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CONSOLIDATING THE COMMODITY CHAIN: Organic Farming and Agribusiness in Northern California

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Executive Summary

The California organic food sector has been expanding rapidly, from minuscule sales just ten years ago to \$75 to \$85 million in 1992, and is estimated to have more than doubled since. This study focuses specifically on the northern California vegetable sector as the fastest growing part of the most significant center of production and consumption in the U.S.

The most significant trend in the organic vegetable sector is toward what has been called "appropriation"—where processes once integral to on-farm production are removed from these sites and reconfigured as new sources of profits. Examples of appropriation include purchasing of inputs like compost in outside markets, post-harvest handling and processing, and vertical integration of markets through grower's agents, grower-shippers, and processors. Major players minimize their involvement in the riskier on-farm production processes by sub-contracting to more marginal firms.

Most production strategies in the industry fall somewhere between two extremes. At one extreme there are still many small, artisan-like farms which tend to be unmechanized, grow many crops simultaneously, engage in year-round crop rotation, and employ a variety of (usually small-scale and local) marketing strategies. At the other extreme are farms which look increasingly like conventional operations. These tend to be larger, mechanized to some degree, and employ cropping patterns typical of California agribusiness (e.g., specializing in one or a few highly profitable crops, seasonal movement of production sites).

Marketing and distribution strategies tend to fall into similar patterns. Small growers, constrained in the conventional market by low production volume, eclectic crop mixes, and inconsistent interest by conventional retail chains, tend to employ direct marketing strategies such as back door sales to restaurants, farmers' markets, and increasingly, subscription sales. Larger and more capitalized farms are able to employ more traditional distribution strategies, which, in turn means they are able to economize on transportation costs and negotiate higher prices. The consolidation and specialization among organic handlers, the increase in international distribution (despite the ideology of local production for local markets) and the huge growth in organic retail are all signs of such conventionalization.

Several well-known agribusiness firms, attracted by the current high rates of profit and growth, are experimenting with different ways to enter the organic sector, and penetrating some of the most profitable segments of organic vegetable commodity chains. Strategies include entering directly into organic production, handling, or processing through the conversion of existing operations, the addition of new product lines, or the acquisition of organic operations. In spite of these trends, most organic food provision is still characterized by practices and ideologies which countervail tendencies in conventional - and increasingly global - agriculture.

Although there exists no natural, readily apparent, and undisputed definition of the term "organic," with the gradual development of a regulatory structure, the right to claim that any product is organically produced has become contingent upon compliance with legal, and thus political, definitions. The codification of both the meaning of "organic" and the institutional structure to enforce this definition shape the ways in which agribusiness capital participates in this sector. For example, while the costs of conversion, registration, and certification may act as a

barrier to entry, the legal right to market produce as "organic" has also created a brand name of sorts, contributing to premium prices in the marketplace. Also, the regulatory structure, albeit confusing, has built consumer confidence and contributed to overall growth and expansion.

This study is based on open-ended interviews with seventy players in each link of the various commodity chains, i.e., systems that deliver fresh and processed organic vegetables from farm to table - as well as with regulatory agencies and other experts in the field. The purpose of these interviews was to explore recent trends in organic food delivery and particularly, ways in which conventional agribusiness is gaining entry into this lucrative market.

I. INTRODUCTION

Farmers and consumers 'marginal' to the industrial agro-food system occupy the interstices of this network. . . . [t]hese tangential spaces represent sites of alternative strategies which build on traditional production practices centered on subsistence and 'informal' market networks, or are bound up with new social movements associated with non-agricultural or non-food issues.

S. Whatmore, 1995, p. 47

The social basis for a democratic food policy lies in movements for employment and incomes, for safe and nutritious food, for environmentally sensitive agriculture (including treatment of animals) and for democratic participation. . . . Democratic principles . . . emphasize proximity and seasonality - sensitivity to place and time. This means the use and development of technologies and markets to facilitate local enterprises in every possible link of agrofood chains. What is increasingly clear is that healthy food and environmentally sound agriculture must be rooted in local economies.

H. Friedmann, 1993, p. 55

Organic agriculture is frequently heralded as one of the frontiers of a *new* environmentalism where concerns about food safety, land use, and social justice are converging with a neo-populist politics of re-localization. Indeed, the provision of organic food crops—from farm to table—would appear to countervail many contemporary trends in the production, processing, distribution and marketing of food in general. Yet, explosive growth since the 1980's is both cause and effect of a proliferation of new entrants who are attempting to capture the niche markets lurking behind organic products and the organic label. Consequently, the field is experiencing rapid changes in production and marketing strategies, and a restructuring of economic imperatives. And while a plurality of economic and ideological actors continue to thrive within the organic sector, large agribusiness firms - or successful start-up firms which increasingly mirror agribusiness practices - are penetrating the most dynamic and profitable segments.

This study explores these recent developments in organic food delivery through the lens of the northern California organic vegetable sector. It is in northern California that the dynamism of the sector is best illustrated, by virtue of its status as a major production center, and also because the San Francisco Bay area is unquestionably the largest metropolitan market for organic produce

in the U.S.. Based on interviews with players in each link of the various commodity chains that deliver product from farm to table, this study focuses on their production, sourcing, and marketing strategies, the constraints and opportunities they face, and the ways in which conventional agribusiness is appropriating - or failing to appropriate - processes and profits within this sector.¹

The first section of this study provides an overview of the organic food sector and its growth. Section II defines "organic" and discusses some of the regulatory and representational issues surrounding what is effectively a brand name designation. Sections III and IV identify and discuss major themes and trends in production and marketing, respectively. The final section argues that despite the ways in which organic food provision countervails trends in conventional food provision, agribusiness capital is both conventionalizing and appropriating its most lucrative aspects.

II. OVERVIEW OF THE ORGANIC PRODUCE SECTOR

Recent trends in the organic produce sector must be examined within the context of the global market for fresh fruits and vegetables in general. As the newest agro-food complex (Friedmann 1992), the latter has experienced rapid expansion, with per capita fresh vegetable consumption growing twenty-six percent in the decade between 1978 and 1988 (Cook 1992). This growth is doubly interesting because it is predicated on overcoming what have been regarded as obstacles to capital's rationalization of agriculture. Year round supply is now possible in North American, European, and East Asian markets because of the increase in varieties (including tropicals), and counter-seasonal cultivation (between hemispheres). Also, advances in post-harvest handling practices, most notably the development of "cool chains," have allowed for long distance transport of otherwise highly perishable product (Friedland 1994 in McMichael).

The growth in consumer demand for fresh vegetables is both producer and consumer driven. Clearly, a critical element of the heightened demand is the "vanity appeal" ascribed to certain high value-added and niche products, such as salad mixes and baby vegetables, which can be partly attributed to the use of more targeted (as opposed to mass) marketing techniques in the industry as a whole (Cook 1992). However, this growth is perhaps more importantly consumer driven, as concerns about health and nutrition have become more salient.

Within the broader agro-food system, the organic fruit and vegetable industry occupies an important site, embodying seemingly quintessential fresh fruit and vegetable opportunities and constraints. Echoing trends in the conventional sector, the success of some organic commodities is due to their character as a specialty product, and may have little to do with their "organic" nature per se. However, demand for most organic product is decidedly driven by food safety and sustainability issues.

Until the mid-1980's, the market for organic produce was largely confined to a minuscule health food sector. Only in the last decade did it expand rapidly, first in 1986, in response to the threat of Aldicarb poisoning in watermelons, and again in 1989, when the Alar scare contributed to a quadrupling of California's certified organic acreage (Schilling 1995). By 1994, there were 4,050 certified organic farms in the United States (Dunn 1995). Total organic industry sales had surpassed \$2.3 billion per annum, growing more than twenty percent each year since 1989. Of this \$2.3 billion, organic produce sold through natural food stores constituted \$332.7 million, representing a thirty-two percent increase over the previous year (Mergentime and Emerich 1995). This growth has occurred in spite of earlier predictions that the Alar scare would fail to create a sustained market. While many conventional outlets did discontinue their organic lines after an

initial surge in the late 1980's (Cook 1992), the huge growth in health food supermarkets has more than absorbed the increases in production.

