label with all of its inconsistencies and biases. Some of these last growers are appreciably more zealous about alternative agriculture than many organic growers.

2. Friedmann (1992, 1993b) and others (Le Heron 1993; McMichael 1994) have posited these shifts as indicative of the ascendance of a "third food regime." a whole nexus of state, capital, and civil society relations around the delivery of food. From this analytical vantage point, the post–World War II surplus regime (1947–72) was characterized by national regulation, subsidized grain production, chronic food surpluses, and a commodity focus on mass-produced durable foods; the incipient "third" regime looks to be characterized by international production-consumption links, international free trade regulation, the demise of farm-based support systems, and a shift to nontraditional exports and "niche" commodities, especially fresh fruits and vegetables. Whether this phase has assumed anywhere near the coherence to be called a regime is highly debatable (see, e.g., Campbell and Combes 1999; Goodman and Watts 1994; Le Heron 1993). Consider, for instance, that fresh fruits and vegetables have been a cornerstone of the California economy for at least a century, and many of California's standard commodities (e.g., lettuce) were once considered specialty goods. Yet, there is no question that, as tendencies, these developments have created openings for different modalities in food production and consumption.

3. In the United States, changing national support for agriculture followed on the heels of the 1980s farm crisis when it became all too apparent that fifteen years of price supports and production controls for certain "strategic" commodities had created chronic conditions of oversupply. Production controls as a way to boost prices were equally incompatible with efforts to expand exports through maintaining competitive pricing and gave other countries the incentive to protect their own domestic farm programs through trade restrictions and/or price supports (Friedmann 1993b; Le Heron 1993; Orden, Paarlberg, and Roe 1999). The United States' zealous promotion of agricultural free trade in the Uruguay Round of GATT was a final effort to address problems of chronic oversupply (Friedmann 1993b). While the Uruguay Round of GATT, which concluded in 1994, did not eliminate state support for national agricultures in the way free traders envisioned (nor did NAFTA, for that matter), it did establish a template for phasing out tariffs (Goodman and Watts 1997; Orden, Paarlberg, and Roe 1999). More recently, the 1996 Federal Agriculture Improvement and Reform (FAIR) Act, previously dubbed the Freedom-to-Farm Act, gave farmers in the United States increased planting flexibility by turning cash subsidies into fixed payments, "decoupled," so that cash supports of farmers would no longer be directly related to market prices or acreage planted (Orden, Paarlberg, and Roe 1999, 1). However, the 2002 farm bill, dubbed the Farm Security and Rural Investment Act, is considered a step backward in that it returns to massive subsidies for certain "strategic" commodities.

4. These two aspects of productivism are intrinsically related, because the diminishing importance of national food security in industrialized countries has brought more scrutiny of the side effects of agricultural productivity, including both (i) the environmental externalities of agricultural production, such as soil erosion, nutrient depletion, fouled water, and unconscionable effects on animal health, and (ii) the impacts on food itself vis-à-vis its safety, nutritional content, and aesthetic qualities (Burtel 1994; Lowe, Marsden, and Whatmore 1994; Marsden 1992).

5. Social resistance to the by-products and practices of agricultural industrialization, whether in the form of increased demands for regulation or changes in consumption habits, can be seen as a modern example of Polanyi's (1944) double movement: an organic reaction to an unbridled market logic that leads to deterioration of the conditions on which production depends (see also Barham 1997; O'Connor 1989). O'Connor calls this the second contradiction of capitalism, "the process whereby capital is its own barrier or limit because of its self-
Notes to Pages 24–25

6. As a consequence, demand for high-value foods almost necessarily comes from "relatively privileged, higher income, higher educated, well-traveled professionals increasingly concerned with food quality, safety, and variety," and "a relatively unprivileged strata less concerned and sophisticated about food variability, less educated, and only fitfully concerned about food safety" continues to eat mass-produced food (Friedland 1994b, 219). Echoes Friedmann: "While privileged consumers eat free-range chickens prepared through handcraft methods in food shops, restaurants or by domestic servants, mass consumers eat reconstituted chicken foods from supermarket freezers or fast food restaurants and dispossessed peasants eat none at all" (1992, 86).

7. This broad canvas of political and economic restructuring admittedly begs the question of individual change. After all, new or expanded organic operations do not simply appear out of thin air, nor are conventional growers converting to organic en masse. Incentives and disincentives to organic production are differentially constituted in space and time. Spatially, access to appropriate inputs, technical assistance, and markets all matter, and so does the health of the surrounding regional economy. Timing counts as well, especially when the goal is "to make a killing" in a new market. There are myriad other factors that affect grower decisions, including the availability of technologies to deal with particular crops, access to suitable land, individual risk profiles, and even grower attitudes and ethical dispositions. Many newly converted growers are simply early innovators. Thus, the purpose here is not to wholly disregard the ways in which personal beliefs count but to encourage a finer tuning, so that ideological convictions and individual choices are understood as being in reciprocal and evolving relationship with the political and economic contexts in which farmers are located.

