CONSOLIDATION IN FOOD AND AGRICULTURE

IMPLICATIONS FOR FARMERS AND CONSUMERS

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WHILE GROCERY STORE SHELVES appear to provide abundant choices, most of these products are marketed by a small and decreasing number of firms. Gigantic multinational corporations are consolidating their control over our food system, including the organic sector. The trend raises concerns about how this power is exercised, as most of these corporations are accountable to their shareholders, not to the communities in which they operate. While the situation may currently appear bleak, corporate dominance is being challenged by groups that have been adversely affected, such as farmers, workers and consumers.

THE DYNAMICS OF CONSOLIDATION

The food system can be thought of as a long chain, with food passing through a number of steps or links in the chain on the way from farmers to consumers, such as food storage and processing. In 1999, Dr. William Heffernan and his colleagues at the University of Missouri identified a worrying trend—the emergence of clusters of firms that are working to put a padlock on this chain and control it from "the gene to the supermarket shelf." [1]

There are three processes by which this is occurring: *1)* horizontal integration, *2)* vertical integration, and *3)* global expansion.

Horizontal integration refers to consolidation of ownership and control within one stage of the food system, such as processing, for one particular commodity. Heffernan and colleagues have been documenting the ratio of the market share of the top four firms in a specific industry compared to the total market, called the concentration ratio (CR4), since the mid-1980s. The CR4 is important because economists suggest that when four firms control 40% of the market, it is no longer competitive. This means that the largest firms will have a disproportionate influence on not just the price of a commodity, but also the quantity, quality and location of production. The table below shows the CR4 ratios for a number of food commodities, indicating the current extent of horizontal integration. All of these ratios exceed the 40% threshold, and have been increasing over the last few decades.

The second process, vertical integration, involves linking firms at more than one stage of the food chain, such as upstream suppliers or downstream buyers. An example would be Smithfield's involvement in both pork production and pork packing, as shown in the table below. Another is ConAgra, which distributes seed, fertilizer and pesticides; owns and operates grain elevators, barges and railroad cars; manufactures animal feed; produces chickens, processes chickens for sale in meat cases; and further processes chickens for frozen dinners[1].

The third process, global expansion, is the attempt by agribusiness firms to increase their market share worldwide. This is most apparent on the retail end of the food chain, as some analysts have predicted there may soon be only 6 global food retailers[3]. A massive wave of mergers has been occurring in this industry recently, spurred by the recent entry of Wal-Mart into food retailing and its expansion to other continents (such as South America and Europe). In fact, Wal-Mart may be the only US-based company big enough to compete with European firms like Carrefour, Ahold and Metro (each of which has stores in more than 20 countries). Before Wal-Mart became a major player in food sales the top 5 retail chains in the US controlled less than a quarter of the market (1997 data). Current estimates suggest that the top 5 now share more than half the market.

Concentration ratios of the top agricultural firms, 2001[2]

Beef packers (Tyson, ConAgra, Cargill, Farmland)	81%
Corn exports (Cargill-Continental Grain, ADM, Zen Noh)	81%
Soybean crushing (ADM, Cargill, Bunge, AGP)	80%
Soybean exports (Cargill-Continental Grain, ADM, Zen Noh)	65%
Flour milling (ADM, ConAgra, Cargill, General Mills)	61%
Terminal grain handling facilities (Cargill, Cenex Harvest States, ADM, General Mills)	60%
Pork packers (Smithfield, Tyson, ConAgra, Cargill)	59%
Broilers (Tyson, Gold Kist, Pilgrim's Pride, ConAgra)	50%
Pork production (Smithfield, Premium Standard, Seaboard, Triumph)	46%
Turkeys (Hormel, ConAgra, Cargill, Pilgrim's Pride)	45%