Yet, organic still represents less than one percent of the total U.S. produce market, and certified farmers represent only two tenths of a percent of total U.S. farms. On average, certified organic farms have only half the acreage of conventional farms (Dunn 1995). Statistics from California's organic sector paint a similar picture: in 1992, of \$18.5 billion total sales, only \$75 to \$85 million were organic; of 81,000 farms, only 1,159 were registered organic; and of 100 million acres of total farmland, 45,493 were registered organic (CCOF Summer 1995, Klonsky and Tourte 1995). California's organic farms are also much smaller than conventional ones, with sixty-four percent of growers grossing under \$10,000 per year, and less than one percent grossing over \$1 million (Klonsky and Tourte 1995).² While the organic produce sector may seem insignificant relative to the immensity of California's conventional sector, Bob Scowcroft, the Director of the Organic Farming Research Foundation, predicts that with the impending implementation of the Organic Foods Production Act, organic production will quickly soar to ten percent of the US agricultural economy.

California is the most prominent node of organic production and consumption in the nation, and one of the most important centers of growth and expansion as well. Between 1992 and 1995, the number of organic farmers registered with the state increased by fifty-five percent. Furthermore, experts believe that gross sales more than doubled during the same period, with the largest increases coming from salad mix, cotton, and wine grapes (Klonsky and Tourte 1995). This growth in sales suggests an increase in acreage under cultivation, intensification of production by already existing farms, or both. Diane Bowen, Director of California Certified Organic Farmers (CCOF), estimates that total certified acreage increased sixty-three percent between 1990 and 1994. According to Bowen, vegetable crop acreage grew eighty-five percent during the same period, representing a disproportionate share of the growth. Moreover, while organic vegetables are grown by only thirty-four percent of growers and represent only thirty-one percent of acreage, they account for fifty percent of gross (organic) sales (Klonsky and Tourte 1995). These figures indicate that vegetables are not only a high value crop, but also central to the recent expansion of the organic sector.

III. WHAT IS ORGANIC? REGULATING MEANING

At first glance, organic and conventional agriculture are different simply by virtue of the material inputs they use. Ostensibly born of social movements emphasizing environmental sustainability, with anti-technocratic and neo-luddite tendencies, organic farming uses only natural materials, without resorting to industrially or synthetically produced chemical fertilizers, pesticides, herbicides, and other inputs. But such a simple definition raises more questions than it answers. For example, should sulphur and strychnine, two naturally occurring substances, be allowed? If so, should farmers be restricted to using only natural sulphur, or should they be allowed to use a product which is chemically identical but synthetically produced? Should the manure of cows and chickens, raised on industrially produced feed and injected with hormones and antibiotics, be considered an organic input? As increasing numbers of large growers begin to compost "clean green," or grass and tree trimmings from municipal landfills, what level of lead content should be considered acceptable? Finally, should a fertilizer manufactured in California using sea kelp from Norway, bat guano from Texas, steamed bone meal from Iowa, and potash from Great Salt Lake, which is in turn sold to growers throughout the United States and Western Europe, be considered organic? While arguably "natural," is such a fertilizer "sustainable," given the large amounts of fossil fuel expended in transportation?

These prevalent and accepted practices serve to illustrate the impossibility of a natural, readily apparent, and undisputed definition of the term organic. There exists a gradient of practices between organic and conventional agriculture, with some practices more organic than others. Any boundary drawn between the two is subject to interpretation and debate, and is therefore socially constructed. With the gradual development of a regulatory structure, the right to claim that any product is organically produced has become contingent upon compliance with legal, and thus political, definitions. The manner in which "organic" is constructed and the institutions enforcing its definition shape the ability of agribusiness capital to participate in this small but burgeoning sector. The remainder of this section will describe the evolution of the current regulatory structure, with its dual system of state registration and agency certification, its influence on the industry, the turning point it has reached, and the importance of the representations of the entities involved.

As the organic community grew, the need and demand for uniform definitions and standards was met initially by private organizations, and later by state and federal legislation. The first private organization, California Certified Organic Farmers (CCOF), was founded in 1973 by a group of farmers, at a time when "the first tentative claims of 'organically grown' produce began to multiply in the marketplace." Its purpose was to ease confusion by defining "uniform standards," and to combat fraud by verifying the growing practices of member farms (CCOF Certification Handbook 1994, p. iv). Certified member farms could use the CCOF label when selling their goods, a claim to organic legitimacy which came to be trusted by knowledgeable consumers and thus influential in the marketplace.

CCOF and other interested parties lobbied for regulatory legislation, which culminated in the California Organic Foods Act of 1990 (COFA 1990). The COFA establishes a legal baseline definition of organic growing practices, including a list of allowable materials. It does not require inspection or verification of organic practices, however, and is enforced only in cases of confirmed violation (Klonsky and Tourte 1994). Although all growers must be registered with the state in order to legally use the term "organic" in describing their produce, most growers interviewed stated that the COFA does nothing to ensure compliance with minimum growing standards. As a consequence, the definition of organic commonly referred to as "registered" means nothing more than the fact that the grower has registered with the state.

The number of registered growers in California has increased from 1,159 in 1992, to approximately 1,800 in 1995. However, due to inconsistent reporting in the registration process, it is impossible to ascertain the true number and size of farms. More importantly, registration statistics do not reflect the large number of small farms which produce organically, but avoid the costs and requirements of registration by selling through local, informal sales channels. Such growers may label their produce as "no spray" or "pesticide-free," or simply rely on local reputations cultivated over time.

The "registered" definition stands in contrast to another codification known as "certified organic." Certification at any level essentially requires verification that organic produce is separated from conventional produce, and protected from contact with prohibited substances, at all instances along the commodity chain. Growers who are certified, and registered with the state, may sell their produce as "certified organic," a claim which is more legitimate and influential in the market than the toothless "registered organic." Just as with registration, many small farmers avoid the costs of certification by selling through informal channels. However, unregistered and uncertified farmers are often shut out of state and nation wide distribution channels. Many distributors and retailers only accept produce from certified growers; and several important buyer states, such as Colorado and Texas, only allow registered and certified produce from California to be marketed as organic.

But certification, which is done by third party (non-state) agencies, adds yet another layer of confusion to the definition of organic. CCOF has since been joined in California by five

competing certifying agencies: Farm Verified Organic (FVO), Organic Crop Improvement Association (OCIA), Organic Growers and Buyers Association (OGBA), Quality Assurance International (QAI), and Scientific Certification Systems/Nutriclean Organic Certification Program (SCS). These six agencies compete for market share, with CCOF historically controlling the largest percent. In 1992, fifty-five percent of all registered growers were uncertified, forty-one percent were CCOF certified, and four percent were certified by the other five agencies (Klonsky and Tourte 1995). In the last three years, the other agencies have grown rapidly but statistics are currently unavailable to demonstrate this.

As competition intensifies and organic markets mature, some of these agencies have expanded their certification programs to include processors and handlers in addition to growers, and to certify internationally as well. CCOF is presently studying the possibility of certifying retailers. All six of the certification agencies must take the COFA as a baseline, but each sets different standards for its member growers, follows different certification procedures, and charges different certification and membership rates. Most of the agencies refuse to release information about their standards, methods, or members. Three of the agencies are for-profit organizations, and all six survive largely on membership fees and assessments. This gives rise to possible conflicts of interest, in which protecting members may be more beneficial to the agency than vigorously enforcing standards. As a result, the reputation of each agency differs, and therefore the degree of legitimacy in the claim that any particular batch of produce was organically grown may vary, depending upon which agency certified the grower.

