

**Economic Concentration and Structural Change
In the Food and Agriculture Sector:
Trends, Consequences and Policy Options**

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Introduction

Over the last several decades, America's food and agriculture sector has been buffeted by many changes. Major developments include technological change, globalization of markets, rapid expansion of crop land in certain developing countries, increased sensitivity to environmental and food safety concerns, more particular and specialized consumer demands, foreign currency fluctuations and the emergence of cumbersome new barriers to access in key foreign markets. In response to these forces, firms in the food and agriculture sector – from the farm to the retail levels – have sought to improve their ability to control production costs, satisfy market demand and generate additional revenue by expanding their operations in a variety of ways. Such expansion has caused a general trend toward fewer and larger firms across most of the range of different types of businesses in the food and agriculture sector.

This process of growth and merger of firms is usually described as consolidation. It is generally agreed that as consolidation increases, it will at some point bring about changes in the economic structure and functioning of markets in the sector. Extensive consolidation results in what is called concentration or economic concentration, the degree of which can be measured by economic formulas. If concentration continues to increase, there is a level beyond which the actions of one or more of the few remaining firms can significantly affect prices for goods. A firm having this capability to affect prices (paid or received) possesses market power.

Considerable concern has arisen that consolidation and economic concentration in the food and agriculture sector is generating market power that negatively affects those participants in the sector who are not consolidated or concentrated, such as individual agricultural producers, production workers and consumers. While the desire to capture benefits from technological change has been driving the sector for many decades (Cochrane), there are indications, and a growing body of work, suggesting that the recent surge in consolidation involves more than simply the motivation to take advantage of new technologies.

Where does the capturing of economic efficiencies end and gaining a position to influence the functioning and behavior of markets begin? Many believe that point has already been reached in many sub-sectors of food and agriculture and is contributing to the ever tighter profit margins and precarious economic situations of many independent farmers and ranchers. With concentration, more economic decision-making, control and profit potential is transferred from the producer to the consolidated agricultural processing and input industries. While larger consolidated firms are often able to leverage costs and capture economic gains on a national and global scale, as well as through various stages of integrated operations, independent agriculture, which is highly diversified, is relatively disadvantaged because it typically cannot leverage costs beyond the farm gate. Beyond the producer level, since rural economies have historically relied in large part upon a vibrant and independent agriculture, increasing concentration in the food and agriculture sector is often cited as one of the reasons rural areas are struggling economically. In addition, there is growing attention to possible negative impacts of concentration on consumers.

Part I of this paper will explore developments in consolidation and concentration in the food and agriculture sector and the economic consequences for agricultural producers, consumers and communities. Part II will examine policy options that have been adopted or proposed to respond to the continuing trend of consolidation and concentration in the sector.

Part I—Economic Implications of Agricultural Concentration

A. Background

What types of changes are occurring in the food and agriculture sector? There are essentially two kinds of structural change occurring in the agricultural economy and among food and agriculture-related industries: horizontal consolidation and vertical integration or coordination. High levels of horizontal consolidation of the firms participating in a market is generally referred to as concentration or economic concentration.

Horizontal consolidation is the result of the merger or combination of two or more firms (or their assets) in the same industry and which are engaged in the same stage of the production cycle. An example of this type of consolidation is the 1999 acquisition of Pioneer Hi-Bred International Inc. by DuPont, with both companies engaged in seed production and genetic modification of crops, although DuPont has other lines of business as well. This form of consolidation is rather common in the general economy. It occurs at all levels of the food and agriculture sector and would also include consolidation of farmland ownership at the local level.

Vertical coordination or integration occurs when one firm acquires or allies with another firm in the same industry but at another stage of the production cycle. This kind of merger is typified by the acquisition of a series of hog producing operations by the packing company Smithfield Foods over the last several years. As of 2004, Smithfield, ranked the world's largest producer of pork products, owned 808,000 breeding sows, accounting for almost 14 percent of the U.S. total (Freese; National Agricultural Statistics Service, USDA, Sept. 2004). Such integration is now rather pervasive in the agricultural sector, and often it spans the full marketing chain through a combination of production contracting or strategic alliances as well as outright purchase (Goodhue).

Factors causing structural change and consequences of it. To some extent, business firms seek horizontal consolidation or vertical integration in order to reduce uncertainty and generate savings in their input and transaction costs. Economic analyses suggest that the desire to capture economies of scale and economies of scope, and to increase revenue, is a common motivation for such actions. With respect to vertical integration, there are benefits from internalizing (i.e., keeping within the firm or the production chain it controls) the transaction costs between stages in the production cycle, thereby reducing the uncertainty of some cost components in the process. However, research does indicate that for large-sized firms, diseconomies of scale resulting from bureaucratic control problems can overwhelm economies of scale and inhibit growth (Canbäck, 2003).

If horizontal consolidation increases beyond a given level, the remaining firms in the industry will attain what is referred to as market power. A firm is said to have market power if it can significantly affect price through its actions (Taylor and Frost). The exercise of market power can occur when firms meet certain conditions, and this capability to exercise market power is enhanced if in addition to the consolidation there is also vertical integration (Sarris and Schmitz).

Conditions that can result in market power, and the extent to which they are met within the U.S. agricultural sector, include:

- *Possession of superior information.* This condition is met by agribusiness concerns that purchase inputs under contract, where the prices paid under those contracts are not reflected in open markets.
- *Greater participation in a larger number of segments of a market.* This condition occurs in vertically integrated firms, which are commonly found in the pork and poultry sector.
- *Control over channels in the marketing system.* This condition is present for firms that control both processing and distribution functions, such as large-scale grain marketing and processing.

Responses to consolidation and economic concentration. In general, our society has sought to regulate what is deemed improper exercise of market power – by prohibiting, for example, practices such as price-fixing or monopoly control of a market – and has also sought to some extent to prevent the acquisition of market power through certain restrictions on mergers and the acquisition of assets by firms. The clear rationale for these policies is that market power, or at least the improper exercise of it, gives firms too much control over prices charged or paid for good or services – to the detriment of consumers or producers.

In the most extreme form of consolidation and concentration, when firms achieve monopoly power, they have the ability to set prices or to charge different prices (or price discriminate) among different groups of consumers. Similarly, a buyer of goods or services that has monopsony power is able to set prices paid or to discriminate among different groups of sellers. However, there is also a good deal of work, including empirical data, indicating that impacts on markets and development of market power begin to occur at levels of consolidation and concentration well below what would constitute monopoly (or monopsony) power.

Individual firms that control more than a modest share of the market do not necessarily gain additional efficiency from more optimal use of production inputs, i.e., technical efficiency. However, the ability to capture gains through accumulation of market power can encourage continued pursuit of greater horizontal concentration (Canbäck, 1997).

Measuring consolidation and economic concentration. A commonly used measure of the degree of horizontal consolidation or concentration in a market is referred to as the four-firm ratio. This ratio is defined as the sum of the percentage market shares of the four largest firms participating in the market. In the general economy of the United States, the level of horizontal consolidation or concentration settled between 40-45 percent for most market sectors in the 1980's and has remained in that range since then. Among economists who utilize the four-firm concentration ratio measure, in general it is believed that as the ratio increases above about 40 percent the market's competitiveness begins to decline. The higher the ratio above that level, the less competitive the market.

An alternative measure of horizontal market concentration is the Herfindahl-Hirschmann Index (HHI), used frequently in evaluations by the Department of Justice (DOJ) in anti-trust investigations. The HHI is calculated by summing the squares of the percentage of the market

held by each competitor. For example, a sector with two firms each controlling half of the market would have an HHI of 5,000, (2×50^2). Markets with HHI measures above 1,800 are considered by DOJ to be highly concentrated.

In many agricultural distribution and processing markets, the four-firm concentration ratios have already exceeded the 40-45 percent benchmark cited above, in some cases substantially. In such already-concentrated markets, there is a serious question whether the objective of any further consolidation would be greater technical efficiency (including improved marketing) or pursuit of market power. A recent study of 32 U.S. food manufacturing sub-sectors found that further concentration would result in improved cost efficiencies in only one-third of the sub-sectors but would raise output prices in nearly every one because oligopoly effects (market power) would outweigh any efficiency gains that should otherwise lead to lower prices (Lopez et al.). Firms with oligopoly (market) power have the ability to control prices, market information or both, and thereby cause economic losses for other players in the market (Perloff and Rausser).

There is no widely-accepted corresponding formula for measuring the degree of vertical integration, but it can be partially assessed – because of the interrelationship noted above – through measures of horizontal concentration within distinct sub-sectors.

B. Incidence of Concentration within Various Food and Agriculture Sub-sectors

Horizontal consolidation, or concentration, and vertical integration have been almost universal across the U.S. food and agriculture sector, with the lowest degree occurring in crop production. The following list contains some of the more pronounced examples of this trend, though it is not exhaustive:

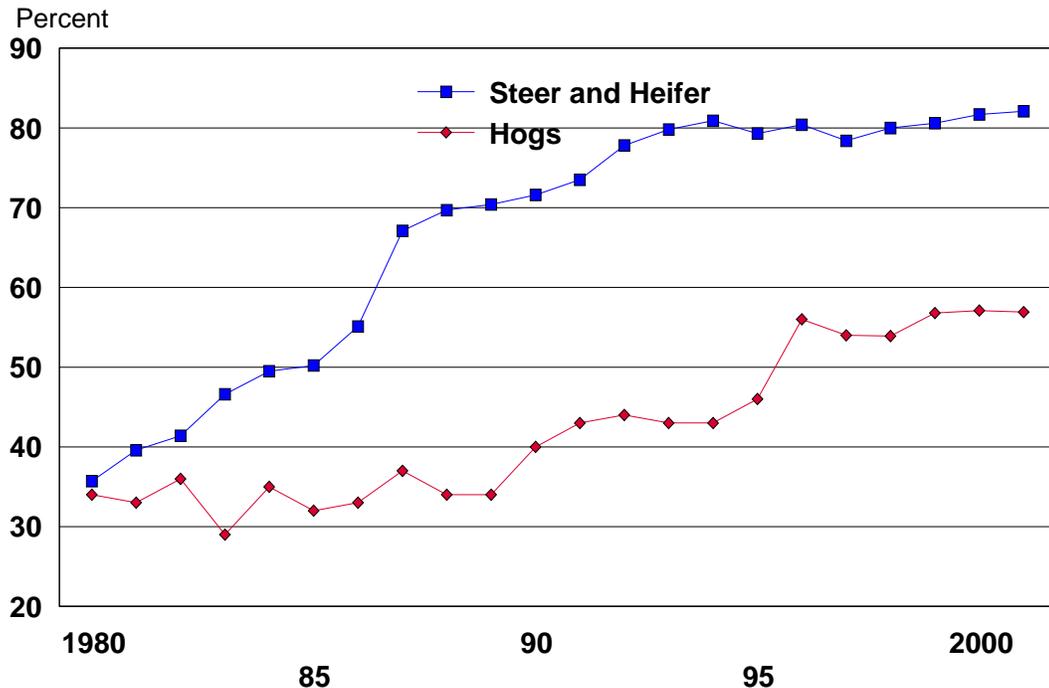
Food processing

- In 2003, it was estimated the four-firm concentration ratio in the packing industry was 84 percent for steer and heifer slaughter and 64 percent for hog slaughter (**Figure 1**) (Hendrickson and Heffernan, 2004). These ratios represent increases in the level of concentration since 1980 of 68 percent and 88 percent, respectively. The HHI for firms processing boxed beef was 2,208 in 1995 (Matthews et al., 1999).
- In production of breakfast cereals, four companies control 89 percent of the market (Benbrook). In 1996, the HHI for the industry was 2,084.