Food chain clusters are formed when groups of firms join together to control every step in the food chain through these processes of horizontal integration, vertical integration and global expansion. The links may be through formal or informal agreements, including mergers, acquisitions, joint ventures or strategic alliances. Although their boundaries are constantly shifting, several potentially emerging clusters have been identified. For instance Cargill and Monsanto form a cluster, with Monsanto providing genetic material and seeds, and Cargill involved in grain collection and processing, and meat production and processing. Kroger, the largest supermarket chain in the US, is linked to this cluster through an agreement with Cargill to receive case-ready meat. DuPont/ConAgra and Novartis (Syngenta)/ADM have similar ties.[4] Although predictions are very difficult, based on other industries that have formed global oligopolies rather than monopolies (such as automobiles, pharmaceuticals and oil) there are likely to be as few as four to six clusters worldwide.[4]

Effects of Consolidation

The implications of what such a system will mean for farmers can already be seen in the poultry industry in the US. Ninety-five percent of chickens produced for meat are grown under production contracts with fewer than 40 companies. The farmer furnishes the land and labor, and is required to invest hundreds of thousands of dollars for buildings and other equipment. The company provides the chicks, feed and medicine and agrees to pay a guaranteed price per pound. In the 1950s, when there were more than a thousand companies, most poultry farmers benefited from such contracts because they were protected from price fluctuations. Now that four vertically integrated firms control 50% of the market, the terms of the contracts are much more favorable to the companies. Their power is so great that some companies have been found to cheat farmers systematically by underestimating the weight of birds, overestimating the weight of feed, or providing poor quality chicks or feed. A farmer who complains is likely to have their contract canceled and be placed on a blacklist.[5] Although most poultry farmers are making poverty level wages or below, without a contract they cannot pay off their mortgages, and therefore face foreclosure. Some cynics have suggested "why buy the farm when you can own the farmer?" and describe chicken farmers as "serfs" who are never able to escape their debts.

Grain and vegetable growers may soon find themselves in a similar situation. Genetically engineered (GE) crops are controlled by just six multinational corporations, and the technology is being used as a tool to consolidate the seed supply. Crop farmers are then being locked into food chain clusters through "bundling," or linking patented seeds with contracts, chemicals and credit. Monsanto's Roundup Ready seeds can only be used with Roundup herbicide, even though cheaper versions of this herbicide are available. Pioneer DuPont seed gives better interest rates on financing, depending upon how much "approved" products the farmer buys, and approved chemicals include those from Syngenta, Bayer/Aventis, and Dow. The precedent set with GE seeds is also being extended by bundling chemicals and other inputs with conventional seeds. In the UK, Syngenta's hybrid barley can only be purchased in conjunction with the company's growth regulator and fungicides.

Consumers are also harmed by consolidation. GE foods have been introduced into the food system without public consent, or even public knowledge, as recent polls have shown,[6] thus limiting the freedom to choose non-GE products. Price gouging is another way that food conglomerates may exploit their increasing power. Although farm milk prices are the lowest they have been since the 1970s, prices paid by consumers have not declined. Consumers Union has reported high retail milk prices at California supermarkets when compared to smaller markets, and suggested these prices do not follow farmer and processor costs.[7] A recent class action lawsuit accused two major supermarkets in Chicago of fixing the price of milk over a four-year period, costing consumers up to $125 million. This is somewhat of an exception, however, as most food prices have remained low over the past few decades (aside from products like carbonated beverages, snacks and breakfast cereals, which are already dominated by a small number of brands). Although consumer pocketbooks have been much less affected by consolidation than farmers and workers, this situation may change if a handful of food chain clusters gain control of the global food supply.

Consolidation In Organic

Organic agriculture is not immune to these trends. Many organic brands have been acquired by giant food processors such as General Mills, Kraft (Philip Morris) and Kellogg, as the accompanying diagram indicates (*see page 5*). Slightly smaller global food processors not shown in the diagram are also establishing their own organic product lines (such as Dole, Chiquita, and McCormick & Co.) or acquiring existing organic brands (J.M. Smucker bought R.W. Knudsen, After the Fall and Santa Cruz Organic; Novartis subsidiary Gerber's bought Tender Harvest). The market share for some of these brands is extremely high — Horizon, White Wave and **Earthbound Farms** control over 60% of the market for organic milk, organic soymilk, and organic bagged salad mix respectively. Earthbound Farms is a brand of **Natural Selection Foods** and a vertically integrated "seed to salad" operation — it contracts with over 200 growers. It is one of just five farms that market half of the organic produce sold in California.[8]