In spite of confusion over definitions, this dual registration/certification regulatory structure has increased consumer confidence, enabling the organic foods industry to grow. It has also created new opportunities for surplus extraction and agribusiness accumulation. For example, it has come to act as a barrier to entry, as the costs of registration and certification may hinder the marketing efforts of many smaller farmers, and preclude their participation in certain market channels. In addition, land cannot be registered or certified unless it has been used in compliance with minimum organic standards for at least three years. According to several large organic growers, this three year conversion process is difficult and costly for any farm. One large conventional lettuce grower-shipper, upon recently entering into organic production, chose to purchase two tracts of certified land, instead of converting its own lands. In this manner, the regulatory system creates differential land rents, which may be more readily met by relatively capitalized farms.

The legal right held by certain growers to market produce as organic has also become a form of differential rent, enabling them in most cases to charge higher prices. This differential rent is based upon a narrow and socially constructed definition of organic which may ignore issues of ecological sustainability (as illustrated above), nutrition, and, some argue, actual production costs. Experts state there is no evidence that organically produced food is more nutritious than that produced by conventional means (Feenstra interview). Although some large growers claim that organic cultivation is more difficult and expensive than conventional farming, others claim that this is a myth. Interviews conducted in the course of this study have shown these differences are for the most part, crop specific. Finally, as shown above, the reputations of the more respected certification agencies have themselves become differential rents, and thus market advantages to be protected, which is partially manifested in particular agencies adopting opposing stances vis-a-vis the federal regulatory system currently being developed.

The federal Organic Foods Production Act (OFPA) was passed in 1990 as part of the Farm Bill. When it is implemented, the OFPA will dramatically alter the current regulatory structure of the organic foods industry. Implementation has been delayed by political struggle between the National Organic Standards Board (NOSB), created by OFPA to determine national standards, and the United States Department of Agriculture (USDA), which will administer the OFPA. At stake are not only specific standards, but also whether these standards will be universal or baseline. If

the federal standards become universal, then certification agencies, which currently adopt and enforce standards more stringent than those define by the federal standard, will no longer be able to do so. Some agencies perceive universal standards to be a threat: representing themselves as grassroots organizations of small family farms, dedicated to sustainable practices and the highest possible standards, they fear that a committee in Washington D.C. is likely to be pressured by agribusiness and chemical interests into adopting diluted criteria. Because an important part of the differential rent created by some of the agencies rests on their image, and their reputation for strict enforcement of the highest standards in the industry, it would be seriously undermined by the implementation of universal standards.

Other agencies are lobbying for universal standards. Belittling the grassroots and counter-cultural foundations of some of the agencies, one agency claims it wants to "take the religion out of certification, and make it just like getting a driver's license." Because the OFPA will require all growers to be both certified and registered before using the term "organic," and all certification agencies to be accredited by the USDA, universal standards would mean that agencies could only compete on the basis of convenience and cost to the grower. This would undermine the market share of established agencies such as CCOF. Quite possibly, it would also favor those (typically larger) growers wishing to distribute across state lines, and likewise, clear the way for agribusiness capital to become more deeply involved in organic foods. Many large corporations are interested in expanding into organic foods, but have been waiting for the creation of a larger, legally homogenous market before investing heavily (Snowcroft interview).

IV. TRENDS IN ORGANIC PRODUCTION

It is impossible to unilaterally discuss production strategies in the organic vegetable industry because of its heterogeneity. For illustrative purposes, most production strategies in the industry fall somewhere between two extremes. At one extreme is artisan-like production, characterized by an attenuated chain with direct producer-consumer links, production geared to small specialty niche markets, and very few backward and forward linkages. One example of this would be a twenty-four acre farm near San Francisco, which grows and delivers (among many other things) purple Peruvian potatoes and specialty beets to an exclusive restaurant in the city. Farms exemplifying this type of production tend to engage in mixed cropping, employ a variety of marketing strategies, and farm one or more small parcels of land which had often been fallow prior to entering production (as opposed to land which has passed through the three year conversion process).

The other extreme has a neo-Fordist or Sloanist tint, characterized by the mass production of organic commodities for both mass and niche markets (Friedland 1994 in Bonanno). In this sphere, "organic" is often appropriated as a sort of brand, used to differentiate products in mass markets. The chain in this sphere can be very complex, with downstream actors having much greater influence, and with organic produce passing through and sometimes even dominating the conventional marketplace. It is here that agribusiness capital is taking hold, and that strategies are increasingly similar to those found in conventional agriculture: mechanized production, large farms, contracting networks and some vertical integration. Furthermore, this sphere of organic production is more likely to employ only multicropping (year-round crop rotation), as opposed to the combination of multicropping and mixed cropping (many crops planted simultaneously) characteristic of smaller farms.

In this section, we will discuss strategies across the spectrum of organic production by focusing on the following elements: cropping patterns, the labor question, the land question, and contract farming.

A. Cropping Patterns

Cropping patterns in the organic farming industry can take many forms. Not only do farms specialize or diversify in the types of crops they grow, but they also attain varying degrees of specialization. Cropping strategies are based in part on the ability of farms to competitively market specific products, the number of marketing strategies they employ, and to a certain extent, their geographic location.

According to CCOF statistics, organic farmers grow, on average, between six and ten crops, with twenty percent growing more than twenty-five crops. Many operations growing high quality products on small acreage have extraordinary crop diversification. For example, one small farm grows more than thirty different types of greens, four types of specialty beets, and many varieties of specialty potatoes. In the middle range are growers who engage in year-round crop rotations, with farming systems geared to five or six different crops. Such a crop rotation might include processing tomatoes, corn, safflower, vetch and wheat (Lanini 1994). Finally, there are highly specialized growers such as one large carrot grower we interviewed, which grows only carrots on it's 45,000 acres, 1,500 of which are organic.

To the extent that large growers control wholesale and other markets (see Section IV), their strategies influence the planting and crop decisions of smaller units. For example, with the entrance of large, mechanized growers, many small farms no longer find it profitable to grow baby salad greens. There is a bifurcation among organic growers, with many large operations becoming specialized in the mass production of a few high-growth, high-profit crops, while smaller farms continue to diversify their strategies, employing artisanal methods to grow specialty crops which meet the demand of very small, and perhaps local, niche markets.

Geography seems to influence cropping strategies as well. California's regional climates are differentially suited to the cultivation of different crops. Smaller farmers engage in mixed cropping, thus growing some of their crops at less than peak efficiency, because of ecological, ideological, and marketing concerns. However, to a certain extent, the geographical cropping patterns of organic agriculture resemble those of conventional agriculture: lettuce is emphasized in the Salinas valley and coastal areas, tomatoes in the central valley, and root crops and apples in the northwest. Similar to conventional agriculture, larger growers are increasingly able to ensure year-round supply by establishing peripatetic production, or the movement of monocrop cultivation between a variety of locations during the year in order to obtain optimal climatic conditions (Friedland 1984). For example, one large grower cultivates organic carrots in the Imperial Valley during the winter, but moves production to higher elevations during the summer months. Likewise, many of the large specialized growers of organic lettuce have begun winter production in the desert valleys of Arizona and southern California.

B. The Labor Question

Although many of the traditional labor issues surrounding conventional agriculture are present in organic farming as well, the latter offers a set of positive and negative working conditions which are unique to the sector. The question of whether labor conditions are better on conventional or organic farms is difficult to approach and under-researched, largely due to resistance on the part of organic farmers to address the "labor question." As such, this paper offers an analysis which is at best partial and tentative.

Organic farms provide certain benefits to labor not found on conventional farms. Perhaps most importantly, workers are less likely to be exposed to the synthetic chemicals which cause so

many of the health problems experienced by workers on conventional farms. Even this issue is not clear cut, however: sulfur, which causes the majority of farm worker injuries in California (although such injuries are not severe), is used by many organic grape growers. Another positive benefit deriving from the substitution of labor for chemicals on organic farms is increased employment. On the whole, agricultural workers feel that they are underemployed, and perceive any strategy which increases employment opportunities as a positive change (Villarejo interview).