Handling and transportation

- The 1998 Cargill acquisition of Continental grain handling facilities gave Cargill control of 40 percent of capacity at the nation's export grain elevators. In evaluating this proposed merger, the DOJ approved the acquisition, requiring divestment of only nine grain elevators out of more than 100 owned by the two companies, even though HHI's exceeded 3,000 in several regional markets. Nationally, the four-firm concentration ratio was 60 percent for terminal elevators in 2002 (Hayenga and Wisner).

Four-firm concentration in U.S. cattle and hog slaughter, 1980-2001



Source: USDA/GIPSA

- In Mississippi Gulf ports, which handle 70 percent of the nation's corn exports, the four largest grain elevator firms own 98 percent of all storage capacity (FAPRI).
- The Union Pacific--Southern Pacific merger approved in 1996 created a railroad system in which two companies control 90 percent of the nation's commercial rail mileage west of the Mississippi River (Office of the Secretary, USDA).
- In 1998, three U.S. companies (two of them owned by major grain trading firms) controlled 55 percent of the covered hopper barges that ply the Mississippi River system (Collins).

Input suppliers

- Four large agro-chemical/seed companies--Monsanto, Novartis, Dow Chemical, and DuPont--control more than 75 percent of the nation's seed corn sales and 60 percent of soybean seed sales, at the same time that these companies control large shares of the agricultural chemical market (National Agricultural Statistics Service, USDA, Sept. 2002).

Production

- Four of the five largest pork producers in the country, owning nearly 1.3 million breeding sows in 2002, also operate hog slaughter facilities and/or feed mills, in some cases controlling the product from the birth of the pig to delivery of pork to the freezer case at the local grocery store.
- Ninety-five percent of U.S. poultry is produced under vertically integrated conditions, entirely in the hands of less than 40 firms. The four-firm concentration ratio for broiler slaughter was 56 percent in 2003 (Hendrickson and Heffernan).

Retailing

- The five-firm concentration of supermarkets in 2004 is 46 percent nationally, while it is even higher in regional markets (Hendrickson and Heffernan). Four-firm concentration for supermarkets in the country's four largest metropolitan areas averaged 73 percent in 1996, a slight decline from 1991.
- In 1999, the top 20 food and tobacco manufacturing companies accounted for 52 percent of the value-added in the U.S. agricultural sector, as compared to 36 percent in 1987 (Harris et al.).

Disparities in rates of return in a concentrated food and agriculture sector. Some economists view wide variations in rates of return within a given industry as one indicator of the disparity of economic power among participants (Taylor). While the overall profitability of the American food and agriculture sector ebbs and flows over time, it is clear that certain sub-sectors have the consistent ability to earn substantial, often double-digit returns for their owners or stockholders. On the other hand, from a strictly financial viewpoint, a typical farmer would have gained better returns on capital assets by selling the farm in December 2000 and buying six-month certificates of deposit, which were yielding nearly 6.5 percent on an annual basis at that time (MSN Money Central).

- Farmers' return on equity averaged just 2.1 percent per annum between 1995-1999. This figure falls short of the 9.5 percent returns of the mid-1970's (Economic Research Service, USDA, March 2003).
- In 1999-2000, average return on stockholder's equity in the food processing sector was 22.6 percent, up from 13.5 percent in 1993 (Harris et al.).
- The entire Farm Credit System earned about 11.0 percent return on equity between 2000-2003, as compared to negative returns during the mid-1980's during the farm banking crisis (Farm Credit Administration, various years).
- Retail food chains currently receive about 18.0 percent returns on their equity investment. Their returns have fluctuated between 12 and 22 percent since 1980 (Taylor).

Benefits from concentration are substantial to some in the food and agriculture sector.

The profitability and success of large-scale, concentrated firms have been achieved in part through their ability to capture economies of scale and adopt new technology, making them more efficient and productive operations. A 1995 study of consolidation of the U.S. beef packing industry found that it has yielded modest cost savings of four percent industry-wide through the operation of larger plants, enabling them to capture economies of scale and scope (Azzam and Schroeder).

Vertically integrated pork firms, rather than having to bargain continually for hogs on the open market, are able to minimize transaction costs by engaging in long-term contracts with producers or owning the hogs outright (Hennessy). In addition, vertical integration helps processing firms exercise better control over quality in their production process, because they can require their growers to utilize certain genetic traits or production practices that help improve uniformity in the quality of the inputs for processing.

One study found that a significant share of the economies gained by consolidation in hog slaughter was from adopting technology permitting the work to be accomplished by lower-skilled, non-union workers, enabling packers to reduce their wage costs (McDonald and Ollinger; Huffman and Miranowski). Such cost reductions and efficiency gains tend to benefit stockholders. The biggest firm, Smithfield, asserts it has delivered a 26 percent annual compounded rate of return to investors since 1975 (Smithfield Foods, 2003).

C. Concerns Raised by Consolidation and Concentration

Although there are economic gains available to participants in agribusiness consolidation, such activity is not beneficial to everyone in the industry. Beyond the modest technical efficiencies that are generated by such consolidation, economic gains by one player usually represent redistribution of income from other players in the sector, particularly with market concentration.

In one very instructive example, during the hog market debacle of the fourth quarter of 1998, a period in which market hog prices dropped below Depression level prices in real terms, processors and retailers were able to maintain the average retail value of a hog, that figure dropping less than two percent from the previous quarter (Economic Research Service, USDA, March 2002). Such a result is characteristic of a market affected by oligopoly power, which can reduce prices to farmers below the level that would prevail under true competition (Sexton and Zhang, 1996). But since it was possible to maintain pork product prices with very little reduction, the very wide farm-retail price differential enabled IBP, the country's largest meatpacker at the time, to generate record fourth-quarter profits that were four times higher than for the same quarter in 1997. Hence, as the following discussion examines, concentration in the food processing, distribution and retail marketing chain has ramifications for both agricultural producers and consumers.

Farmers on wrong end of market power. To what extent can these large-scale firms influence their input or output prices (defined as market power), either nationally or regionally? There have been few economic studies conducted on this subject. Recent studies that have looked broadly at this question, across sub-sectors, suggest that market power is being created

through consolidation. One study, looking at 40 sub-sectors of the U.S. food industry, found that 37 of them reflect the exercise of market power to some degree (Bhuyan and Lopez). A handful of industry-specific studies, focusing largely on the meatpacking industry, typically find little evidence that these large firms seek to influence market prices (i.e., exercise market power), but notably, these analyses are incomplete in fundamental respects. Specifically, they fail to incorporate the behavior of firms that own multiple plants, which is typical in meatpacking, or examine the impact of market power in regional markets (McDonald et. al).

Market structure also influences how profit is distributed within an agricultural market. A 2002 study compared the implications of spot markets, contractual integration and packer ownership in the U.S. hog market. It found that packer profits are greatest under vertical ownership organization in part because vertical ownership allows lower transaction and procurement costs and fewer losses due to uncertainty of access to inputs compared to other organizational structures (Poray et al.). More research is clearly needed in this area, especially studying markets outside of meatpacking and the cumulative market power of vertically integrated companies.

Farmers losing share of retail food dollar. Over the last few decades, the farm share of the retail food dollar has been steadily falling. The decline has been most acute for commodities like pork and beef, where consolidation pressure increased during that period. The farmer's share of the pork retail dollar fell as low as 12 percent in December 1998, a 75 percent decline from the level in 1970, a time prior to the emergence of concentration (**Figure 2**). While there are some problems with the consistency of the underlying data (e.g., pork prices reported by USDA do not fully track actual purchases by consumers), there is no doubt that the relative gap between the price the farmer receives for the raw commodity and the price the consumer pays for the retail product is widening (GAO, 1999). These comparisons over time are based on prices for a consistent product from farm to retail, so the farmer's share of a dollar spent on a pork chop, for example, is comparable between time periods (Nelson and Duewer).

This trend is not unique to the hog industry. Among the products shown in Table 1, only the processed fruit and vegetable industry did not experience a significant deterioration of the farmer's share of the retail dollar. This industry experienced considerable consolidation prior to 1970. Between 1984 and 1998, the inflation-adjusted price for a select market basket of typical foods increased by 3 percent, while the farm value of those foods fell by 36 percent. While a portion of the increasing gap is typically attributed to increased marketing and packaging costs, in fact, the marketing and packaging costs for food sold for consumption at home (including labor costs and prices of supplies used in processing, wholesaling and retailing) has decreased nearly 15 percent in real terms over that period (Taylor).

An aspect of the gap or disconnection between farm and retail prices is the lag that exists between changes in farm level prices and retail prices, exemplified by stable retail pork prices during the fourth quarter of 1998 while hog prices fell more than 60 percent. Conversely, that lag clearly benefited consumers of beef in 2003, as it took several months for beef prices to follow the increase in cattle prices from the absence of Canadian cattle and beef from the U.S. market due to a BSE case detected in Canada. Industry sources claim that the lag stems from the time it takes to move products from farm to retail outlets, as well as retailers' reluctance to subject consumers to frequent price changes (Nelson and Duewer).