In the rapidly consolidating food retailing industry, the top 4 supermarkets — Wal-Mart, Kroger, Safeway and Albertson's — are increasing the amount of shelf space devoted to organic products. Kroger, for example, has a natural and organic section in 43% of its 2400 stores.[9] Fast growing natural foods chains such as Whole Foods (currently the 21st largest supermarket by sales[10]), Wild Oats and Trader Joe's have had success with their own brands of organic products, prompting mainstream retailers such as Kroger, Safeway, Piggly Wiggly and Harris-Teeter to introduce organic brands as well. Such growth is unlikely to benefit small farms because many supermarkets no longer allow managers to buy directly from local farmers or food processors. Instead, these corporations prefer to deal with operations that can supply huge volumes for their increasingly centralized supply chains.

Challenges to Consolidation: Alternative Futures

Despite the predictions of some economists, this global industrial food system is not inevitable. Dr. Mary Hendrickson and Dr.

Heffernan believe that although the current system appears very powerful, it also has potential weaknesses. They state, "To succeed, (alternative agriculture) movements must organize where the dominant system is vulnerable—by making ecologically sound decisions, by relying on time and management rather than capital, and by building authentic trusting relationships that are embedded in community."[11] Examples of this approach can include CSAs (Community Supported Agriculture), roadside stands and farmers' markets that connect consumers directly with local farms. Other emerging alternatives include farmer marketing cooperatives with retail brands (such as Organic Valley), and 'eco-labels' that represent ecological and social criteria that go 'beyond' organic. These eco-labels include: 'fair trade', which guarantees a fair price to the farmer and a fair wage to farm workers; 'humane', which assures consumers that livestock have been treated humanely; and region-specific labels.

The power of food conglomerates is also being challenged in the political arena:

In 1998 South Dakota voters passed by a constitutional amendment that placed

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Major Food Companies Enter the Organic Market

Kraft (Altria Group Inc./Philip Morris) has purchased **Organic Milling's Back to Nature** organic cereal brand. Details of the sale have not been disclosed, but the brand posted $10 million in revenue in 2002. Kraft already owns Boca Burger and Balance energy bars. Back to Nature will remain a separate business and will not be added to the Post Cereals line. Kraft will, however, reformulate some of the Back to Nature products, and "make other changes to ensure that we meet consumers' needs," said Kevin Scott, Executive Vice-president of External Development & Strategy and General Manager of Natural & Organic Foods.

Dean Foods acquired **Horizon Organic** in summer 2003, purchasing 87% for $216 million in cash and assuming $40 million in debt. Horizon had revenues of $187 million in 2002, and recently announced the marketing of the first certified organic infant formula.

Frito-Lay (PepsiCo) has introduced Tostitos Organic Tortilla Chips.

Nature's Farm (Tyson Foods) organic chicken is now available in retail markets in the Northeast.

Ben & Jerry's (Unilever) Homemade division is test marketing organic ice cream in four flavors in San Francisco and Boston.

General Mills is considering adding its logo to its line of organic cereals offered by **Cascadian Farms.**

Price Chopper Supermarkets is creating a private label organic line with approximately 20 products slated for availability by the end of 2003, including soy milk, tortilla chips, and veggie burgers.

7-Eleven announced it will add several varieties of natural, low-fat, and organic chips from manufacturers such as **The Hain Celestial Group**, **Snyders**, and **Rexall/Sundown.**

Dunkin' Donuts has started selling espresso coffee beverages made exclusively with Fair Trade Certified coffee certified through TransFair USA.

Consumer Trends

According to the Food Marketing Institute's *Trends in the United States: Consumer Attitudes & the Supermarket 2003,* 70% of households surveyed indicated that their primary store provides natural or organic foods (18% did not, and 12% were not sure).