Similarly, the year-round crop rotation and multicropping strategies commonly adopted by organic farms lend themselves to the year-round (as opposed to seasonal) employment of agricultural workers. For example, most organic farmers grow break-even or marginal-return crops in order to replenish nutrient levels in the soil. These crops often fill in the seasonal gaps between higher-value crops. Many organic farmers also create opportunities for longer-term employment by extending the length of the growing season through the use of greenhouses and other new equipment. According to a study conducted by Suzanne Vaupel, many farmers have found year-round employment to be more profitable than hiring workers seasonally, due to lowered training costs, increased productivity, and constant availability of a dependable labor supply (Campbell 1994, p.4).

Finally, organic farms are more likely to be managed by people committed to environmental and social sustainability. Though they are the exception and not the rule, farms managed according to these principles often commit to providing year-round employment, good benefits, and creative and challenging opportunities for their workers.

In spite of these important benefits, the organic sector may present labor with certain negative working conditions. First, since organic farms tend to be small, they are often unable or unwilling to provide the level of benefits provided by large farms. A survey conducted by the California Institute for Rural Studies asked farm workers if they preferred to work on small or large farms. The majority of respondents preferred large farms to small, citing higher pay, fewer demands and fewer abuses (Villarejo interview). A second issue concerns the manner in which manual labor is actually performed. On organic farms, people have been found working with short handled hoes or with their bare hands. Although the short handled hoe has been banned in California for nearly twenty years, a loophole in the law still allows the use of bare hands. California Rural Legal Assistance and other labor rights groups nearly succeeded in an attempt to close this loophole with a bill in the California Senate (SB 587, introduced by Solis of El Monte). The bill was strongly opposed by the organic and ornamental flower industries, who argued that such a ban would make many of their production practices obsolete. Last minute lobbying by the California Certified Organic Farmers was instrumental in defeating the bill in June of 1995 (CCOF, Summer 1995).

Thirdly, many people in the organic industry have historically seen themselves as "outside the system": to some of them, organic farming represents a countercultural movement which is both anti-government and against conventional norms. This "consciousness" has reportedly led a few organic farmers to evade reporting and paying taxes, with the result that their workers are ineligible for many public benefits (Villarejo interview).

Thus, while the labor question in the organic sector does take on many of the same, perennial characteristics of the conventional sector, the organic factor can add a new set of variables into the equation. For instance, until recently the organic sector has been entirely non-unionized. In 1994, Teamsters Local 890 of Salinas succeeded in organizing an organic farm for the first time in history. According to Mike Johnston of Local 890, the organic factor was not as important in the bargaining process as the "nonunionized" nature of the salad mix industry, and the small size of the farm (the farm in question has 150 to 200 workers, compared to another Local 890 contract, a large conventional grower in the same area which employs 7,000 workers). At the time of negotiations, one of the area's largest nonunionized salad mix growers paid its harvesters

\$5.50 per hour, as opposed to going union rate of \$7.37. While organizing workers, the union strategy was to develop a wage scale which would both be fair to the workers and allow the company to remain economically viable. Ironically, the recently organized farm is currently going out of business, but its owners claim that unionization is not a direct factor -- as far as they are concerned, unionization neither helped nor hurt the farm's operations.

C. The Land Question

There are several ways in which patterns of land use and ownership seem to differ between organic and conventional farming. First, because most organic farming does not utilize heavily mechanized growing techniques, fields do not have to conform to technological necessities. Small and undercapitalized farms are typically located in a variety of small spaces, from hillsides to suburban backyards. Yet, as with conventional agriculture, growers wishing to expand must confront the difficulty of acquiring adjacent parcels, and often find themselves cultivating discontinuous plots. One medium-sized farm interviewed for this study leases three or four discontinuous parcels from different landowners. This serves as an impediment to efficient operation, because transporting equipment and labor between fields, and bringing crops to a central warehouse, increases costs. In contrast, larger and better capitalized operations increasingly resemble conventional farming, in that production tends to occur on large parcels and be mechanized to some degree. For example, the mechanical harvester recently introduced by one large organic lettuce grower requires large fields of flat, laser-leveled land. In this way, in some sectors, capital is literally changing the shape, and space, of organic farming.

Second, although comprehensive data regarding tenure patterns is unavailable, the nature of organic farming seems to produce contradictory incentives to either own or lease land which are unique to the sector. On the one hand, leasehold agreements are desirable for many operations, especially in conventional farming but in organics as well, because they enable a less capital intensive entry into new or expanded production. Also, they allow growers to minimize capital commitments in what often prove to be highly competitive and quickly changing markets.

On the other hand, organic cultivation requires costly improvement of the land, as growers must build up the soil over several years through the use of composting, green manuring, and other techniques. The organic registration and certification process only increases the capital investment required, as land must be cultivated without the use of prohibited substances for three years before product can be sold as organic. Some growers claim that it must then undergo an additional three years of intensive weeding before many row crops can be productively grown on it. In light of these constraints, most organic operations do not enjoy the mobility of conventional agriculture, and may have greater incentive to purchase than to lease land for production. This constraint also manifests itself in the strategies of numerous small growers who do not register or certify their land, simply because they do not know how long their leases will last. Instead, they market their product informally, often with a "no spray" or "pesticide-free" label.

Interestingly, this differential quality of registered and certified land may create opportunities for unions such as Teamster Local 890. According to Mike Johnston, one important impediment to the organization of farm workers is that conventional agribusiness farms move very frequently. Because of their lower mobility, he perceives a potential for the unionization of large organic farms.

A third and related issue is whether there is a price premium for organic land. According to Don Villarejo, organic land is not at a premium. The three year conversion process, which otherwise serves as a barrier to entry, can be avoided by purchasing land which was previously fallow or used as dairy pasture. Although the cattle may have received hormones and antibiotics,

certification can be obtained immediately upon demonstration that prohibited materials were not used directly on the land. Likewise, some important players maintain that organic certification does not influence land prices.

However, there is evidence of a market for certified land. When a large conventional grower from the Salinas area decided to enter organic production, it purchased two ranches, totalling more than 500 acres, which had already been registered, certified and farmed organically. Likewise, a very large farm certified by CCOF was recently purchased by a conventional grower-shipper. Finally, the quarterly newsletter published by CCOF includes classified advertisements placed by people seeking to purchase land which is already certified.

D. Contract Growing

Contract farming enables firms to circumvent many of the perennial labor and land problems. Thus, it is an avenue by which capitalist firms can appropriate the products of rural production without assuming the risks of cultivation (Watts 1993). Arguably, "organic" contracts represent an even more extreme appropriation as the growing processes of some organic crops, such as tomatoes (for processors) and salad mix (for grower-shippers), are more variable and hence even less amenable to capital penetration than those of conventional crops. Nevertheless, contract production of crops offers a stable, assured market for many small growers. In most cases, growers receive a predetermined price for the product, irrespective of market price at the time of delivery. This arrangement can be beneficial or devastating, depending upon the outcome of such variables as weather and crop yields.

For tomato processors the contract relationship is critical, not only to appropriate the rural product but also to ensure that growers adhere to the timing and conditions of processing. Harvesting must be clustered commensurate with the short period during which the processing plants do their organic "runs." Also, as organic processors have gained market power relative to growers, they have lowered the prices they are willing to pay. The premium on organic accruing to growers has been decreasing, while those involved in processing and manufacturing are increasingly able to secure a bigger slice of the pie. Meanwhile, most contract growers assume both the risks of over-production, which often means they sell surplus product in the conventional market where they forego the organic premium, and under-production, which represents a pure loss of revenue.

The contract mechanism also appears to be an increasingly popular strategy among the larger grower-shippers involved in salad mix production. Several organic farms which were particularly successful in marketing their salad mixes quickly grew into very large, concentrated operations. In a pattern similar to the large conventional grower-shippers, some of these farms developed their own cooling, hydropole cleaning, and packing facilities, and the infrastructure necessary to market under their own brand name. The success - and growth - of the lucrative salad mix markets, and the attendant competition from conventional lettuce grower-shippers, created a huge glut in the market. Consequently, prices have fallen significantly in the last few years. One of the largest salad mix farms in Northern California discovered that greater profits were to be made, with less risk, from the various downstream functions than from cultivation itself. This farm recently began to spread the various risks of cultivation by dis-integrating its vertical operations, and subcontracting the growing of "components" to at least five different certified farms. The complexity of coordinating twelve to eighteen different varieties, each with different growing times and needs, is partially avoided through the subcontracting of component growing.

