SHORT ENDS OF THE STICK: THE PLIGHT OF GROWERS AND CONSUMERS IN CONCENTRATED AGRICULTURAL SUPPLY CHAINS

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INTRODUCTION

Competition in U.S. agricultural markets has been shaped and reshaped over the course of decades by a number of factors. These include long-standing statutory exemptions from the U.S. antitrust laws for some forms of agricultural business organizations, changes in regulation, advances in technology, the rise of intellectual property protection, and globalization. More recent changes, however, have fundamentally altered the landscapes of domestic and global agricultural markets. This has been driven largely by horizontal and vertical consolidation, which has created tight oligopolies and by the emergence of powerful players at critical stages in increasingly complex agricultural supply chains.

One major segment where the effects of high concentration are apparent is in agricultural inputs. These include agricultural fertilizers, chemicals, and conventional and genetically modified crop seed. Supra-competitive pricing resulting from coordinated behavior and single firm dominance in these input sectors has taken a toll on growers through higher prices and fewer choices.[1] Another area of growing concentration is the processing of agricultural commodities such as meat and poultry, milk, and grains into manufactured commercial and retail food products.[2] Consolidation of the midstream segments has led to fundamental shifts in economic power and the strategic enhancement of market power within important supply chains.[3]

Despite these escalating problems, relatively little legal-economic analysis has been devoted to systematically examining the phenomena of increasingly concentrated agricultural supply chains and their implications for the two most vulnerable stakeholders: growers and consumers. For example, in 2010, the U.S. Department of Justice (DOJ) and U.S. Department of Agriculture (USDA) held a series of workshops on competition in agriculture.[4] A major theme of the testimonials heard in the workshops was the systematic squeezing of the producer and consumer through the exercise of market power at other levels.[5] The

1. *See, e.g.*, *infra* Part V.C.

2. *See, e.g.*, *infra* Part II.C.

3. *Id.*

4. U.S. DEP'T OF JUSTICE, COMPETITION AND AGRICULTURE: VOICES FROM THE WORKSHOPS ON AGRICULTURE AND ANTITRUST ENFORCEMENT IN OUR 21ST CENTURY ECONOMY AND THOUGHTS ON THE WAY FORWARD 2–4 (2012), *available at* http://www.justice.gov/atr/public/reports/283291.pdf [hereinafter DOJ, VOICES FROM THE WORKSHOPS].

5. *See, e.g.*, U.S. DEP'T OF JUSTICE, PUBLIC WORKSHOPS EXPLORING COMPETITION ISSUES IN AGRICULTURE: DAIRY WORKSHOP 85, 190, 235 (2010), *available at* www.justice.gov/atr/public/workshops/ag2010/wisconsin-agworkshop-transcript.pdf [hereinafter DOJ, DAIRY WORKSHOP].

DOJ/USDA effort culminated in a report acknowledging problems.[6] However, there was little to no subsequent heightened enforcement or investigation. Moreover, the DOJ/USDA collaboration oddly did not involve the participation of the antitrust enforcement agency with purview over competition in downstream segments of the agriculture and food industries (for example, retail grocery markets), and much of the fertilizer industry, the Federal Trade Commission (FTC).[7] The 2010 workshops were followed closely by a number of key agriculture antitrust enforcement issues, including the closing of a DOJ investigation into Monsanto's controversial practices in markets for transgenic seed traits without any enforcement action,[8] and the FTC's decision not to challenge the merger of food manufacturing giants ConAgra and RalCorp.[9]

This Article attempts to lend some order to what is likely one of the most troubling phases in U.S. agricultural history—namely the squeezing of the ends of the supply chain through the exercise of market power in the upstream and midstream segments. It proceeds in six sections. Part I examines characteristics of agricultural supply chains and describes growing concentration at the input, midstream processing and food manufacturing, and downstream retail levels. Part II analyzes horizontal and vertical integration in supply chains, including efficiency motivations and strategic competitive incentives. The implications of integration for producers and consumers are examined further in Parts III and IV. Part V takes up key challenges for antitrust enforcement that result from concentrated agricultural supply chains and provides important examples from fertilizer and transgenic seed. The final Part concludes with observations and policy recommendations.

I. AGRICULTURAL SUPPLY CHAINS AND COMPETITION "BOTTLENECKS"

A. Characteristics of Supply Chains

The term "supply chain" describes a network of relationships and transactions between sellers and buyers that results in the production and distribution of a product.[10] A supply chain thus encompasses all the

6. DOJ, VOICES FROM THE WORKSHOPS, *supra* note 4, at 5–15.

7. *See id*, at 2–4 (discussing the partnership between solely the DOJ and USDA to host the 2010 workshops); *infra* notes 106–07107 and accompanying text.

8. *See infra* Part V.D.

9. *See* Bill Donahue, *US, Canada Approve $6.8B ConAgra, RalCorp Deal*, LAW360 (Jan. 16, 2013, 7:08 PM), http://www.law360.com/articles/407986/us-canada-approve-6-8b-conagra-ralcorp-deal. *See also infra* Part V.A. (describing other mergers and antitrust enforcement issues).