American consumers spent nearly $36.4 billion on natural and organic products in 2002. Natural products sales increased 6.6% across all sales outlets, while organic product sales rose 17.3% in natural product stores.

Sources: *Organic Business News,* Sept. 2003; *Provender Journal,* v. 20, #6, Nov.–Dec. 2003; *The Organic Report,* Sept. 2003.

The Supercenters Are Coming

Wal-Mart plans to open 40 of their 200,000 square-foot Supercenter stores in California in the next 4 years, beginning in La Quinta, Bakersfield, Stockton, Chico, Redding and Palm Desert. The implications for local economies and California producers are as yet uncertain, but experience elsewhere in the country does not appear to be positive.

A survey conducted in Las Vegas, Dallas and Tampa revealed a shopping cart from Wal-Mart was 17%–39% cheaper than a traditional supermarket with a union work force. Wal-Mart, with food sales of $82 billion, was the country's largest retailer in 2002, and it expects to account for 35% of US grocery sales by 2007. Estimates are that 400 traditional national grocery outlets will close as a result of Wal-Mart's expansion.

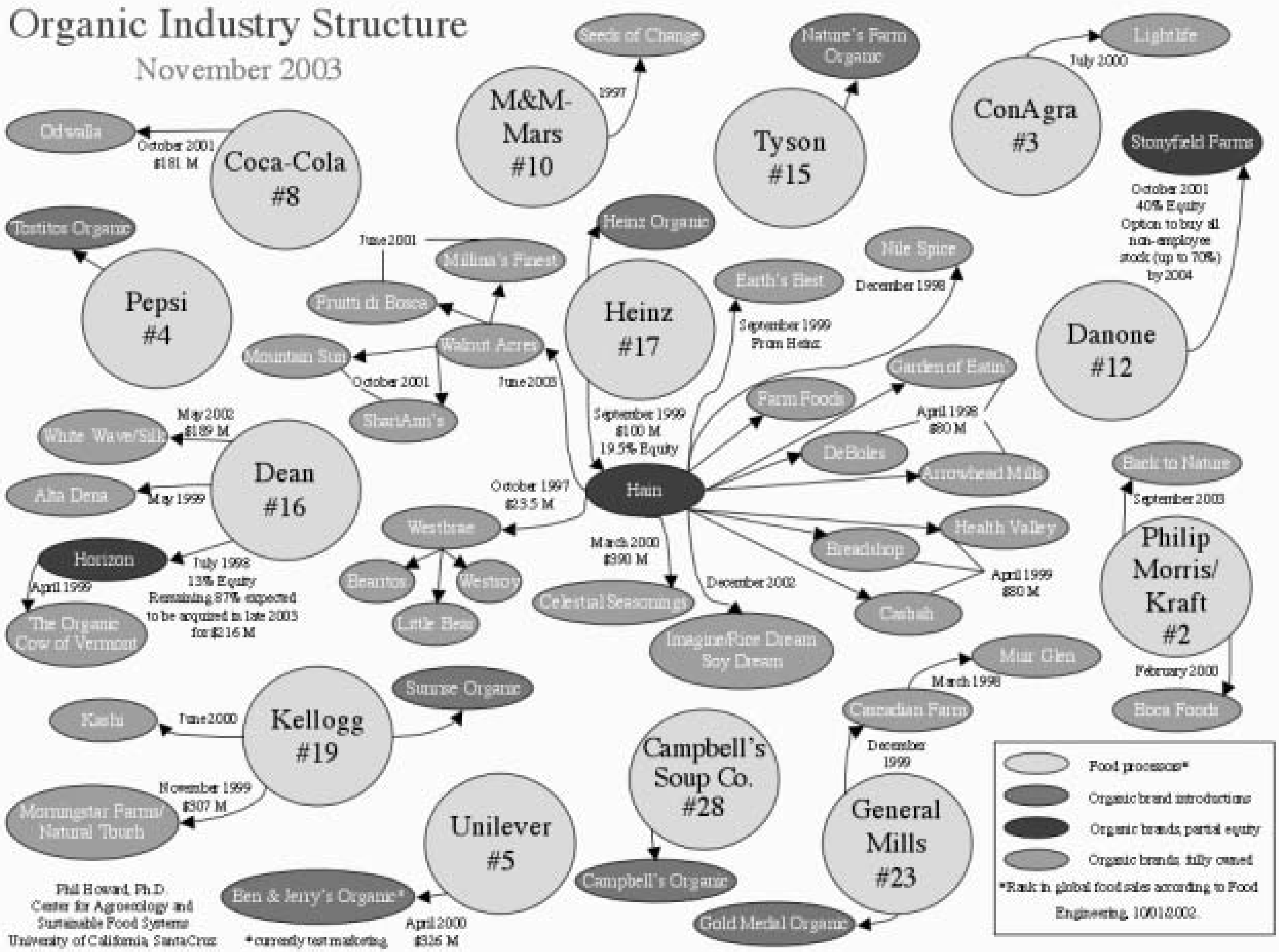
In Dallas, Wal-Mart grew from eight Supercenters and nine Sam's Club stores in 1997 to 28 Supercenters and 13 Sam's Clubs in 2002. In addition, it opened 10 Neighborhood Markets, smaller stores designed for metro areas that still have the Wal-Mart economies.