In short, while organic growers may employ a plurality of production strategies that belie simple characterization, taken as a whole, the productive sphere is tending toward bi-modality,

driven in part by divergent ideological and economic incentives, but shaped as well by differential access to productive resources. Those units of production which are under-capitalized are relegated to the most agriculturally marginal spaces, where land was previously fallow, and thus organic "conversion" was less costly. These organic farms grow a diversity of crops throughout the year, many of which may yield only marginal returns. On the other hand, there are those organic farms which either recently converted from conventional, or more likely, experienced rapid growth in the last few years. Most of these larger farms specialize in the mass production of a few high-growth, high-value crops, and are usually located on flat expansive parcels in the more traditional agricultural zones of California, where organic land is likely to sell at a premium. While farms at both ends of the spectrum tend to employ migrant labor, as labor tends to substitute for chemicals (and often machinery) on organic farms, perhaps ironically, the smaller and more diversified farms are better able to offer year round, as opposed to seasonal employment. Yet, the inherent weakness of an agronomic strategy that precludes the production of the most lucrative crops, is that the farms which employ this strategy are more vulnerable to economic marginality, if not plain failure. Through mechanisms such as contract farming, these more marginal farms are potential sources of land or labor to the highly-capitalized ones, as production continues to grow and consolidate.

V. TRENDS IN DISTRIBUTION AND MARKETING

The marketing and distribution of organic vegetables increasingly follow conventional patterns, both geographic and institutional, even more so than does production. As such, the organic market resembles a niche market, with several factors differentiating it from mass markets. These include: the predominance of small growers as sources, the relative unimportance of food service³ (with the exception of upscale restaurants and hotels), demand limited to certain geographic and demographic markets⁴, and an ideology of local production for local markets and the concomitant valorization of direct marketing. All of the above factors play a role in the particular patterns and trends of organic distribution and marketing.

Yet, it is important to recognize that in the organic market, even the big players are fairly small by conventional standards. Thus, while there is some trend toward consolidation, it is mitigated by tremendous fluidity in the market power of various players, which varies *inter alia* seasonally and geographically. As a consequence of the greater availability of locally produced vegetables in the spring, summer, and early fall, retailers can not only carry a higher percentage of organic product⁵, but they can also purchase directly from "local growers" who are anxious to sell their product in an often glutted market. In the late fall and winter, however, the role of handlers becomes more important, as they are able to "manage" supply, and more specifically, to procure product from places as far away as the Pacific Northwest and Latin America. Meanwhile, a handful of growers, who practice peripatetic farming strategies, have a distinct market advantage in the off-season.

This is not to say that market power is necessarily related to size. To be sure, some specialists in high value salad greens and herbs are able to command extraordinarily high prices. However, in general, larger players are able to assert more control, while more marginal players increasingly look for ways to mediate risk. For certain handlers, this may mean increased specialization, while for small retailers, it may mean cost cutting measures (or losing the business). Meanwhile, for growers this often means the adoption of alternative distribution channels such as direct marketing, or contract growing for more powerful players. The remainder of this section will detail five trends that typify the roads increasingly taken in organic marketing.

A. Grower-Shippers, Processors and Marketing Agents: Adding Value through the Brand Name

Value-added processing and the creation of brand-name appeal have been on the rise in the organic sector, with grower's agents, grower-shippers, processors, and marketing agents attempting to create and control profit opportunities in the intermediate steps between farm and table. While this is similar to trends in the conventional sector, it also exhibits characteristics unique to organic "niche" marketing.

Grower's agents and grower-shippers have been among the most active in creating opportunities for value-added processing in the fresh vegetable sector. Grower's agents actively assist in the production planning and marketing for small to medium size growers. Contracts with the growers specify quality standards and allow the agent to check their activities. Grower-shippers are larger farms which not only do their own cooling, packing, and marketing, but often contract out production and market under their own label as well, effectively acting as grower's agents. These new forms of "marketing" are essentially forms of contract farming, where the large grower-shippers, as opposed to smaller growers, are able to corner the high value portion of the commodity chain.

For instance, agents often create value on or near farm through the use of hydropole facilities (washers and dryers) and light packaging. Whether they purchase or simply consign the product, the agent's handling of the product entitles them to package, code, and label it with their own brand name. Labels not only substantiate certification, but also contain bar codes which make products more attractive to large retailers with price scanners. This tertiary benefit of consolidation has allowed one of the largest grower-shippers of organic carrots in California to develop a brand name of sorts. Furthermore, because they consolidate so much product, they can ship in pallet size quantities, enabling them to sell their product to distributors, wholesalers and retail chains at higher margins.

Somewhat apart from the fresh vegetable sector, processors have entered the organic market in recent years. Some have adopted Sloanist or "neo-Fordist" strategies, characterized by Friedland as the mass production of "specialized" products for both mass and niche markets (Friedland 1994 in Bonanno, p. 213). As value-added technologies have facilitated the penetration of mass markets, "organic" is increasingly represented in conjunction with the "branding" process used to create both the mass and niche markets. For instance, one of the largest suppliers of canned organic tomato products does not consider safety to be their primary selling point. While presumably "organic" means "safer" to most consumers, this firm is attempting to manipulate the term such that "organic" takes on other meanings. Particularly, it is with the representation "organic equals tastes better" that it is trying to break into the conventional retail marketplace.

In fine tuning its command over the discourse of organic production (Goodman and Watts 1994), this firm is trying to build brand reputation. The company's goal is to foster a monopoly brand-product association such that the general public will associate their brand name with organic tomato products and organic tomato products with their brand name. Unlike terms such as *low-fat*, *natural*, and *healthy*, which are contingent merely on a relevant mix of ingredients, the term *organic* can only be used contingent upon strict adherence to a very specific and highly regulated set of production processes, at all levels of the chain. Hence, unlike the former terms, *organic* is not easily replicated by other distributors. It is for this reason that *organic* is what this firm wants consumers to see as the factor differentiating its products from other tomato products on the shelf. Because *organic* as a brand cannot be copyrighted, they must attempt to monopolize the entire chain.

B. Distributors and Wholesalers: Increased Specialization and Consolidation

In the San Francisco Bay Area, four distributors have dominated regional distribution of organic produce. These distributors and wholesalers buy products directly from growers, or from other handlers. Purchases are never made on a contract basis, depending instead upon "personal" relationships to ensure quality. Some distributors have established field support programs which provide advice on production planning and post harvest handling. These programs have at times caused conflicts, as some growers have taken this advice to mean a promise of purchase, which no distributor seems willing to make, at least in writing. For this reason, many farmers prefer to avoid selling through distributors, or at least carve out ways to secure advantages from them. Distributors do not directly handle the product themselves. Their primary functions are repackaging the product (generally in smaller quantities) for their buyers, warehousing, refrigeration, and transportation. Because they have the ability to sell to smaller entities, distributors tend to specialize in certain markets.

In addition to these distributors, a handful of conventional distributors have begun to deal occasionally with organic products. For example, one conventional distributor began selling organic produce eight years ago. Organics now comprise as much as fifteen percent of turnover, is their largest growth area, and commands their highest margins (CCOF Winter 1995). In an interesting twist, they source a majority of product from outside of California for a local market, mainly by dealing with brokers, although they do buy direct from local producers and handlers. Finally, most regional and national retail chains have their own distribution arms, which increasingly compete with independent distributors by "buying direct."