Farm share of retail pork dollar

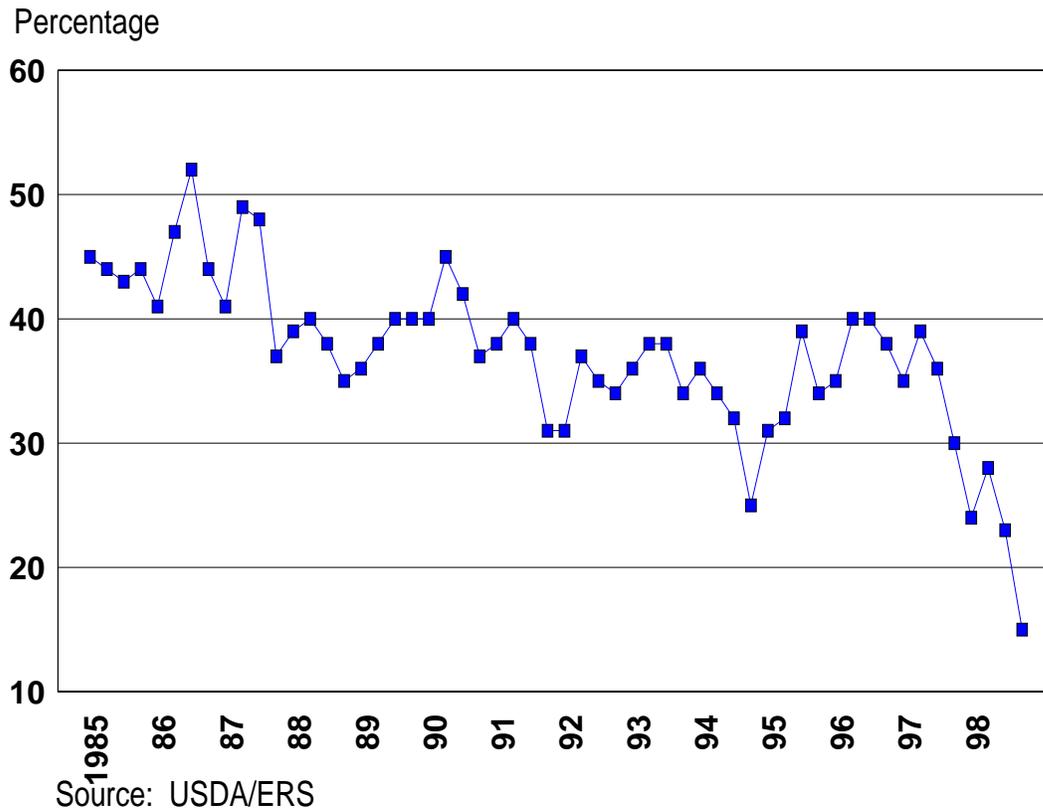


Table 1—Farmer share of retail food dollar, select commodities

	1970	1993	2000
Cereal and baked products	16%	7%	5%
Processed fruits and vegetables	19%	19%	17%
Choice beef	64%	56%	44%
Pork	51%	37%	30%
White bread	9%	5%	5%
Market basket of food products	37%	26%	20%

Source: ERS/USDA, Agricultural Outlook.

Traditional price discovery failing under consolidation and vertical integration.

Consolidated and vertically integrated food and agriculture firms commonly secure “captive supplies” of commodities or raw materials either through direct ownership or contractual arrangements. Agricultural producers have expressed concern about the effect of these captive supplies on prices and the lack of transparency of prices under production or marketing contracts. Empirical studies indicate that captive supplies increase price instability for producers that sell outside the integrated channels, increasing their costs of doing business by forcing them to spend more time and money to find buyers, as well as decreasing their prices (Connors). Common practices that prevent all parties in the market from having access to the same price information (called asymmetric access), such as the convoluted formula or grid pricing often used by packers, tend to create an advantage for the party with better information.

Farmers who are not participants in such contracts are left with little information on the true price that prevails for their commodity. Research indicates that vertically integrated firms tend to rely on large farms for such contract production and are less willing to work with small or medium-sized farms which provide less output volume (Gebremedhin and Christy). Thus, most remaining independent farmers must rely on spot markets for price discovery, which do not reflect the majority of transactions when captive supply practices dominate that market.

A January 2003 study concluded that more than 86 percent of the nation’s hog supply was sold under some sort of pre-arranged contract arrangement (Grimes and Plain). As a consequence, the prices reported on open, spot markets represent a declining share of the livestock actually sold, and thus may not convey an accurate picture of prices paid for livestock in actual transactions. The Livestock Mandatory [Price] Reporting Act was enacted in 1999 to increase price transparency in the livestock and red meat markets. However, recent studies on the law’s impact differ as to whether individual producers do actually benefit, depending on the use that meatpacking firms make of the additional public information in developing contracts with livestock farmers (Azzam, 2003; Njoroge).

One study found that the shift toward contract sales has reduced the influence of public spot markets on the cattle price discovery process (Walburger and Foster). Instead, prices are increasingly determined by regional basing-point pricing schemes, whose details are likely not known to non-participating producers since contract terms are not made public. Many producers believe that the widespread use of captive supplies has the effect of driving down spot market prices, a belief supported by empirical analyses, which have found a price reduction of between \$1-2 a hundredweight for live cattle compared to a situation without captive supply practices (Durham). These empirical analyses were cited by the plaintiffs (a group of ten Kansas cattle producers) charging that captive supply practices of IBP (later Tyson Foods) constituted a violation of the Packers and Stockyards Act in the Pickett v. IBP case.

In a 2001 survey of 316 cattle producers, more than 80 percent of respondents agreed or strongly agreed with the statement “cash market bids by packers are lower when packers have cattle contracted,” though more than 60 percent of those surveyed participated in such contracts (Schroeder). These fears are confirmed empirically. Even though price effects of captive supply practices are modest (3 percent or less), the decline can represent between 12 percent and 25 percent of long-run cattle feeding profits (Lawrence).

Contract producers lack control over operations. Even while independent farmers face the adverse effects of uneven market power and poor price discovery in their transactions, their counterparts who participate in the system experience effects of market power. In general, as a sector becomes more fully integrated, the options available to an individual producer become limited and that farmer's ability to reject or negotiate undesirable terms in a contract diminishes or vanishes. There are two types of contract in which livestock or poultry producers might participate: 1) production contracts, in which the integrator owns the animals prior to slaughter, and the farmer is compensated for feeding the animals, and 2) marketing/pricing contracts, in which the farmer owns the animals, but has some prior agreement with the processing firm regarding purchasing arrangements or pricing. The first type predominates in the poultry sub-sector, while marketing or pricing contracts now account for a majority of sales in the hog market (Grimes and Plain). Empirical analyses of the effects of concentration on producers participating within the marketing chains are limited.

In recent years, the concentration in the poultry sector has reduced the ability of individual farmers to seek new outlets for their output. There is practically no commercial poultry production in this country that is not linked to one of the major integrators (Martinez). A March 1999 series in the *Baltimore Sun* described integrator actions, such as contract cancellation or mandating costly technological upgrades, taken in retaliation against contract producers who question some aspects of their relationship with the integrated firm. A July 2003 *Washington Post* article describes the departure of a major poultry processing plant from the Delmarva region. The remaining integrators in the region recently modified their requirements for bird sizes, leaving many farmers with investments in broiler facilities that cannot accommodate those requirements without extensive and costly renovations.

Due to the time- and capital-intensive nature of raising chickens in confinement, contract broiler farmers have limited opportunity to diversify their income sources. A 2001 study commissioned by USDA found that for a majority of broiler producers, broiler production was the primary activity, but that annual net cash flows were only \$30,000 or less from the activity (Farmers Legal Action Group). Although the majority of those surveyed (75 percent) thought that getting into broiler production had been good for them, only 35 percent would recommend the same decision to others.

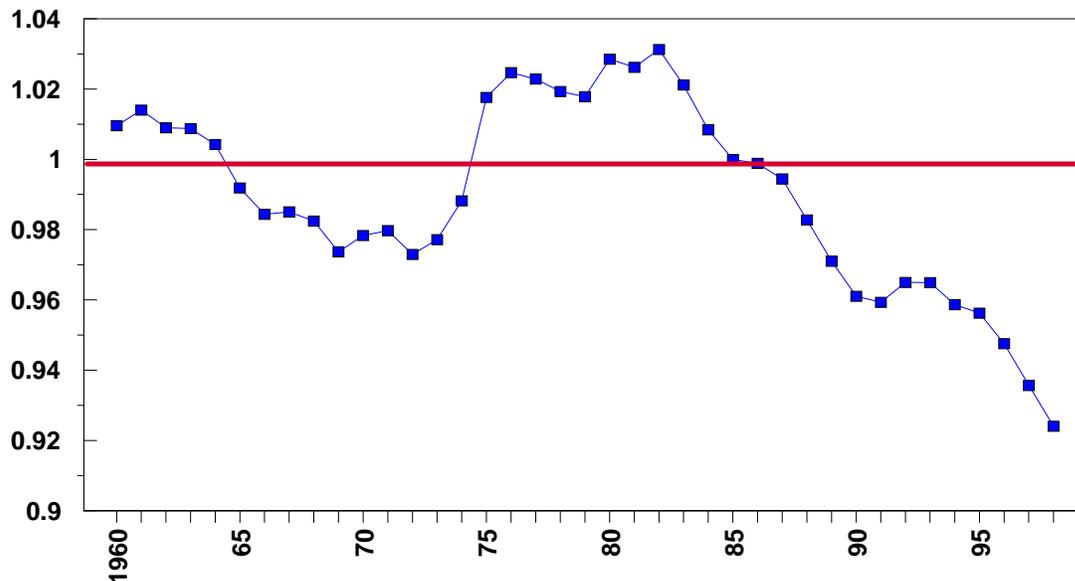
Mixed impact on local economies. Many rural communities have shown a willingness to compete to encourage large agribusiness firms to locate in their vicinity, anticipating a boost to the local economy. States and local jurisdictions have offered financial incentives, such as preferential tax treatment, underwriting infrastructure development such as roads and sewage, and relaxing zoning restrictions in order to attract these businesses. In general, the larger the business, the more costly the incentive package, since a greater potential for number of jobs and volume of economic activity provides the business more bargaining leverage. These community efforts to attract jobs and income sometimes do succeed: a 1998 GAO study found that per capita income increased between 1985 and 1995 in 19 of 23 counties in Iowa and Nebraska with meatpacking facilities.

However, the emergence of large-scale food processing facilities, especially meat-packing, in the 1980's and 1990's, precipitated a relative decline in hourly earnings for production employees and a flood of immigrant workers willing to work for less money (**Figure 3**). These results suggest that such large-scale companies may be behaving as local monopsonists with

respect to labor supply, with the ability to influence wage levels (Henderson and Quandt). An examination of more than 1,000 small towns in Illinois found that proximity of large hog farms tends to hinder economic growth in those towns, suggesting that public policy decisions that favor such operations do not necessarily benefit the town's citizens (Gomez and Zhang).