In response, Winn-Dixie pulled out of the market, closing 15 stores; Minyard Food Stores closed nine markets; and Brookshire Grocery Co. closed another five. Fifteen of the top 100 supermarket chains have filed for bankruptcy or liquidated since Wal-Mart began opening Supercenters.

ConAgra Sells UAP

ConAgra Foods, Inc. has sold its United Agri Products US and Canadian divisions to Apollo Management LP for approx. $600 million. The sale is the sixth that ConAgra has made in a little over a year as the company moves toward consolidating its business around branded food products. Other units sold are ConAgra's beef and pork operation, poultry business, canned seafood, and cheese processing.

Source: *Field Talk,* a weekly e-newsletter of Rincon Publishing



Source: Higgins, K.T. 2002. "The World's Top 100 Food & Beverage Companies," *Food Engineering*, October 1.

restrictions on corporate involvement in agriculture (although it was overturned by an appellate court in August, 2003). Fed up with factory hog farms and the application of toxic sewage sludge to farms, two townships in Pennsylvania went further and passed ordinances that declare corporations are not 'persons' under the US Constitution.

Mandatory payments to commodity promotion boards, or "Checkoffs", have been ruled unconstitutional for pork, beef, grape and mushroom farmers (the pork and beef decisions are currently still being fought in the court system, but are widely expected to be upheld). Many independent farmers feel these funds help agribusiness at their expense, and courts have agreed that they violate producers' First Amendment right to free speech and association.

The 2002 Farm Bill included provisions that require labeling the country of origin for perishable agricultural commodities, but the program has been placed on hold until 2006. Surveys have consistently found that more than two-thirds of consumers are willing to pay more for meat and produce from their own country.[12]

Regulations that ban Wal-Mart Supercenters and other "big box" grocery stores have been enacted in Oakland, Martinez, San Luis Obispo and Arroyo Grande in California, and in at least 18 other cities in the US.[13]

Finally, many efforts are underway to create a more decentralized food system, involving both the creation of alternative structures and addressing the political power of oligopolies. In Chicago, for example, an initiative to create a regional organic food system advocates new consumer food cooperatives, farmers' markets and community gardens, as well as increasing farmland protection, reducing subsidies to agribusiness and increasing public funding for sustainable food systems.[14]

Consolidation in food and agriculture has many negative consequences for the majority of those who grow, harvest, process and eat food. These include lowering incomes and purchasing power, limiting choices, and harming human, animal and ecosystem health. However the importance of food makes it likely that as more people become aware of these consequences, the power of corporate agribusiness will be more effectively confronted.

About the Author

Phil Howard is a postdoctoral researcher at the Center for Agroecology and Sustainable Food Systems at UC Santa Cruz where his research addresses the role of consumers in fostering sustainable agriculture. He is a co-author of the "Consolidation in Food Retailing and Dairy" study conducted for the National Farmers Union.

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