Distributor specialization seems to be deepening in response to this new competition. One well-established wholesaler recently curtailed its emphasis on organics, and now focuses almost exclusively on delivery of "specialty" produce to upper end restaurants and a few independent retail outlets. Another smaller distributor traditionally supplied local and independent health food stores. As the independent stores find themselves squeezed by the new health food chains, this distributor is trying to get into the business of brokering to chains. Only one local organic distributor seems to be growing and thriving, given that they are sufficiently capitalized to be able to do both pick up and delivery. They claim to work with "every producing organic farm that has a wholesale strategy," but also source nationally and from Latin America and Canada.

A somewhat different strategy is offered by a firm in the Salinas area, which calls itself a direct marketer of organic produce, but is really a distributor like many others, sourcing from California, the Pacific Northwest and Mexico. While this firm has its own ranch, which produces high value items such as salad mixes, flowers, herbs and greens, it mainly purchases from other growers and distributors on a spot basis. Its particular niche is shipping directly to people's homes, all over the United States, by Federal Express or UPS. Product is shipped in individual boxes, with an average order bringing \$50 - \$100. This high value service has 4,000 regular customers (CCOF Winter 1995), and the proprietor is looking to expand packing operations throughout the country.

Finally, as the market grows, some players are establishing niches for themselves as brokers. Brokers set up deals with known markets, arranging sales between interested parties at any two points in the system. They may also arrange trucking or shipping from sellers to buyers, but tend to deal only in pallet size quantities to make the trucking worthwhile. Brokers do not physically handle or take title of the merchandise (Cook 1992). One self-ascribed broker sells only to wholesalers and national food chains, and requires that the receiver have a warehouse. This broker sources an estimated eighty percent of its fruits and vegetables from California and selling primarily to California, Washington and Texas.

C. Conventional and Health Food Chains: Growth in the Retail Marketplace

According to Mergentime and Emerich (1995), organic produce sales in supermarket-format stores leaped from \$94 million in 1993 to \$186.4 million in 1994. While conventional regional supermarkets have increased sales of organic produce, this activity is usually sporadic, and limited to certain products and (upscale) locations. Rather, the vast majority of retail growth has taken place in a quickly expanding and consolidating health food supermarket sector, which includes such businesses as Whole Foods, Living Foods, Real Foods, and New Leaf in California, and Bread and Circus (a subsidiary of Whole Foods) and Fresh Fields in the midwest and eastern United States. Because of high volume, these companies are able to get better deals, and perhaps provide higher quality, which is helping to drive the small independents, and particularly co-ops, out of business. There is significant consolidation occurring in this sector. Bay Area based Living Foods was recently purchased by Wild Oats, a Denver chain who just opened up on the NASDAQ. Likewise, Whole Foods, one of the largest of these chains with more than forty stores nationwide, has recently purchased the Mrs. Gooch's chain. As these chains expand and compete with locally-based independent stores, it is hard to say whether this will increase demand or merely shift it away from the smaller outlets.

Part of what differentiates the purchasing and marketing patterns of retailers is the level of importance they place on carrying a certified product. Retailers who consider certification a selling point generally choose to buy products certified by CCOF. This is particularly true of health food markets, including both chains and independents. One local retailer, which is a produce, rather than strictly a health food market, ensures that their organic product is certified, but is less concerned with the certifying agency. More traditional conventional supermarkets are less likely to care about certification, in large part because they do not want the expense of constant re-labelling. However, if they claim to carry organic foods, these products must be registered.

D. Shrinking the Chain: Direct Purchasing and Post-Fordist Supply

An increasing number of retailers and restaurants purchase organic produce directly from growers, a phenomenon which is very uncommon in the conventional sector. Indeed, along with the huge growth in organic health food stores, direct purchasing is the most important trend in organic retail. By advertising their produce as directly purchased, retailers imply that direct purchasing is "local" and "sustainable," thus appealing to consumer misgivings about big agribusiness. However, this practice effectively allows them to reap higher margins by foregoing middlemen. Some claim that the state requirement to include grower's labels on organic produce has allowed the distribution centers of Safeway and Lucky's to seek out growers themselves. In addition, several of those interviewed for this study indicated that many retailers advertise as direct buyers but still rely on intermediaries. Still, some smaller chains actually provide their own "field support" to small growers, and make verbal promises for future purchases as well. On the supply side, direct purchasing does get smaller growers into otherwise inaccessible markets. Large growers with conventional ties also take advantage of this strategy. For example, a large and specialized conventional carrot grower, which has recently added a line of organic carrots, is able to sell its organic carrots directly to such conventional retailers as Ralphs, Vons, and Raleys because it can guarantee a year-round supply.

The other prominent form of direct purchasing consists of small farms catering specifically to high end restaurants. Demand created by gourmet restaurants has been much more important than food safety issues in driving the growth of salad mixes and baby vegetables. According to Rauber (1994), a trend started by Alice Waters of Berkeley's famous Chez Panisse has caused

mesclun salads to become *de rigueur* for all self-respecting restaurants. Some of the largest salad mix farms in Northern California entered business by selling directly to this and other elite restaurants.

Direct links between farmers and restaurants ("back door sales") have become quite common in the San Francisco Bay Area. From restaurant sponsored farms, to farms which sell to a variety of different restaurants, about one third of all growers sell at least some of their produce to restaurants (Auburn 1994). Some of these farms are hardly more than backyard gardens, but are extremely profitable because they capture the differential rents of a high end business. For example, a one acre farm located in San Francisco, grows only mesclun which it sells at \$8-9 per pound to ten or twelve San Francisco restaurants. For reasons of risk mitigation and product diversification, most high end restaurants source from numerous growers and distributors: currently, Chez Panisse has a network of over ninety suppliers (Rauber 1994), and most of the growers interviewed for this study claimed to be one of them.

In this case, size is unrelated to market power. Most of these high end sales rely upon strong connections in the gourmet restaurant world, product sampling, and impeccable service. It is not uncommon for people of the restaurant world to leave to start their own farms: one of the largest mesclun growers in Northern California was started by a former chef at Chez Panisse. After a similar start, the owner of a smaller farm which sells 60-70% of its produce directly to restaurants has found his long-established network to be of key importance. However, these direct relationships are not always efficient, because restaurants can be unpredictable in the type of produce they request. Thus, the owner of one farm reported spending a lot of time convincing chefs that he has produce that is "too good to pass up." Another farm has scaled down its relationship with restaurants, after finding that their orders are usually too small to make such sales worthwhile.

E. Bypassing the Marketplace: From Farm to Table

The fastest growing, but still economically marginal, distribution channel is direct producer to consumer marketing. According to Cook, whose data is six to eight years old, direct sales account for only one percent of the total fresh fruit and vegetable market. However, it is likely that a higher percentage of organics are sold directly, for reasons relating to both farm size and ideology. On the supply side, small producers cannot meet the volume, timing, and quality requirements of intermediaries, especially as retailing and wholesaling becomes increasingly integrated. Small producers thus have proportionately higher marketing costs and reap lower margins. On the demand side, direct marketing appeals to consumers because of the association of nutrition with freshness, cost savings, and an ideologic that small is better (Singh et al. 1991).

Traditional direct marketing outlets have been farmer's markets, roadside stands, and "pick yer owns." While comprehensive data on farmers markets is unavailable, they seem to have grown considerably in popularity during the ultra-price conscious 90's. For some small producers, farmer's markets may be the only accessible sales outlet. However, they are extremely labor intensive (many small growers sell at as many as seven to ten markets per week), very volatile ("bad weather or a football game can kill a market"), and, related to this, much product is wasted when farmers guess incorrectly how much to pick. Also, because of a glut of product, especially during the summer, many of the larger growers use farmer's markets to dump product they can not sell elsewhere. Many informants (including ourselves) report seeing large salad mix farms underselling smaller growers in local farmer's markets.