Empirical evidence indicates that if a significant fraction of jobs at such facilities were to be filled by commuters from other cities or new residents, the net economic benefit of the new business would be reduced because of the need to fund new services (Barkley et al.). In general, purchase of production inputs from outside the immediate region by any firm, agricultural or otherwise, also reduces the net benefit, because the multiplier effects of economic activity within the community are limited. A 2001 report commissioned by the Council on Agricultural Science and Technology found that concentrated or integrated firms tend to make strategic decisions and pay the highest salaries to personnel located far from the local plant. Other studies have found that compared to a set of smaller farms with the same composite production, larger farms tend to buy a smaller share of production inputs in nearby towns (Henderson, Tweeten, and Schreiner).

Ratio of average hourly earnings for food processing vs. general manufacturing



Source: BLS/Dept. of Labor

Consequences of consolidation and concentration for consumers. There is also an increasing amount of study and attention by economists to the consequences for consumers of the greater consolidation and concentration in food processing, distribution and retail marketing (Cotterill, 1999, 2000, 2001, Bunte and Kuiper). Clearly, more study is needed.

An example can be found in the substantial increase in the value of red meat production from \$31 billion in 1977 to \$56 billion in 2001 (Bureau of Census, Dept. of Commerce). Part of the increased value provided by this industry is manifested in the wider variety of fresh, frozen, and table-ready products available for consumers, a selection made possible in part by specialized processing as well as the degree of control over uniformity and quality exerted by the integrated firms. Yet, while the value-added attributes of meats and foods in general increased at the retail level, consumer prices for foods have remained stable for a number of years. The market basket of food consumed by the typical American increased about 4 percent annually on average in the 1990's (National Agricultural Statistics Service, USDA, 2000). But when adjusted for inflation, between 1984 and 1998 the price of a select market basket of typical foods increased just 3 percent. It is commonly noted that the at-home per capita food spending by American consumers is typically lower than similar spending by consumers in Canada and much of Western Europe, both in absolute terms and as a share of overall spending (Putnam and Allshouse).

Nevertheless, simple consumer food cost data and comparisons are only a part of the picture and leave out consideration of what retail prices would be in the absence of consolidation and concentration in food processing, distribution and retail marketing (Cotteril, 2000). Profits in the food chain from the farm level forward have generally remained good or strong, even as more value has been provided to consumers at quite stable prices. These developments suggest that much of the cost of these innovations that add value for consumers has in effect been paid for at the producer level of the food chain in the form of substantially reduced margins – and thus very little reward to agricultural producers for their tremendous productivity gains. In fact, as discussed above, the farmer's share of the retail food dollar has fallen dramatically over the past several decades. Hence there is also evidence for the conclusion that market power negatively affects prices for both agricultural producers and consumers (Cotteril, Bunte and Kuiper). In effect, because of concentration in the food chain, consumers also seem to be denied the benefits of increased productivity in the sector that they would enjoy if all markets in the chain were truly competitive.

Part II – Consolidation and Concentration: Policy Considerations

A. Public Policy Issues

As discussed above, many economists agree that consolidation provides certain efficiencies. But as this paper points out, that consolidation, particularly when it becomes concentration, also carries societal costs, such as an allocation of the food dollar away from independent producers, lack of transparency in markets for agricultural products and loss of control by producers, as well as food price and other consequences for consumers.

The far-reaching consequences of these trends present policy makers with a number of issues and different approaches to address the negative effects of consolidation and concentration.

Federal policy makers have a long history of seeking to address the functioning of agricultural markets, including transparency or the related issue of equality of bargaining power. Examples include the Commodity Exchange Act, Livestock Mandatory Price Reporting Act, U.S. Grain Standards Act, establishment of marketing orders for many perishable commodities, Packers and Stockyards Act, Perishable Agricultural Commodities Act, Agricultural Fair Practices Act, Capper-Volstead Act (recognition and legal treatment of cooperatives), and the commodity promotion (or check-off) acts. These legislative initiatives respond to Congress' determination that without legislative action, the unregulated marketing of agricultural commodities would yield unfavorable results, such as unfair treatment of producers.

Just as Congress has acted to facilitate fair and reasonable market activity in the past, it could respond to the recent changes in the market structure of the food and agriculture sector by enacting new policy to protect market participants in this new industry structure. For instance, in 1890, the fears of monopoly power in the meatpacking sector helped fuel the passage of the Sherman Act. Nevertheless, by the early 1900's, the big five meatpackers controlled 50 to 75% of the market, depending on market definition. (Mathews et al.). Cattle prices rose for a period, largely in response to heavy demand during World War I, which for a while lessened the attention to concentration in the packing industry. But in time, attention again focused on the market power of the large packers. A Federal Trade Commission (FTC) report in 1919 found that meatpackers were in fact attempting to monopolize the meat industry. This study provided the political fuel for Congress to pass the Packers and Stockyards Act of 1921. (Lauck 2000).

While a five-firm concentration ratio of 75 percent in beef packing prompted legislative action in the early 1900's, a century later the four-firm concentration ratio is even higher, at 83 percent in 2003. And as noted above, four-firm concentration ratios and other indicators of economic concentration and market power have increased markedly in recent years across the entire food and agriculture sector.

B. Policy Approaches to Address Consequences of Consolidation and Concentration

Historically, policies have reflected a variety of methods and approaches to address the effects of consolidation and concentration. Some, such as antitrust laws, seek to affect directly the consolidating activity or the use of market power resulting from the concentration. Other measures, often seemingly quite attenuated from consolidation, serve to ameliorate its effects. For example, the Homestead Act and the land grant college system substantially served that purpose when adopted.

Policy makers have been selective when deciding which causes of consolidation and concentration to address – at least directly. For instance, there has been virtually no interest in restraining technological change, even though it can be a major factor in consolidation, especially in an industry like agriculture. Yet policy makers have been willing to address certain activities associated with consolidation and concentration. The basic premise for direct action has almost entirely been actual, attempted or potential for abuse of economic or market power to the detriment of other individuals or firms, consumers or society more generally.

The question for policy makers is what are the appropriate measures to deal with the real possibility of market impacts and detrimental consequences stemming from consolidation and economic concentration? The following outline describes and analyzes different policies enacted or proposed to affect economic balance in the food and agriculture sector as a whole. The first two approaches attempt to equalize bargaining power of the players, either by (1) reducing the power of the stronger party by affecting the structure of the industry, or (2) increasing the power of the weaker party such as by encouraging collective bargaining. The second two approaches are closely related, but essentially accept the fact that the power imbalance exists. These approaches try to minimize the negative consequences of accumulation of market power by (3) regulating the behavior of market participants, and (4) improving the enforcement of competition or trade practice laws.

- 1. Affect the structure of the industry.** The main argument in support of this approach is that it will decrease the power of one of the players because it will provide more choices in the market. These laws do this by limiting what certain firms may own or control. The main arguments against this policy are that the government might hinder the most efficient means of production, and in any case, that the government should not dictate who owns what or the structure of businesses. Because these policies tend to have the greatest effect on the market participants, they can also be the most controversial.

The policy goals of antitrust law sometimes seemingly diverge and create tension for policy makers. (Sullivan and Hovenkamp at 2). For instance, two main goals of antitrust policy have emerged over the years. The first, to stem economic concentration of large firms that threaten the economic viability of smaller entities, has sometimes been seen as conflicting with a more recently championed goal, to promote economic efficiency. (Sullivan and Hovenkamp at 2). Nevertheless, as it applies to agriculture, policy makers might unify those goals and agree that the basic policy goal of antitrust law is to ensure that markets are free and open so that certain economic outcomes can be achieved, such as efficiency, dynamic growth, equitable allocation of resources and economic opportunity. (Carstensen). These outcomes are threatened when a market is not free and open because there is a substantial difference in size between buyers and sellers and the market is consolidated. (Carstensen). A number of policy approaches have been devised to address the openness and functioning of markets.

a. Prohibit certain types of businesses from owning certain types of other businesses or assets. A recent example is proposed federal legislation prohibiting packers from owning livestock. (S. 27, H.R. 719, 108th Cong.). This policy attempts to prevent possible price manipulation stemming from consolidation or concentration combined with vertical integration. A similar approach was utilized in 1920 when the federal government forced packers to agree no longer to own or control the critical elements of the marketing channels of that day, including the railroads and stockyards. The packer consent decree of 1920 enjoined the Big Five meatpackers “both severally and jointly from (1) holding any interest in public stockyard companies, stockyard terminal railroads, or market newspapers, (2) engaging in, or holding any interest in, the business of manufacturing, selling or transporting any of 114 enumerated food products [principally fish, vegetables, fruit, and groceries], and 30 other articles unrelated to the meatpacking industry;

(3) using or permitting others to use their distributive facilities for the handling of any of these enumerated articles, (4) selling meat at retail, (5) holding any interest in any public cold storage plant, and (6) selling fresh milk or cream.”. (*Swift & Co.*). In this case, the court prohibited certain types of vertical integration and horizontal consolidation in an attempt to thwart market manipulation and encourage access to the market for other participants.

A variation of this approach is represented by laws in a number of states that attempt to encourage family farm ownership of agricultural assets by prohibiting certain types of corporations from owning or controlling agricultural land. Recently, however, parties have challenged the constitutionality of these laws on the basis of the dormant commerce clause. The dormant commerce clause is a principle under the U.S. Constitution that prohibits states from adopting laws that discriminate against businesses or transactions originating outside that particular state. The claimants in these cases argue that the state legislatures either intended or that the laws have the effect of discriminating against out-of-state businesses. Significantly, the United States Court of Appeals for the Eighth Circuit recently held that Amendment E to South Dakota’s constitution, which prohibits corporations, subject to certain exemptions, from acquiring land used for farming is unconstitutional because it has a discriminatory purpose. (*South Dakota Farm Bureau*).

The dormant commerce clause has also been relied upon to challenge an Iowa law that prohibits pork processors from owning or controlling hog operations. In January 2003, a federal district court struck down the law after it was challenged by Smithfield Foods, Inc. This marked the first constitutional challenge to Iowa’s corporate farm law since it was enacted in 1975. In May 2004, the district court judgment was set aside and the case was remanded to the district court by the United States Court of Appeals for the Eighth Circuit.

b. Merger review. A similar approach concerning the ownership and control of assets is contained in the merger provisions included in the Clayton Act, under which the Department of Justice (DOJ) or Federal Trade Commission (FTC) may block a merger or require that for a firm to acquire another firm, it must first sell certain assets. (U.S. Department of Justice). The burden upon DOJ to stop a merger is less than to prove a violation of the Sherman Act’s antitrust prohibitions. (Sullivan and Grimes at 513). To succeed, “a plaintiff need not prove that the merged entity is likely to commit antitrust violations in the future.” (Sullivan and Grimes at 513). Rather, the plaintiff only needs to prove that the merger will likely substantially lessen competition.