9. Unfortunately, statistical data of growth in the organic sector are limited. Organic farming grew out of a culture that defined state intervention, and, for the state's part, organic lacked the legitimacy and importance to justify record keeping. Until it was required, many self-proclaimed organic farmers did not join certification programs, and many others adopted organic practices without naming them so. In California, all of this changed with the passage of the COFA, which among other things required all growers to register with the CDFA and reported basic farm level data. Enabling legislation, however, was not implemented until 1992, so 1992–93 is the first fiscal year in which data were collected. Prior to that, the only data kept were those by private certifiers and perhaps sales records of individual retailers, the latter of which were never sufficiently aggregated. Although record keeping among certifiers varies greatly in terms of accuracy and availability, it is fortuitous, for these purposes, that up until about 1990, California Certified Organic Farmers dealt with most California growers who chose to certify. As such, COCOF constituted the "normal" organic sector for most intents and purposes, making its records the best basis for describing growth in the organic sector up until 1992.

10. The registration requirement is a process separate from certification, the latter of which has been voluntary in California—all of which changed with the implementation of the federal rule in 2002. Between the enactment of the COFA and up until 2002, there were always more registered growers than certified growers.

12. In 1996 Muir Glen was bought out by Small Planet Foods, a Disney-related corporation, which also owns Fantastic Foods and previously owned Cascadian Farms, a major organic processor. A couple years later, General Mills purchased Muir Glen and Cascadian from Small Planet.

12. Since then, the operations manager has sat on the CCOF Board of Directors, representing the processing chapter.

13. This buyer-led, as opposed to producer-led, system in some respects resembles the globalization commodity chains that Gereffi and Korzeniewicz (1994) see as emblematic of flexible production networks. Gereffi and Korzeniewicz, however, are making claims about new systems of manufacturing, whereas mass food production has always been coordinated by marketers.

14. Apples are difficult to grow organically even with well-managed operations. These operations, which are "organic by neglect," often produce fruit that can be used only for low-grade purposes.

15. The federal Reclamation Act of 1902 imposed acreage restrictions on landholdings with water irrigation developed by the federal government. The original restriction was 160 acres per family, by the 1980s, the limit was raised to 360 acres. Compliance has never been whole-hearted. See, e.g., Hundley 1992; and Worster 1984.

16. These crops are eligible to be labeled "certified transitional," so they may reap higher prices than conventional crops do, but the transitional market has not really been established in California.

17. See Wargo 1998 for a detailed look at this regulatory history and Whorton 1974 for the previous history.

18. Methyl bromide is supposed to be completely phased out by 2005 in industrialized countries, according to the 1987 Montreal Protocol for abolishing ozone-depleting substances (Boulton 1997).

19. As urban dwellers have moved out to rural areas, conflict has heightened over pesticide use, odors, dust, noise, and other "nuisances" of farms. Many social conflicts at the rural-urban interface have been resolved with "softer" production schemes (Daniels and Bowers 1997; Handel 1998).

20. Sandra Steingraber's Living Downstream (1997), purposely modeled after Silent Spring, brings together heretofore uncorrelated EPA toxic-release inventories with cancer registry data. In my opinion, she makes a convincing argument that environmental contamination from the postwar petrochemical industry is the predominant cause of the contemporary increase in cancer rates.

CHAPTER 3


Acreage is a highly inexact measure of scale because it is a poor indicator
of the complexity and intensity of any given operation. For one thing, in relation to the level of mechanization, there are obvious economies of scale in the production of field crops, and even certain produce crops, that simply do not exist for crops that require more delicate handling and/or intense management. Lower-value crops are characterized so in part because they require less labor. Second, some of the larger growers in purely acreage terms are contract growers, which also simplifies aspects of their operation. In other words, a grower farming wheat that is mechanically harvested on a contract basis may have several hundred acres of crops, but has a much less complicated operation than a vertically integrated stone fruit grower on fifty acres who hires pickers and does his or her own sales. Third, using acres as a measure of scale minimizes the significance of the many operators who handle and market other growers’ crops.

Still, there are also significant caveats for the use of sales as a measure of scale: (1) gross sales are “skewed” by higher crop values in which some elements may reflect economic and ground rents in addition to higher production costs (strawberries being the best example); (2) better managed (or more intensively cropped) farms appear to be of larger scale than farms of similar size but less well managed (or less intensively cropped) (Strange 1988); and (3) sales figures exhibit substantial variability from year to year, even when the same amount of acreage is farmed.