As a consequence, many small and medium sized farms are turning to a form of direct marketing that minimizes many of these risks. Subscription farms or CSA's (for Community Supported Agriculture) allow growers to shift many of the weather and price risks onto the consumer. Consumers subscribe on an annual or monthly basis, and for a set fee, receive a standard box of seasonal produce (selected by the grower). The fees of various CSA's may range from \$11 to \$37 per week. These price differences are related primarily to box size, product mix, and delivery location: some CSA's require subscribers to pick up their box from a central location, while others deliver to the door. Although some farms actually sell equity-like shares, by splitting both annual operating costs and total annual product among shareholders, this practice has not yet appeared in California (Howe 1995).

Subscription farms provide obvious advantages to the grower. Growers can charge a premium over retail prices and thus earn high profits, as long as delivery costs can be kept low. CSA's allow year round growing and an assured market for hard-to-sell winter crops like kale, squash, and collard greens. Harvesting is done on a predictable and controllable basis, rather than on a wing and prayer for the farmer's market, or according to the vagaries of the restaurant business. CSA programs allow growers to establish a more interactive and personal relationship with their customers, and allow farms to specialize in what they can grow best, without being limited to the specific and changing needs of restaurants.

Most growers with established CSA programs are much more satisfied than they were with previous marketing strategies. Howe estimates that fifty farms have adopted this practice nationwide, servicing around 5000 customers (1995). One eighty-two acre farm derives forty percent of its revenue from a 200 member CSA program, with total revenue increasing fifty percent since the program was started (Howe 1995). Another 400 acre farm has completely moved away from the risky and difficult farmer's market business and is instead concentrating on its growing CSA program. Subscriptions reached 400 in 1995, up from 200 in 1994. For 1996, they project subscriptions to increase to 500 or 600. This farm, however, does not find CSA's to be risk free. In certain short months, they have had to purchase from elsewhere (deeply discounted in a reciprocal arrangement) in order to provide an adequate box. Also, monthly subscriptions are subject to some fluctuation, causing uncertainty. Thus, as customer loyalty increases, most farms attempt to gradually shift customers from monthly to annual shares. While this has proven difficult to market initially, it is economically more sustainable in the long run.

In sum, local and direct marketing arrangements, which in some sense illustrate the promise of local networks of direct grower-to-consumer links, are effectively default choices for growers with few resources. Larger and more capitalized farms tend to enjoy the economies of more traditional distribution strategies, which fashion a more complicated and extensive (i.e., international) system of provision from farm to table. Yet, within these conventional channels, many players exist to extract economic rents and surplus value at many links along the commodity chain. Thus, post-Fordist supply arrangements are becoming prevalent, which appeal to consumers for their populist appearance, but which effectively redistribute surplus to the most powerful players, such as large retailers.

VI. APPROPRIATION AND CONVENTIONALIZATION

We came to this project under the assumption that organic food provision countervailed both long term and recent trends in conventional food delivery. Indeed, in at least four respects, organic agriculture impedes the intrusion of agribusiness capital. For one, the particular nature of organic farming, especially that of highly specialized fresh fruits and vegetables, presents certain obstacles to agribusiness penetration, perhaps even more so than with conventional agriculture

(Kautsky 1988, Mann 1989).⁶ Mixed cropping, for instance, creates more efficient nutrient recycling and a degree of biological pest control, and thus, mitigates the need for fertilizers and pesticides. Mixed cropping is also a significant obstacle to on-farm mechanization in harvesting, as is the special care or so-called "artisan-like" handling required of certain specialty crops like baby lettuces. While agribusiness penetration can not necessarily be conflated with mechanization and high input agriculture, they are often closely linked.

Two, and related to cropping and handling practices, there appear to be few economies of scale on the production side of organic agriculture. Therefore, many organic farms are able to survive in relatively marginal spaces, without vast acreage of flat land. In fact, organic farms are significantly smaller than conventional farms, especially in California, where large factory-like farms are the norm. While the relatively small size of organic farms is enabled by unique production efficiencies, as with other small farms, it is also a product of significant undercapitalization.

Three, to some degree the organic sector has more the character of a "social movement" than of an industry, which is partially expressed by the extensive involvement of nonprofit organizations. Indeed, within the sector there exists a multiplicity of actors whose values may be at odds with the profit-maximizing motivations associated with conventional farming. By all accounts, a significant number of farms exist within an informal sector of sorts, as their owners choose not to register with the state, either because their processes do not meet the particular specifications of the "organic" label (but they are able to sell their product anyway), or because of more deep-rooted ideological leanings regarding self-sufficiency or tax protest. More broadly, many organic farms are less concerned with the logic of profits than with ideals of environmental sustainability, localized economies, and/or the provision of "healthy" or "natural" food. However, the combination of multiple motivations leads to several contradictions. For example, the line between the ideal of sustainability and the practice of sound business is fuzzy, especially when the primary indicator of "success" of the movement is the profitable production and marketing of synthetic-free food. Even consumer "involvement" in the organic sector, such as the support of certification organizations and subscription farms, not to mention the provision of unpaid labor, straddles a fine line between directly financial and ideological ends.

Four, the growth in the organic sector is decidedly demand-led, and related to increasing dissatisfaction with the ways in which most food is produced and marketed. By buying organic, consumers comment on both food safety issues and to some extent, food bioengineering. Those consumers who also valorize the local and seasonal effectively take a stand on the globalization of markets. In other words, consumers are demanding agricultural products that do not involve the very inputs and processes that allow agribusiness' intrusion into agriculture. In this respect, the surge in organics can be seen as not only an example of consumer "agency," but also a struggle against capital's product.

Despite these countervailing tendencies, organic agriculture is beginning to strongly resemble conventional agriculture. Many organic farms, like conventional farms, employ (migrant) wage labor, making them effectively capitalist in nature. Those growing high value crops such as salad mixes or carrots tend to abandon many of the agronomic practices of organic to intensive monocropping. As with conventional agriculture, organic growers have begun to experiment with mechanical harvesting and thus face many of the same obstacles.

Moreover, agribusiness capital is increasingly penetrating into organic agriculture in other ways besides subsumption of actual production. The process of "appropriation," as defined by Goodman et al. (1987) effectively marginalizes the actual site of production as the locus of profits.⁷ The clearest example of appropriation is the proliferation of near-farm mechanized post-harvest processing, including washing, spin drying, refrigeration and packaging facilities. These

processes all are value-adding and render distinct marketing advantages. Not surprisingly, several farms with these facilities also contract out production, which not only diversifies risk, but also ensures more volume of inputs for the higher margin processing and marketing. For processing tomatoes, the organic "rents" are realized solely in the marketing end; growing is relegated to those with severely limited market power.

Organic agriculture is also increasingly being pulled into upstream markets for inputs. While many organic inputs can be developed on farm; the production of inputs, like everything else, uses limited labor and land resources. Also, many inputs may occur naturally, but not on every farm (e.g. bat guano). Thus many farms choose to purchase from the growing organic input market, which includes companies which both specialize in compost production and/or purvey more exotic inputs in a global market.

However, it is particularly in the marketing and distribution end of the chain where the organic sector is beginning to look most like the conventional one. Although the organic commodity chain is often represented as "local production for local markets," the geographic reach of this sector is quite extensive; and follows cropping and distribution patterns similar to those of conventional. Peripatetic production and regional specialization are becoming commonplace and the distribution of California organic produce is considerably far flung. The most dramatic development is the growth in organic imports, with some companies sourcing almost exclusively from out of state and Latin American to bring in both organic exotics and counter-seasonals to local (Bay Area) markets!

Furthermore, despite the plethora of small growers, small retailers, and independent restaurants, there are few one-on-one relationships between small buyers and sellers. Players at both ends of the chain attempt to diversify their client base as much as possible, although for some, the choices are limited and are becoming more so with the expansion and consolidation in retail, and the scale economies increasingly required by distributors. Transportation, as one of the biggest costs, clearly favors those who can move in pallet quantities, leaving small growers at the mercy of consolidators and marketing agents (or the oft-chosen channel of direct marketing).