As an example of a merger review in 2003, Smithfield Foods, the nation’s largest hog processor, proposed to purchase the pork processing facilities of Farmland Industries, a cooperative in bankruptcy. Because of the magnitude of the acquisition, Smithfield was required to file merger review documents with DOJ. A number of federal policy makers, especially those from the upper Midwest, urged DOJ to review the proposed acquisition closely for the potential of lessening competition. (Shafer). Critics of the merger argued that the merger would violate

section 7 of the Clayton Act because it would substantially lessen competition in the market for slaughter hogs in the nation, and especially in the Midwest, because of the loss of a major buyer (Farmland) and the fact that the acquiring firm already controlled much of its supply of hogs. The DOJ allowed the sale of Farmland to go forward and the liquidation and sale was approved by the bankruptcy court in December 2003.

c. Break up firms. This approach may be the most drastic because it forces firms to divest interests that it already owns. Thus the Sherman Act requires that an actual antitrust violation be proven before this remedy can be utilized. In reliance on the Sherman Act, the Department of Justice can exercise its power to break up firms or require divestment of interests and can take the matter to court for enforcement. An example of this remedy is the break-up of AT&T and the Microsoft case (Microsoft documents).

2. **Increase bargaining rights or market position of weaker party.** Instead of limiting the power of a more dominant firm, this approach attempts to increase the bargaining power of the party who traditionally has relatively few options in the marketplace. Federal policy has worked toward this goal by providing agricultural producers the ability and right to join together to bargain with their suppliers or buyers.

a. Cooperative bargaining. The Capper-Volstead Act provides producers of agricultural products limited immunity from the antitrust laws to bargain collectively and, in essence, agree to prices among themselves, so long as the agreement does not “unduly enhance” prices. 7 U.S.C. § 291. To qualify for this limited immunity, (1) the cooperative must operate in a democratic manner, i.e., one member-one vote, regardless of the amount of investment *or* (2) the return on investment must not exceed 8 percent a year. In any case, the majority of the cooperative’s business must come from members. Beyond the antitrust exemption, another advantage enjoyed by cooperatives and their members is that the income for a cooperative is taxed on either the cooperative or producer level. 26 U.S.C. § 1382 (Internal Revenue Code, subchapter T). This differs from regular subchapter C corporations and shareholders that pay tax on income at both levels. (Note that the recent tax legislation somewhat limits this advantage because it reduced taxes on subchapter C dividends). Many believe that producers seriously underutilize the opportunities afforded under the Capper-Volstead Act. Nevertheless, critics of cooperatives complain that some cooperatives are not responsive to producer’s needs.

b. Protecting producers’ rights to form cooperatives and associations. Congress passed the Agricultural Fair Practices Act (AFPA) to protect a producer’s right to join an association of producers. 7 U.S.C. §2301. The Act generally prohibits processors from discriminating against or intimidating producers who want to join or are members of an association. *Id.* at § 2303. A major limiting factor in the AFPA has become known as the “disclaimer clause.” (Frederick). This clause states that (1) a processor can refuse to deal with a producer for any reason other than the producer’s relationship to an association, and (2) a processor may refuse to deal with any particular association. (*Butz*).

This clause has largely nullified the law because a processor whose action is challenged can usually cite some reason other than the producer's relationship to an association as the basis for choosing not to deal with a producer. Legislative attempts have been made to address this problem. For instance, the Senate Chairman's mark of the 2002 farm bill included a rewrite of the AFPA that deleted the disclaimer clause and made it unlawful for processors to fail to bargain in good faith with an association of producers. (S. 1628, 107th Cong, title X, sec. 201(b)(8)). However, no major amendments to the Act have been adopted since its enactment in 1968.

3. **Regulate the behavior of market participants.** This approach does not affect the actual structure of the industry, but tries to limit the negative consequences of a consolidated or concentrated industry structure by regulating the behavior of market participants. Policymakers have used this approach in a myriad of other industries to address inequities in the commercial relationship. One need only look to federal and state regulation of insurance, advertising, car sales or home improvement to find examples of policies centered on protecting the weaker or less-informed party from onerous practices. (Stumo). This approach addresses the problem of lack of bargaining equality because it regulates what can or cannot occur within the business relationship. As outlined below, these provisions can be very prescriptive, such as requiring a three-day period for a party to review a contract, or somewhat broad, such as a general prohibition against unfair conduct. These more general prohibitions have often been narrowed by court decisions in recent years that make it more difficult to prove violations of law. The result has been renewed interest on the federal and state levels in revamping these laws to protect agricultural producers.

a. Prohibit unfair practices. The most familiar example in agriculture is the Packers and Stockyards Act of 1921. (7 U.S.C. 181). Beyond providing financial protection for livestock sellers, this law generally prohibits packers, live poultry dealers, swine production contractors, livestock auction markets and livestock dealers from engaging in unfair, unjustly discriminatory or unduly preferential practices.

The scope of this law has been narrowed by federal court decisions applying the "rule of reason" to determine what is unfair in specific cases. Essentially, this rule looks at the intent behind a practice and the likelihood that the practice will cause competitive injury in order to decide whether it violates the Act. (*Armour & Co.*) This rule assigns the plaintiff the daunting task of proving likelihood of injury, while the defendant can rebut the plaintiff's case by showing that the practice is simply a legitimate business practice. For example, a smaller producer may argue that a packer unduly prefers another producer when it provides the other producer premiums based solely on volume. The packer would argue that the practice is justified because it wants a large, consistent supply for its plants.

Courts have also limited the scope of the P&S Act by stating that the P&S Act was not intended to affect parties' right to freedom of contract. (*Jackson*). The 2002 farm bill did make one significant change to the P&S Act by providing P&S Act

protections to producers with hog production contracts. P.L. 107-171 § 10502 (codified throughout the P&S Act, 7 U.S.C. § 181 et seq.).

Critics of the USDA Packers and Stockyards Program point out that, notwithstanding judicial limitations on P&S Act remedies, the legislative history indicates that Congress intended the P&S Act to be used more aggressively than any other law in protecting producers and consumers. (Packing Industry). Some argue that USDA could more forcefully utilize the rulemaking process to make clear what practices are unfair (Stumo). USDA likely has not fully utilized its ability to promulgate rules under the P&S Act to protect producers. In rulemaking, USDA may declare a practice unfair. For a packer to challenge the rule, it must prove that USDA acted in an arbitrary and capricious manner. This burden for a packer to challenge a rule developed and adopted by USDA is likely much higher than the standard that a packer would need to meet in defending against a regular P&S Act enforcement action. As stated above, a regular enforcement action allows most activities, no matter the harm the activity causes to the producer, if the packer can show a legitimate business reason for the activity. The law in this area, especially as to the broad authority of USDA to make rules, is undeveloped because USDA has not utilized much of its rulemaking power under the Packers and Stockyards Act.

In the last few years there has been growing concern that USDA's Grain Inspection and Packers and Stockyard Administration (GIPSA) has not actively pursued complaints of anti-competitive actions in the livestock industry. In fiscal year 2003, GIPSA initiated or continued 1,744 investigations for violations of the Packers and Stockyards Act. Of these, only 31 complaints were investigated that pertain to practices that were suspected of being anti-competitive in nature. Only 8 of these investigations were ultimately finished or closed. USDA (GIPSA) has not taken administrative action against any of the alleged anti-competitive practices in the 31 complaints from 2003. This level of enforcement action by USDA in 2003 is similar to other recent years. In addition, there is serious question whether USDA reports characterize the handling of all producer complaints (which could be simply a telephone call from a producer) as actual investigations, thus overstating the number of investigations acted upon by USDA.

Producers dissatisfied with USDA's enforcement of the Packers and Stockyards Act have sought to recover damages for anti-competitive activities in private court action. In February 2004, a jury in an Alabama federal district court found that Tyson Fresh Meats, Inc. (formerly IBP) violated the Packers and Stockyards Act by manipulating the spot market by using its captive supplies (Pickett vs. Tyson Fresh Meats, Inc.). The jury awarded the cattle producers \$1.28 billion, but this verdict was later overturned based on the district judge's interpretation of the P&S Act. The plaintiffs have appealed the decision to the U.S. Court of Appeals for the Eleventh Circuit. If the use of captive supplies were found to be a violation of the Packers and Stockyards Act, it would have large ramifications on how cattle are marketed and force a real policy debate in Congress.

b. Contract regulation. In the late 1990's, a number of state attorneys general created model legislation entitled the Producer Protection Act (PPA). State and federal policy makers have looked to the PPA for ideas on how to regulate agricultural contracting. Some of the issues dealt with in the PPA are listed below:

i. **Implied obligation of good faith.** This obligation generally requires that the parties to the contract deal with each other honestly. For example, Minnesota state law implies a promise of good faith by all parties to an agricultural contract. Minn. Stat. § 17.94 (2002).

ii. **Disclosure of risks.** The contract must be accompanied by a clear written disclosure statement setting forth certain contractual rights and obligations of the producer. For instance, the contract might need to make clear the factors to be used in determining payment or who bears responsibility for possible environmental liability. Minn. Stat. 17.91 (requiring agricultural contracts to be “accompanied by a clear written disclosure setting forth the nature of the material risks faced by the producer if the producer enters into the contract.”).

iii. **Readability.** The drafter of the contract must avoid overly complex language so that a person of average education and intelligence can understand the terms of the contract. The PPA includes a provision that would allow a state official, typically the state agriculture department or state attorney general's office, to review the contract for readability.

iv. **Right to review the contract.** The producer will have at least three days to review and cancel the contract. The producer is protected from being pressured into a binding contract without the ability to seek advice. This approach may work well for production contracts and longer-term marketing contracts, but it may not suit spot market sales, since the buyer may need to hedge in the futures market at the same time as the purchase or may want to sell the product within the three-day window. Minn. Stat. § 17.941 (2002).

v. **Confidentiality provision prohibited.** This section prohibits the use of any type of confidentiality clause. The 2002 farm bill included a provision stating that parties to certain poultry and livestock contracts have the right to share their contract with family, close advisors, and federal and state agencies, no matter what the contract says about confidentiality. (codified at 7 U.S.C. § 229b). As an example of state law, Iowa law not only voids confidentiality clauses in production contracts, but actually makes it a criminal fraudulent practice for a contractor to execute a production contract that includes a confidentiality clause. Iowa Code ch. 202 (2001).

vi. **Production contract liens.** The producer is allowed to file a lien that will have a priority over other liens filed by the contractor's creditors, much like a veterinarian's or mechanic's lien. For example, see Iowa Code §579A (2001). As with most laws that provide lien protections, the

key to this provision is that the farmer must take the affirmative step of filing the lien.

vii. **Investment requirements.** If the producer makes a certain minimum amount of investment in relation to the contract (\$100,000), the contractor may not terminate the contract without providing at least 90 days notice. If the contractor does terminate the contract, it would have to reimburse the farmer for his or her lost investment. Minnesota law requires that in cases where no breach of contract occurred, contractors must provide 180 days notice before termination and reimburse the producer “for damages incurred by an investment in buildings or equipment that was made for the purpose of meeting minimum requirements of the contract.” If the contractor does allege a breach, the contractor must provide 60 days for the producer to cure the breach. Minn. Stat. § 1792 (2002).

viii. **Right to join associations.** Producers may not be discriminated against for choosing to join a bargaining association. The main difference between this PPA provision and the Federal Agricultural Fair Practices Act is that the PPA provision does not include the disclaimer clause discussed above, which allows a processor to refuse to deal with an association or association member.