2. Clearly, there is more to tenure than land title. In the U.S. context particularly, the degree that land is mortgaged has important implications for farming practices. Farmers who are heavily mortgaged or who used their farm as a bank for working capital are more constrained in their abilities to experiment with alternative practices.

3. This misrepresentation is not a reflection on the integrity of their methods, only a reflection of the data they had to work with.

4. Besides the CERS database and CCOF membership directory, sources for these statistics include the Los Angeles Times 1986; PR Newswire 1987; Carnal 1996; Stevenson 1987; and Groves 1991.

5. Still, conventional agribusiness involvement in organics, in terms of off-farm production, remains experimental, tentative, and protracted, and there is a significant amount of exit as well. For example, Sun World International, the second largest citrus marketer in California behind Sunkist and now owned by the Cadiz Land Company, attempted organic production on a limited amount of acreage but found no marketing outlet. (The main thrust of Cadiz’s business has been buying up Mojave Desert land with water reserves in the hope of eventually marketing the water (Carnal 1996)). Harris Farms, which had 20,000 acres in crop production and ran an 80,000-head feedlot (Groves 1991), combined their 500 acres of certified organic acreage with two other Westlands growers in 1998, under the banner of Greenway Farms. The idea behind Greenway was to economize on scale because each farm had difficulty meeting its marketing obligations separately. Double D Farms of Coalinga, another large grower, experimented with organic production but leased out their 300 acres of certified land to Natural Selection when they experienced difficulties in growing crops. And Harlan and Dumas of Woodland, Jack Brothers and McBurney of Brawley, and La Brucherie Ranch of El Centro exited altogether, feeling that organically priced prices never seemed to accommodate the additional costs of growing organic and the regulatory hassle it entails. All the same, there are new entrants all the time, wanting to take a stab at the fastest growing sector in agriculture.

6. Small farms in California are larger than those placed in this category nationally, reflecting relatively high sales of high-value crops.

7. Actually, several of the large all-organic producers deal in some conventional product, either as a way not to flood the organic market (i.e., selling organic as conventional) or ostensibly to sign on more growers to ecological methods by giving them technical support in near-organic methods. In effect, this allows large operators to avoid organic regulations in markets where they get little benefit.

8. In any case, the axis of corporate versus family farms is a more salient category for the Midwest, where it more reliably signifies a distinction between capitalistic farms and petty commodity producers (i.e., farms that do not depend on hired labor) (Gilbert and O’Connor 1996). In California, this crucial structural difference was eroded a long time ago and never had much analytical purchase to begin with. In general, growers tend to choose ownership forms on the basis of tax and liability considerations. Moreover, there is increasing debate as to how much the corporate form in and of itself matters in terms of the social issues at stake (see, e.g., Welsh 1998).

9. Coincidentally, one is Cadiz International, which bought out Sun World International and its small organic operation. In processing, handling, and distribution, the story is quite different, of course, and Horizon Organic Diary, for example, is now publicly traded.

10. For tax reasons, many family-held farming corporations own no land and lease it from individual principals who are the owners of land. Since this is a case where ownership has not been substantially separated from control, these farms are counted as “owned” land, as is land that growers lease from other family members.

11. The principles behind organic are quite parallel to those of agroecology, as demonstrated in the CCOF handbook (CCOF 1998b). It is the rule making that makes organic narrower, as will be explained in chapter 6.

12. Indeed, it is only in prime areas that contiguous activity is sufficient for the contractors themselves to survive economically.

13. The potential liability of a worker using a disallowed substance surely contributes to this concern.

14. There is, however, a social division of labor on these farms between whites and Latinos. White employees work at the farmers’ markets more often, for which they are almost always paid in cash, “Mexicans” are preferred for their skills as fieldworkers.

15. Some growers are actively reconstructing consumer tastes toward food that is local and seasonal and that fits well with an ecological farming strategy. In an extraordinary feat of producer control, aided by the dissemination of recipes and exhortations to buy seasonally, they have introduced their customers to the likes of kohlrabi, green garlic, and kale.

16. Because of extralocal availability of seasonal produce, the net of the region has been flung wider. Aside from the organic produce that it obviously "im-
ports,” be it Washington State apples, Caribbean bananas, or Chilean raspberries, the northern California region has been quietly extended to include the Imperial Valley, Arizona, and Baja California, where many large organic farms now operate to provide such desirables as cherry tomatoes and baby lettuces in the dead of winter. While some may argue that this greatly expands product availability—often considered a good thing—others say such a broadening goes against the grain of a foodshed.