Yet, the development of consolidating facilities and brand name marketing further marginalizes small growers who choose to sell through conventional channels. Marketing agents and grower-shippers provide point of purchase materials which not only substantiate certification, but also establish brand names. It is unclear that brand names per se are the threat, as so far they have meant little in the total fresh fruit and vegetable market, save Dole, Chiquita, Sunkist, and Ocean Spray (Cook). However, large retailers with price scanners clearly favor the accompanying packaging materials because they often include bar codes.

In general, the organic vegetable market has become quite competitive, leaving room only for those who can deal in larger volumes, construct a quality advantage, or appeal to ideological sensibility. Indeed, the success of a company like Muir Glen in differentiating its products from those of competing firms by appropriating and manipulating the representation "organic" has allowed it to effectively compete in a highly concentrated industry. The "organicness" of processed products in a way legitimizes the industrialization process against which many consumers originally rebelled in their demand for more "fresh" fruits and vegetables. "Organic" turns canned foods "green", representing them in a manner which falls somewhere between illusion and reality.

Yet, a very different story is painted with the example of the large salad mix growers. Instead of manipulating the *label* organic, they have taken an organic product and marketed it to capitalize on mesclun's appeal not primarily as an organic alternative, but instead as a "specialty" or "vanity" good, one of the top yuppie commodities of the nineties. This is evidenced by the fact that most gourmet restaurants do not market their salads as organic, and that many of the

prepackaged or even bulk salad mixes sold through food chains are not labelled organic. Indeed, many sources claim that as much as sixty to eighty percent of organically grown salad mix is sold on the conventional market. For example, one of the largest salad mix growers sells much of its product to conventional growers for inclusion in their prepackaged, "conventional" salad mixes.

With new - and more powerful - entrants since the Alar scare, better yields as organic improves technically, and a concomitant drop in prices as a result of a generally agreed upon problem of over-supply (especially in the summer, although this is hardly unique to organic), profit margins are declining and small players, in particular, are indeed being squeezed. An important force which is shaped by and in turn shaping these trends is the entrance of agribusiness capital into organic markets.

Although in the past conventional growers viewed organic agriculture as economically not viable, they can not help but notice the recent emergence of new market opportunities and shifts in consumer concerns. Most of the large operations consulted agree with the prediction of Bob Scowcroft, of the Organic Farming Research Foundation, that once the National Organics Standards Board and the USDA establish universal standards, and the Organic Foods Production Act is implemented, organic production will very quickly increase to as much as ten percent of the nation's agricultural economy. Attracted by the current high rates of profit and growth, conventional agribusiness capital has been experimenting with different ways to enter the organic sector. Strategies observed include entering into organic production, handling or processing through the conversion of existing operations, the addition of new product lines, or the acquisition of organic operations. Venture capital is also beginning to play a role, especially with regards to the processing and manufacturing of organic foods.

Many conventional growers have become directly involved in organic production by converting their land and operations over a several year period. One such grower has become a leader in the development of large-scale composting, and is currently teaching composting techniques to the largest conventional grower-shipper of lettuce in the United States.

Other conventional growers are entering the market by purchasing existing certified organic farms. A large conventional carrot grower recently purchased a certified farm which grows thousands of acres of organic carrots. Likewise, a large Salinas-based conventional grower-shipper recently entered into the organic production of lettuce through the purchase of certified land in California and Arizona, and one of the largest certified growers of organic lettuces has been purchased by a large conventional grower-shipper of lettuce. However, not every attempt by conventional growers to enter into organic production has been successful. One large lettuce grower-shipper from Salinas lost large amounts of money before aborting its attempt to cultivate organic lettuces five years ago. They found that, due to the labor intensive nature of organic production, no economies of scale accrued with increased size.

There are many other examples of agribusiness capital expanding into the handling, distribution, and processing of organic foods, as opposed to cultivation. For example, several years ago Dole acquired an operation which packs raisins for 15 or 16 organic raisin growers, and more recently, purchased a medium-sized distributor of fresh organic produce with a nation-wide reputation. ConAgra and General Mills have both acquired small processing operations, and Heinz very recently purchased a manufacturer of organic baby foods. Finally, at least fifteen venture capital firms have invested in the processing and manufacturing of organic foods.

In conclusion, while the entrance of agribusiness capital is slow, piecemeal, and experimental, consisting of individual cases more than clear trends, it appears that it is finding ways to re-shape the particularities of organic agriculture to its own advantage. The production of high value and high turnover crops is increasingly being assumed by large agribusiness firms, or start-up firms which mirror the practices of conventional growers. Other fast growing, high

value segments are being driven by an exemplary case of appropriation, where processes once integral to the farm, are taken off farm and reconfigured as inputs. The most salient instances of appropriation are the off-farm development of organic inputs, the growth of value-adding light processing and packaging facilities, and the increase in contracting arrangements for high risk production. Finally, contrary to the direct marketing ideology of many strains of the organic farming movement; it appears that capital may become more concentrated in the various levels of distribution and processing, mirroring the patterns of the industrialization of conventional agriculture. Thus, where small growers persist, most of the surpluses they produce will continue to be re-distributed to players who control the processing, distribution, and marketing links in the commodity chain.

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¹ We conducted over 70 interviews in Northern California between October and December of 1995. A list of interviews is included in the Appendix. While not claiming to provide exhaustive coverage of the organic vegetable industry, we believe our findings to be broadly representative of recent trends and developments.

² However, there are significant caveats to this data. Relying on state registration of organic farms, it if anything grossly underestimates the size of this sector. Klonsky and Tourte (1995) noted the following data collection problems: inconsistent reporting, disincentives to report all business because registration fees are based on sales volume, and reporting problems for farms with both conventional and organic acreage. In addition, there is a non-identity of production and sales, particularly in that substantial volumes of organically produced goods are "dumped" on the conventional market. Finally, statistics based on acreage do not account for multicropping.

³ According to Cook (1992), food service creates up to forty-five percent of the market for conventional produce. This would include fast food outlets, as well as institutions like hospitals.

⁴ In this regard, the San Francisco Bay Area does double duty, as both an upscale metropolitan market and a center for health conscious consumers.

⁵ Specialty stores may carry up to ninety percent organic at these times, whereas for regional markets like Safeway, the difference may be between some or none.

⁶ This idea has its origins with Kautsky's observation that agriculture's basis in land creates obstacles to capitalist accumulation. Fragmented land holdings, for instance, make it difficult to centralize and consolidate operations. Building on Kautsky, the Mann-Dickenson thesis posits that agriculture's basis in *nature* is the source of capitalism's uneven and protracted penetration of agriculture. Problems such as the non-identity of labor application time with production time (which gives rise to labor recruitment problems, inefficient use of machinery, and long turnover times) amplify the more obvious risks of extreme market volatility, nature's vagaries (e.g., floods, droughts), and product perishability. (Mann 1989)

⁷ Goodman et al. (1987) defined "substitution" as the creation of industrial substitutes for the rural product and "appropriation" as the refashioning of products and processes once integral to on farm production as inputs.

Appendix: Interviews

In addition to the sources listed below, this study is based on interviews with 25 producers, 8 handlers, 5 processors, 2 restaurants, 7 retailers, 1 venture capitalist, 4 certification agencies, and 2 academic specialists. The interviews were all concentrated in Northern California, and were conducted between October and December of 1995.

Bowen, Diane. Executive Director, California Certified Organic Farmers. 11/3/95

Feenstra, Gail. Nutrition and Food Systems Researcher, Sustainable Agriculture Research and Education Program, University of California, Davis. 11/10/95

Friedland, William. Professor of Sociology, University of California, Santa Cruz. 11/3/95

Johnston, Mike. Teamsters Local 890, Salinas. 11/20/95

Klonsky, Karen. Specialist, Cooperative Extension, Department of Agricultural Economics, University of California, Davis. 11/14/95

Scowcroft, Bob. Executive Director, Organic Farming Research Foundation. 11/15/95

Tourte, Laura. Post Graduate Research Assistant, Cooperative Extension, Department of Agricultural Economics, University of California, Davis. 11/14/95

Villarejo, Don. Executive Director, California Institute of Rural Studies. 11/10/95

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