Federal and State policymakers have introduced a number of pieces of legislation that incorporate at least some of the PPA provisions.

Federal legislation. S. 20 (107th Cong.); S. 1628, title X (107th Cong.).

State legislation. Arkansas H.B. 2573 (2003); Georgia H.B. 1498 (2002) and S.B. 533 (2002); Illinois H.B. 264 (2003); Iowa H.F. 547 (2001) and S.F. 254 (2001); Kansas S.B. 355 (2001); Minnesota H.F. (2001) ; Mississippi S.B. 2987 (2002); Missouri H.B. 1967 (2002); Oklahoma S.B. 162 (2001).

c. Limit the types or terms of contracts a firm may enter into. For instance, a law could provide that a firm cannot buy more than a certain percentage of its supplies through forward contracts or similar arrangements; i.e., the firm must buy a certain amount on the cash (or spot) market. S. 325 (108th Cong.). This approach attempts to ensure a market for producers who choose not to use contracts. The legislation also addresses concerns that the spot market is becoming so thin that it is susceptible to manipulation and is no longer a reliable measure of supply and demand.

d. Provide more transparency in the marketplace. One of the essential elements in any competitive market is access to information. Given increasing consolidation and vertical integration, many producers fear that they no longer have access to critical market information. In the late 1990’s a determined movement to improve access to price information resulted in the federal Livestock Mandatory Reporting Act of 1999 (7 U.S.C. 1635). This law provides a fairly

specific regime of reporting and public dissemination of price information for cattle, hogs, and sheep. Assessment of the implementation of the law has been mixed, with some producers concerned that even less information about certain markets is now available. USDA has addressed some of the early implementation problems that severely limited the amount of information made available to producers. Yet critics question the efficacy of USDA's enforcement of the law against those who misreport or fail to provide information to USDA. These critics point to the fact that USDA has not cited one violation of the law in the nearly five years that it has existed. On August 12, 2004, Senators Tom Harkin and Charles Grassley requested that the Government Accountability Office (GAO) investigate the accuracy and objectivity of prices reported to livestock producers by USDA under the reporting law. The five-year authorization for mandatory price reporting expired on October 22, 2004. An extension of the law for one year was passed by the U.S. Senate on October 8 and is pending action in the U.S. House of Representatives. The one-year extension will provide producers and industry groups time to develop recommendations for making the program work more effectively in the longer-term extension of the law.

The Mandatory Price Reporting Act also includes a provision requiring USDA to establish a swine contract library to provide producers information about contractual terms in actual swine marketing contracts (7 U.S.C. 198 thru 198b). USDA recently announced the final rule to implement this program. (Swine Packer Marketing Contracts).

The 2002 farm bill addressed the transparency of contract information by providing that regardless of contract prohibitions, parties to a livestock or poultry contract have the right to share their contract with their advisors and family members (7 U.S.C. § 229b.)

Another possibility is to require contracts to be negotiated and traded in an open and public market. The proposed Captive Supply Reform Act, S. 1044 (108th Cong.) would require contracts and marketing agreements to have a fixed base price and be negotiated much as contracts are traded on commodity futures exchanges.

4. **Improve enforcement.** Many argue that adequate laws already exist and that the most effective approach to improving competition policy is not to change the substantive law, but to improve the enforcement regime. Currently, three different agencies in the federal government serve as primary enforcers of competition and trade practice policy in agriculture. The Department of Justice (DOJ) enforces the Sherman Act and Clayton Act, the Federal Trade Commission enforces the FTC Act (designed primarily to protect consumers) and USDA enforces the P&S Act, the Perishable Agricultural Commodities Act and the Agricultural Fair Practices Act. For several reasons, including the impact of court decisions and changing views among officials in the departments and agencies responsible for enforcing antitrust and competition laws, the federal government has in recent years become significantly less aggressive in responding to consolidation and economic concentration and the consequences in markets. DOJ will on occasion require relatively minor adjustments of a proposed merger before it is allowed to go through (Pate) but has not challenged in a substantial way any of the major mergers that have occurred in

the food and agriculture sector in recent years. This trend in the federal enforcement of antitrust and competition law has generated a great deal of interest among agricultural producers and others who follow the continuing consolidation and concentration in the food and agriculture sector.

a. Possible changes in federal enforcement. Some have suggested that the enforcement of certain laws should be handed over to different agencies. For instance, in the past some have argued that DOJ should enforce the P&S Act because of its expertise in antitrust litigation. Others, however, point out that DOJ does not promulgate rules and that given the other sectors on which DOJ focuses, it may not devote the required resources for effective enforcement. The Senate Chairman's mark of the 2002 farm bill (S. 1628, title X, 107th Cong.) included a provision that would have reorganized enforcement within USDA by creating the Office of Special Counsel for Competition Matters. This office would have facilitated consolidating the enforcement of competition and trade practice laws in one USDA office. Another suggestion is to allow USDA to seek outside counsel for large, complex competition cases.

b. Private enforcement. Some argue that as an alternative to government enforcement of the law, policy could encourage private parties to bring actions to enforce the law and serve as "private attorneys general." These parties point to the Sherman Act and state consumer protection laws that provide for attorney fees or treble damages if the plaintiff is successful. These types of provisions would encourage the private bar to take cases that otherwise may not be economically viable. Currently the P&S Act does include a private right of action for direct damages, but does not include attorney fees or any type of increased damages. For instance, if a farmer suffers \$5,000 of injury caused by a practice prohibited by the P&S Act, but it would cost \$6,000 in legal fees to litigate the matter, the farmer is likely simply to take the \$5,000 loss. If, however, an award could include attorney fees, the farmer is much more likely to pursue the statutory right of action against unfair practices.

c. Dispute resolution issues. State or federal policy can affect how a matter is resolved if a dispute arises. These policies attempt to address the possibility that agricultural contracts written by a more powerful party may make it difficult for the weaker party to have any say in the dispute resolution mechanism. For instance, federal legislation has been introduced to prohibit the use of mandatory arbitration clauses in livestock and poultry contracts (S. 91, 108th Cong.). This legislation responds to concerns that a producer may feel little choice but to enter into contracts that take away the producer's right to go to court and thus force the producer into arbitration. There have been complaints that some of the arbitration programs are skewed in favor of the writer of the contract. The chief criticism of prohibiting arbitration clauses is that it takes away the parties' right to limit the risk of high litigation costs. Other proposals that ensure that producer dispute resolution rights are protected include (1) requiring that certain contracts are controlled by the laws of the producer's state or (2) requiring that if the dispute goes to court, the case must be filed in the producer's state, as opposed to the processor's state which may be hundreds or thousands of miles away.

Conclusion

The structure of the food and agriculture sector is quickly changing as a result of the dual forces of horizontal consolidation, or concentration, and vertical integration. Because these forces tend to increase the disparity of bargaining power and affect the functioning of competitive markets, they may negatively affect certain market participants, including particularly agricultural producers and consumers. To address the resulting inequality in bargaining power and impacts upon the competitiveness and fairness of markets, policymakers may choose to enact policies that (1) reduce the power of the stronger party by affecting the structure of the industry; (2) increase the power of the weaker party such as by encouraging collective bargaining; (3) regulate the behavior of market participants; or (4) improve the enforcement of competition and trade practice laws.

References

Armour & Co. v. United States, 402 F.2d 712 (7th Cir. 1968).

Azzam, A.M., and J.R. Schroeter (1995, Nov.). The Tradeoff between Oligopsony Power and Cost Efficiency in Horizontal Consolidation: An Example from Beef Packing. *American Journal of Agricultural Economics*, 77, 825-36.

Azzam, A.M. (2003, May). Market Transparency and Market Structure: The Livestock Mandatory Reporting Act of 1999. *American Journal of Agricultural Economics*, 85, 387-95.

Barkley, D., M.S. Henry, and M. Warner (2002). Estimating The Community-Level Impacts of Attracting New Businesses: The Implications of Local Labor Market Adjustments. Clemson University, REDRL Research Report 02-2002-01.

Benbrook, Charles M. (2001). "Policies to Prevent Animal Agriculture's Adverse Impacts on Public Health and the Environment. Special Report of the Humane Society of the U.S. Available: http://www.pmac.net/AM/HSUS_chapter6.pdf

Bhuyan, S., and R.A. Lopez (1997, August). Oligopoly Power in the Food and Tobacco Industries. *American Journal of Agricultural Economics*, 79, 1035-43.

Bunte, F., and E. Kuiper (2003). Market Power in Food Chains. University of Wageningen, Netherlands. [Online] Available: <http://www.lei.dlo.nl/nl/content/publicaties/%20andere/LEZINGEN/presentaties/2003/november/EUNIP.doc>

Bureau of Census, U.S. Dept. of Commerce (2001). *Annual Survey of Manufactures*.

Butz v. Lawson Milk Co., 386 F. Supp. 227, 237 (N.D. Ohio 1974)

Canbäck, S. (1997). "Diseconomies of Firm Size," Working paper, Henley Management College.

Canbäck, S. (2003). Bureaucratic Limits of Firm Size: Practitioner's Summary. Working Paper, Henley Management College, United Kingdom [Online] Available: <http://econwpa.wustl.edu:8089/eps/io/papers/0311/0311001.pdf>

Carstensen, P. (2003). Testimony before the U.S. Senate Committee on the Judiciary during hearing entitled *Monopsony Issues in Agriculture: Buying Power of Processors in Our Nations Agricultural Markets*, October 30, 2003.

Cochrane, Willard (1981). *The Development of American Agriculture: A Historical Analysis*. Minneapolis: University of Minnesota Press.

Collins, K. (2001). Written testimony before the Senate Committee on Appropriations, Subcommittee on Agriculture, Rural Development and Related Agencies, May 17.