17. The 1999 OFRF national survey stated that 21 percent of growers know that their product reached foreign markets.

18. Of course, not all wholesale arrangements relinquish control. There are be scale economies in postharvest processing, for instance, which can be met through cooperation among growers. Some packing relationships are informal “sweetheart” deals, where one grower with the appropriate postharvest capacity packs or sells for other growers in the region. They tend to be run like marketing cooperatives, where participating growers simply pay their share of expenses and receive their share of revenue. Yet, only one true marketing cooperative exists for organic: an herb cooperative in Trinity County, which was partly funded by community development grants. At one point, growers in Yolo County had formed a marketing cooperative called Yo-Cal. It was short-lived and apparently failed because of poor management. Growers who lived through this experience express a clear preference for separate marketing, even though it involves competing with their friends and colleagues.

19. It is not only competition that causes dissonance among these movement growers; they also increasingly face compliance issues in areas such as labor, food safety, or environmental impacts, causing them to resist state regulation in these areas. It bears mentioning that many organic growers have strong libertarian tendencies anyway, stemming from the USDA's historical disregard for alternative agriculture and more recent frustration over organic rules making at both the state and federal levels.

CHAPTER 4


I must clarify here that Pollan drew some of his conclusions from my earlier article on the same topic (Buck, Gez, and Guthman 1997). Pollan also interviewed me in the course of preparing his piece.

In terms of on-farm production, concern with “the disappearing middle” (Buttel and LaRamee 1992) maps onto the agrarian populist imaginary, suggesting that the scale of production is an appropriate measure of agricultural industrialization.

3. Economic returns of mechanization in agriculture are minimal compared with returns of intensification (Scott 1998), so, at least with some crops, insufficiently capitalized growers can compete with scaled-up operations by working the land harder (cf. Cochrane 1993; Johnson and Ruttan 1994). In fact, low fixed costs and flexible family labor may be a scale advantage in what are risky enterprises (Friedmann 1978; Goodman and Redilf 1991; Watts 1993).

4. In truth, Goodman, Sorj, and Wilkinson (1987) break this notion of appropriation into two processes. They use appropriation to refer to the process by which products and processes once integral to on-farm production are refashioned as inputs, making way for more factory-like production on the farm. They use substitution to refer to processes by which postproduction value added becomes such a high proportion of the value of the commodity to the point that industrial processes may wholly substitute for rural products. For simplicity, I am using the term appropriation to capture the transfer of value from farmers to others in the commodity system.

5. Kautsky posited that direct on-farm production is of little interest to industrial capitalists, which would leave it to producers who have either less power or other reasons to self-exploit.

6. The classical political economy theory of rent goes like this: All else being equal, access to better land translates into surplus profits for farmers on that land. Without having to apply more labor, they can get better yields simply from the land’s unexploited fertility. The source of these surplus profits is thus a “gift of nature,” not derived from human effort. Yet, because land is both scarce and privately held, landowners have monopoly power over it. So, if better land fetches higher profits, landowners intervene to appropriate those extra profits, having the power to expel the farmer from that land. This ability of landowners to exercise such market control over even the worst land is the basis of Marx’s term absolute rent, the price that every farmer must pay to have access to land (Ball 1980; Harvey 1982; Walker 1974). Even when a farmer is also the landowner, it does not necessarily eradicate the rent relation. The selling price of land is rent capitalized, so some farmers pay rent through land purchase (Ball 1980, 304). More often, owner-occupancy conceals a mortgage or credit relation, where rent takes the form of interest (Harvey 1982, 365). In the case of freehold land, the fact that is handed down from generation to generation, “the income forgone by virtue of the fictitious capital locked up in the value of the land cannot be cavelically thrust aside” (Harvey 1982, 365).

The ability of landowners and creditors to appropriate rent effectively equalizes rates of profit among agricultural producers no matter what their resources. Those who can produce better yields pay higher rents—what are called differential rents. As a result, farmers must compete on the basis of new methods or lower wages; that is, they try either to increase productivity or to lower costs (Harvey 1982; see Ball 1980 on how rents reflect depressed agricultural wages). Only in fully developed land markets, where land is treated as a pure financial asset, will landowners not draw off all productivity gains. Recognizing that cooperation with capitalist producers will enhance ground rents, so the theory goes, landowners come to encourage technological innovation (Harvey 1982).

7. State subsidies as well are capitalized into land values. These include technical and research support provided by the land grant universities, price supports for certain commodities, cheap credit, and infrastructure development, all of which benefit producers unequally.

8. Land valuation (i.e., rent) for land with monopoly characteristics operates