Connor, J.M. (2003). The Changing Structure of Global Food Markets: Dimensions, Effects, and Policy Implications,. Department of Agricultural Economics, Purdue University, Staff Paper 03-02.

Cotterill, R.W. (1999). Jawboning Cereal: The Campaign to Lower Cereal Prices. Agribusiness.

Cotterill, R.W. (2000). Dynamic Explanations of Industry Structure and Performance. Commissioned Paper Presented at USDA Conference “The American Consumer and the Changing Structure of the Food System,” available at

Cotterill, R.W. (2001). Public Interest and Private Economic Power: A Case Study of the Northeast Dairy Compact. Food Marketing Policy Issue Paper No. 22.

Council for Agricultural Science and Technology (2001). Vertical Coordination of Agriculture in Farming Dependent Areas. Task Force Report No. 137.

Durham, C. (1998). Formula Pricing (Marketing Agreements) v. Fixed Pricing (Forward Contracts). Unpublished study commissioned by Western Organization of Resource Councils.

Economic Research Service, U.S. Dept. of Agriculture (1996). Farmers’ Use of Marketing and Production Contracts. AER-747.

Economic Research Service, U.S. Dept. of Agriculture (2003, June), Food Price Spread briefing room. [Online]. Available: (www.ers.usda.gov/Briefing/FoodPriceSpreads/).

Economic Research Service, U.S. Dept. of Agriculture (2003, July), Food Market Structures briefing room. [Online]. Available: (www.ers.usda.gov/Briefing/FoodMarketStructures/).

Economic Research Service, U.S. Dept. of Agriculture (March 2002). *Red Meat Yearbook*.

Farm Credit Administration, U.S. Dept. of Agriculture (1996). Report on the Financial Condition and Performance of the Farm Credit System. [On line] Available: <http://www.fca.gov/Download/40502d.pdf>

Farmers Legal Action Group (2001). Assessing the Impact of Integrator Practices on Contract Poultry Growers.

Food and Agricultural Policy Research Institute (2004, June). “Grain Transportation and Marketing Channels,” FAPRI-UMC Briefing Paper #04-04. [On line] Available: http://www.fapri.missouri.edu/outreach/publications/2004/FAPRI_UMC_Briefing_Paper_04_04.pdf

Frederick, D.A. (1990). Agricultural Bargaining Law: Policy in Flux. *Arkansas Law Review* 43, 679, 685.

Freese, B. (2004, October). Pork Powerhouses 2004. *Successful Farming*.

Fesperman, D. and K. Shatzkin (1999, Feb. 28). The Plucking of the American Chicken Farmer. *Baltimore Sun*.

Gebremedhin, T., and R.D. Christy (1996, July). Structural Changes in U.S. Agriculture: Implications for Small Farms. *Journal of Agricultural and Applied Economics*, 28, 57-66.
General Accounting Office (1998). Changes in Nebraska's and Iowa's Counties with Large Meatpacking Plant Workforces. GAO/RCED-98-62.

General Accounting Office (1999). "Pork Industry: USDA's Reported Prices Have Not Reflected Actual Sales," RCED-00-26.

Gomez, M.I., and L. Zhang (2000). Impacts of Concentration in Hog Farms on Economic Growth in Rural Illinois: An Econometric Analysis. Paper presented at the annual meetings of the American Agricultural Economics Association.

Goodhue, R.E (1997). Production Control and Production Contracts: Why do Integrators Control Inputs? Paper presented at annual meetings of the Western Agricultural Economics Association.

Grimes, G., and R. Plain (2003). 2003 Hog Marketing Contract Study. University of Missouri and National Pork Producers Council.

Grain Inspection, Packers and Stockyards Administration. U.S. Department of Agriculture (April 2004) FY 2003 Annual Report. [Online].

Available: <http://www.usda.gov/gipsa/pubs/annual-reports.htm>

Harris, J. Michael, et al. (2000). "The U.S. Food Marketing System, 2000." Economic Research Service, U.S. Dept. Agriculture, AER-811.

Hayenga, M. (1998, Fall). Structural Change In The Biotech Seed And Chemical Industrial Complex. *AgBioForum*, 1, 2.

Hayenga, M., and R. Wisner (1999). Cargill's Acquisition of Continental Grain's Grain Merchandising Business. Staff Paper #312, Iowa State University Dept. of Economics.

Henderickson, M., and Heffernan, W (2004). Concentration of Agricultural Markets Table. [Online]. Available: <http://www.foodcircles.missouri.edu/consol.htm>.

Henderson, D., L. Tweeten, and D. Schreiner (1989). Community Ties to the Farm. *Rural Development Perspectives* 5, 31-5.

Henderson, J., and R. Quandt (1980). *Microeconomic Theory: A Mathematical Approach*. New York: McGraw-Hill.

Hennessy, D.A (1996, Nov.). Information Asymmetry as a Reason for Food Industry Vertical Integration. *American Journal of Agricultural Economics* 78, 1034-43.

Huffman, W.E., and J.A. Miranowski (1997). Immigration, Meat-Packing, and Trade: Implications for Iowa. Staff Paper #285, Iowa State University.

Huslin, A. (2003, July 7). Poultry Growers Rattled Tyson's Departure Clouds Future. *Washington Post*.

IBP, Inc. v. Glickman, 187 F.3d 974, 977 (8th Cir. 1999)

Jackson v. Swift Eckrich, Inc., 53 F.3d 1452 (8th Cir. 1995).

Lauck, J. (2000). *American Agriculture and the Problem of Monopoly: The Political Economy of Grain Belt Farming, 1953 – 1980*. Lincoln: University of Nebraska Press.

Lawrence, John (2004). Packer Concentration, Captive Supplies, and Fed Cattle Prices. [Online] Available:

<http://www.econ.iastate.edu/classes/econ135/lawrence/Captive%20Supplies%20and%20price.ppt>

Lopez, R.A., A.M. Azzam, and C. Lirón-Espana (2002, Mar.). Market Power and/or Efficiency: A Structural Approach. *Review of Industrial Organization*, 20, 115-126.

Martinez, S.W. (1999).. Vertical Coordination in the Pork and Broiler Industries. Agric. Econ. Report No. 777, Econ. Res. Serv., U.S. Dept. Agriculture.

Mathews, K.H. Jr., W.F. Hahn, K. E. Nelson, L.A. Duewer, and R.A. Gustafson (1999). U.S. Beef Industry: Cattle Cycles, Price Spreads, and Packer Concentration. Economic Research Service, U.S. Dept. Agriculture, TB-1874.

Matsuyama, K., and T. Takahashi (1994). Self-Defeating Regional Concentration. Discussion Paper #1086, Northwestern University.

McDonald, J.M., M.E. Ollinger, and K.E. Nelson (1999). Scale Economies, Product Innovation, and Consolidation in Cattle Slaughter. Paper presented at NE-165 symposium on Consolidation in the Meat Sector, Washington, DC.

McDonald, J.M., and M. E. Ollinger (2000, May). Scale Economies and Consolidation in Hog Slaughter. *American Journal of Agricultural Economics*, 82, 334-46.

National Agricultural Statistics Service, U.S. Dept. of Agriculture (2000, Oct. 24). *Agricultural Prices*. Pr 1 (10-00), Oct. 24.

National Agricultural Statistics Service, U.S. Dept. of Agriculture (2004, Sept. 1). *Quarterly Hogs and Pigs*.

National Agricultural Statistics Service, U.S. Dept. of Agriculture (2002, Sept. 6). *Vegetables*.

Nelson, K.E., and L.A. Duewer (1997). Meat Industry Price Spreads: What Do They Indicate? AO-247, *Agricultural Outlook*, Econ. Res. Serv., U.S. Dept. Agr.

Njoroge, K. (2003). Information Pooling and Collusion: Implications for the Livestock Mandatory Reporting Act. *Journal of Agriculture and Food Industrial Organization*, 1.

Office of the Secretary, U.S. Dept. of Agriculture (1996). Secretary Glickman Opposes Proposed Union Pacific-Southern Pacific Merger. Release No. 292.96.

The Packing Industry and the Packing Act, (1922) *Columbus Law Review* 22, 68, 70.

Pate, R.H. Testimony before the U.S. Senate Committee on Judiciary during hearing entitled *Monopsony Issues in Agriculture: Buying Power of Processors in Our Nations Agricultural Markets*, October 30, 2003.

Perloff, J.M. and G.C. Rausser (1983). The Effect of Asymmetrically Held Information and Market Power in Agricultural Markets. *American Journal of Agricultural Economics*, 65, 366-72.

Poray, M., A. Gray, M. Boehlje, and P. Preckel (2003). Evaluation of Alternative Coordination Systems Between Producers and Packers in the Pork Value Chain. Paper delivered at annual symposium of the International Food and Agribusiness Management Association.

Producer Protection Act, [Online]. Available: <http://www.flaginc.org/pubs/poultry/poultrypt5.pdf>

Putnam, Judith J., and Jane E. Allshouse (1999). "Food Consumption, Prices, and Expenditures, 1970-97. Economic Research Service, U.S. Dept. Agriculture, SB-965.

Rural Economy Division, Economic Research Service, U.S. Dept. of Agriculture (1997). Farm Business Economics Report, 1995. ECI-1996.

Sarris, A., and A. Schmitz (1981). Price Formation in International Agricultural Trade, in *Imperfect Markets in Agricultural Trade*. Edited by A.F. McCalla and T. Josling. Totowa, NJ: Allenheld, Osmun and Co. Publ.

Schroeder, T. (2002). Fed Cattle and Beef Markets: Developments and Diverse Options. Presentation at Seminar at Economic Research Service.

Sexton, R.,J., and M. Zhang (1996). A model of price determination for fresh produce with application to California iceberg lettuce," *American Journal of Agricultural Economics*. Vol. 78.

Shafer,A. (2003, July 21). Farmers Worry About Smithfield Purchase of Farmland Foods. *The Cincinnati Enquirer*.

Smithfield Foods (April 2003). "Smithfield Foods Comments on Fourth Quarter Earnings," Press release [On-line] Available: http://www.smithfieldfoods.com/Investor/Press/press_view.asp?ID=183

Smithfield Foods, Inc. v. Miller, 241 F.Supp.2d 978 (S.D. Iowa 2003)

South Dakota Farm Bureau v. Hazeltine, -- F.3d -- (8th Cir. Aug 19, 2003)

Stumo, M.C. and D.J. O'Brien (2003). Antitrust Fairness vs. Equitable Unfairness in Farmer/Meat Packer Relationships. *Drake Journal of Agricultural Law* 91.

Sullivan, E.T. and W.S. Grimes, *The Law of Antitrust: An Integrated Handbook*. West.

Sullivan, E.T. and H. Hovenkamp (1994). *Antitrust Law, Policy and Procedure*. The Michie Co. Law Publishers.

Swine Packer Marketing Contracts; Contract Library, 68 Fed. Reg. 47,801 (to be codified at 9 C.F.R. 206).

Taylor, R.E (1999, Jan. 26). Economic Concentration in Agribusiness. Written testimony before the Senate Committee on Agriculture, Nutrition, and Forestry.

U.S. v. Swift & Co., 286 U.S. 106 (1932).

U.S. Congress (1921). 61 Cong. Rec. 1805 (1921)

U.S. Department of Justice. Microsoft case documents, [Online] Available:
http://www.usdoj.gov/atr/cases/ms_index.htm

U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, Issued 1992, Revised 1997, [Online] Available:
http://www.usdoj.gov/atr/public/guidelines/horiz_book/hmg1.html

Walburger, A.M., and K.A. Foster (1998, Feb.). Determination of Focal Pricing Regions for U.S. Fed Cattle. *American Journal of Agricultural Economics* 80, 84-95.

Appendix A

Recently-passed federal laws

- The 2002 Farm Bill included two provisions dealing with competition issues in agriculture.
 - The bill brought hog production contractors (those who contract with a grower to raise the contractor's hogs) under the Packers and Stockyards Act. (codified throughout the P&S Act at 7 U.S.C. §§ 181 *et seq.*). Before this amendment, those who raised hogs owned by others had no statutory protections under the P&S Act.
 - The bill also included a provision stating that parties to certain poultry and livestock contracts have the right to share their contract with family, close advisors, and federal and state agencies, no matter what the contract says about confidentiality. (codified at 7 U.S.C. § 229b).
- The 2003 omnibus appropriations bill (H.J. Res. 2, Division A, Title I, 108th Cong.) provided USDA \$4.5 million to conduct studies on packer ownership and captive supplies. The Report Language accompanying this appropriation stated that the results of the study must be reported within 24 months of enactment. USDA, Grain Inspection, Packers and Stockyards Administration (GIPSA) published a notice and request for comments on the framework of the study on May 30, 2003. Livestock and Meat Marketing Study, 68 Fed. Reg. 32455 (2003).

Appendix B
Legislation introduced in the 107th (2001 to 2002) and 108th (2003 to 2004)
Congresses to address problems arising from agricultural consolidation and
vertical integration

108th Congress

- S. 27; H.R. 719. Ban on packer ownership. Amends the P&S Act to make it unlawful for a packer to own, feed, or control livestock prior to seven days before slaughter; exempts smaller packers as well as cooperatives that are majority owned by active cooperative members that own and raise livestock.
- S. 91. Prohibition on forced arbitration in agricultural contracts. Provides that if a livestock or poultry contract provides for the use of arbitration to resolve a controversy under the contract, arbitration may be used to settle the controversy only if, after the controversy arises, both parties consent in writing to use arbitration to settle the controversy.
- S. 325. Require use of spot market. Requires packers to purchase 25% of their slaughter on the spot market, on a per day, per plant basis; requires packers owned by cooperatives to purchase 12% of their supply on the spot market; exempts packers that own only one plant.
- S. 1044. Captive Supply Reform Act. Prohibits use of livestock marketing agreements unless the contract contains a firm base price, is offered for bid in a public manner, and provides for contracts with a maximum of 40 cattle or 30 swine; allows for the use of futures contracts and premiums based on carcass quality.
- H.R. 582. Packers and Stockyards Administrative Enforcement in Poultry. Amends P&S Act to provide USDA administrative enforcement authority over live poultry dealers (integrators); provides growers of breeding hens protections under P&S Act.

107th Congress

- S.20. Securing the Future for Independent Agriculture Act.
 - Prohibits unfair, unjustly discriminatory, or deceptive practices in the marketing, receiving, purchasing, sale, or contracting for the production of any agricultural commodity; provides whistleblower protections to those who report unlawful conduct by a contractor; prohibits the use of the right of first refusal in agricultural commodity contracts; expressly prohibits price discrimination in agricultural commodity transactions; establishes a Farmer and Rancher Claims Commission to consider claims made under the Act;
 - Provides that before a merger or acquisition with another agribusiness, a large agribusiness must file merger documents with the Secretary of Agriculture, and the Secretary must report the possible impacts and remedies to address negative consequences of the proposed merger DoJ and FTC;
 - Requires large agribusinesses to file annually a report with USDA that describes the strategic alliances, ownership in other agribusiness firms or agribusiness-related firms,

- joint ventures, subsidiaries, brand names, and interlocking boards of directors with other corporations, representatives, and agents that lobby Congress on behalf of the covered person;
 - Includes a number of contract regulations for agricultural contracts, such as a requirement of good faith, disclosure and readability standards, a producer's 3-day right to review and cancel the contract, prohibition of confidentiality clauses, provision for producer contract liens, and the ability to recoup damages from large investments required by production contracts;
 - Amends the Agricultural Fair Practices Act to require bargaining in good faith, deletes the disclaimer clause, provides for the accreditation of producer associations, and provides for the assignment of association dues.
- S.142; H.R. 3803. Prohibition of Packer Ownership of Livestock. *See supra* S. 27 (108th Cong.).
- S. 1076. Agricultural Competition Enhancement Act.
 - Establishes within USDA a Special Counsel for Competition Matters to analyze agribusiness mergers and bring civil actions under the Act; provides Special Counsel the authority to review agribusiness mergers with respect to its effects on producers and family farmers and to file suit to block or change the provisions of the merger;
 - Prohibits unfair, unjustly discriminatory, or deceptive practices in the marketing, receiving, purchasing, sale, or contracting for the production of any agricultural commodity;
 - Requires large agribusinesses to file annually a report with USDA that describes the strategic alliances, ownership in other agribusiness firms or agribusiness-related firms, joint ventures, subsidiaries, brand names, and interlocking boards of directors with other corporations, representatives, and agents that lobby Congress on behalf of the covered person;
 - Prohibits confidentiality clauses in livestock and grain production contracts;
 - Amends P&S Act to provide USDA administrative enforcement authority over live poultry dealers (integrators); provides growers of breeding hens protections under P&S Act;
 - Establishes within the Antitrust Division of DoJ an Assistant Attorney General for Agricultural Antitrust Matters.
- S. 1628, title X. Competition Title of the Senate Chairman's Mark of the 2002 farm bill.
 - Establishes an Office of Special Counsel for Competition Matters in USDA to investigate and prosecute violations of this Act and any other Act that the Secretary determines to be appropriate and serve as a liaison between USDA and the Department of Justice and the Federal Trade Commission with respect to competition and trade practices in the food and agricultural sector;

- Requires large agribusiness to file reports annually with USDA \$100,000,000 shall annually file with the Secretary that describes the strategic alliances, ownership in other agribusinesses, joint ventures, subsidiaries, brand names, and interlocking boards of directors with other covered persons
 - Rewrites the Agricultural Fair Practices Act to prohibit any unfair, unjustly discriminatory, or deceptive practice in the marketing or contracting for production of agricultural commodities; deletes the “disclaimer clause”; makes it an unfair practice to fail to disclose certain terms in an agricultural contract;
 - Provides certain regulations of production contracts, including: the 3-day right to review and cancel; creation of production contract liens; ability for a contract grower to recoup investment required by production contract;
 - Provides for a private right of action and attorney’s fees for those injured by violations of the Act; provides that venue and choice of law will be the state in which the producer resides; gives USDA the authority to appoint outside counsel for litigation;
 - Allows for a producer to assign proceeds from sales or production contracts to an association of producers, and;
 - Amends P&S Act to provide USDA administrative enforcement authority over live poultry dealers (integrators); provides growers of breeding hens protections under P&S Act.
- S.2021. Captive Supply Reform Act. *See supra* S. 1044 (108th Cong.).
 - S. 2867; H.R. 5247. Require Use of Spot Market. *See supra* S. 325 (108th Cong.).
 - H.R. 231. Packers and Stockyards Administrative Enforcement in Poultry. *See supra* H.R. 582 (108th Cong.).
 - H.R. 1526. Agriculture Competition Enhancement Act of 2001. Requires that before a large agribusiness may acquire or merge with another agribusiness, the agribusiness must file notice with USDA; prohibits agribusiness mergers if it will negatively affect the price received by producers; establishes an Office of Special of Special Counsel for Agriculture within DoJ.
 - H.R. 3810. Livestock Ownership Fairness Act of 2002. Prohibits packers from owning livestock; requires large packers to file notice with USDA before merging with other agribusinesses.
 - H.R. 5357. Agricultural Competition Enhancement Act. Includes most provisions of S. 1076 (107th Cong.).

Appendix C

Bibliography of law review articles dealing with issues surrounding agricultural consolidation and integration

- Peter C. Carstensen, Concentration and the Destruction of Competition in Agricultural Markets: The Case for Change in Public Policy, 2000 WIS. L. REV. 531 (2000).
- Jim Chen & Edward S. Adams, *Feudalism Unmodified: Discourses on Farms and Firms*, 45 DRAKE L. REV. 361 (1997).
- Neil D. Hamilton, *Broiler Contracting in the United States – A Current Contract Analysis Addressing Legal Issues and Grower Concerns*, 7 DRAKE J. AGRIC. L. 43 (2002).
- Neil D. Hamilton, *State Regulation of Agricultural Production Contracts*, 25 U. MEM. L. REV. 1051 (1995).
- Christopher R. Kelley, *Notes on an Agricultural Production Contract, with a Model Contract Attached*, 2001 ARK. L. NOTES 11 (2001).
- Jon Lauck, *Toward an Agrarian Antitrust: A New Direction for Agricultural Law*, 75 N.D. L. REV. 449 (1999).
- Edward P. Lord, *Fairness for Modern Farmers: Reconsidering the Need for Legislation Governing Production Contracts*, 33 WAKE FOREST L. REV. 1125, (1998).
- David R. Moeller, *The Problem of Agricultural Concentration: The Case of the Tyson-IBP Merger*, 8 DRAKE J. AGRIC. L. 33 (2003).
- Douglas J. O'Brien, *The Packers and Stockyards Act of 1921 Applied to the Hog Industry of 1995*, 20 J. CORP. L. 651 (1995).
- Randi Ilyse Roth, *Redressing Unfairness in the New Agricultural Labor Arrangements: An Overview of Litigation Seeking Remedies for Contract Poultry Growers*, 25 U. MEM. L. REV. 1207 (1995).
- Michael C. Stumo & Douglas J. O'Brien, *Antitrust Fairness vs. Equitable Unfairness in Farmer/Meat Packer Relationships*, 8 DRAKE J. AGRIC. L. 91 (2003).