10. Benita M. Beamon, *Supply Chain Design and Analysis: Models and Methods*, 55 INT'L J. PRODUCTION ECON. 281, 282 (1998).

coordinated steps necessary to move and transform inputs from the upstream producer to the downstream consumer.[11] Supply chains are an inherently interdisciplinary concept. For example, the marketing literature focuses on the relational aspects between buyers and sellers at various stages in the supply chain.[12] Economic analysis centers on the transactional component of linkages between buyers and sellers and whether they are internal to a vertically integrated firm or are negotiated at arm's-length between independent parties.[13] Law and economics adds the critical perspective of how buyers and sellers are affected by incentives for players to engage in procompetitive or anticompetitive behavior, much of which is determined by the underlying structure of markets that make up the supply chain.[14]

Numerous supply chains populate agriculture, ranging from grains to fruits, vegetables, meat, poultry, and milk. Agricultural input markets such as fertilizers, chemicals, and crop seed are particularly important for growers of crops, cattle, hogs, and chickens. Many of these commodities pass physically or virtually through the hands of traders or marketers before reaching the midstream segment. This encompasses activities within the industrial food production system that transform unprocessed products into highly standardized, consumable foods including beef packing, chicken processing, dairy processing, and grain milling. Processed commodities are then directed into food manufacturing for the production of packaged foods, then they are distributed to consumers through food service or retail grocery outlets. Figure 1 depicts a typical agricultural supply chain with various segments and the major competition "bottlenecks" that frequently exist. Innovation is shown to the left because it affects most stages in the supply chain. This generalized depiction of an agricultural supply chain is particularly important for understanding competitive issues.

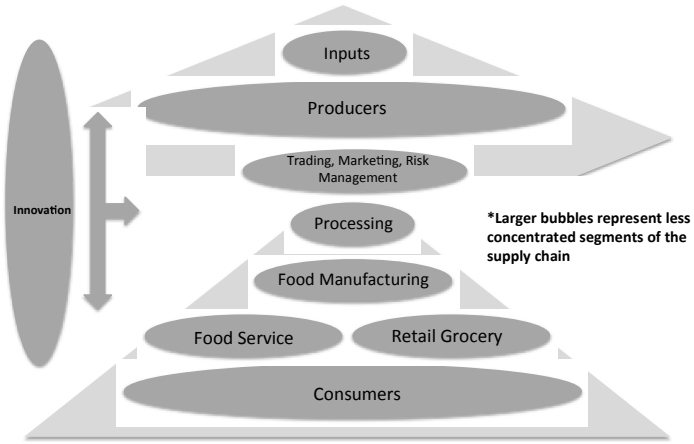
11. *Id.*

12. *See, e.g.*, Gregory Gundlach & Diana L. Moss, *Systems Competition and Challenges to Antitrust Thinking*, 56 ANTITRUST BULL. 1, 4–5 (2011).

13. *Id.*

14. *See id.*

Figure 1: Competition "Bottlenecks" in Agriculture Supply Chains



B. Growing Concentration in Input, Processing, Food Manufacturing, and Retail Grocery Markets

At the top of Figure 1[15] are input markets, which include products such as crop seed, fertilizers, and agricultural chemicals. Many of these markets have been the subject of significant competitive concern such as anticompetitive coordination (tacit or explicit collusion) in fertilizers and single-firm dominance in genetic traits for crop seed.[16] These input markets are thus shown with a smaller bubble to depict a less competitive segment. In a seminal 2011 report on competition, the USDA highlighted growing concentration in key agricultural input markets: crop seed and biotechnology, agricultural chemicals, farm machinery, animal health, and animal genetics.[17]

Between 1994 and 2009, for example, the four-firm concentration

15. *See* Letter from Diana Moss, Vice President American Antitrust Inst., to Edith Ramirez, Chairwoman, Fed. Trade Comm'n 2 fig.1 (Feb. 25, 2014), *available at* http://www.antitrustinstitute.org/sites/default/files/AAISyscoUSFoodsMergerLetter_0.pdf.

16. *See infra* Parts V.C., V.D.

17. KEITH O. FUGLIE ET AL., U.S. DEP'T OF AGRIC., ECON. RESEARCH INVESTMENTS AND MARKET STRUCTURE IN THE FOOD PROCESSING, AGRICULTURAL INPUT, AND BIOFUEL INDUSTRIES WORLDWIDE 14–15 (2011) [hereinafter FUGLIE ET AL., RESEARCH INVESTMENTS], *available at* http://www.ers.usda.gov/media/199879/err130_1_.pdf; *see also* Keith O. Fuglie et al., *Rising Concentration in Agricultural Input Industries Influences New Farm Technologies*, AMBER WAVES, Dec. 3, 2012, [hereinafter Fuglie et al., *Rising Concentration*], *available at* http://ageconsearch.umn.edu/bitstream/142404/2/4risingconcentration.pdf.

ratio for agricultural chemicals increased by 86% from 28.5% to 53%.[18] The markets for potash and phosphate fertilizers are tight oligopolies, with three U.S.- and Canada-based firms accounting for the bulk of North American output.[19] In 2011, concentration in phosphorus fertilizer was 3,163 Herfindahl-Hirschman Indices (HHI) and in potash fertilizer was 4,604 HHI.[20] The levels of global concentration and increases in concentration of key input markets are the highest in crop seed.[21] For example, between 1994 and 2009, the market share of the four largest firms in the crop seed industry more than doubled to 54%.[22] In the late 2000s, the four largest companies held 95% of the U.S. market for cottonseed, 72% of the market for corn seed, and 55% of the soybean seed market.[23] In the 2009 traits markets, the "Big 6" biotechnology firms held greater than 95% of trait acres for corn, soybeans, and cotton, with Monsanto alone accounting for 90% of these acres.[24]

In Figure 1 producer markets are shown below input markets. Markets for crops and animals generally contain many atomistic participants with relatively little—if any—ability to control price and with limited bargaining power to leverage against powerful buyers in the downstream processing segments. Many markets in the midstream processing segments of many agricultural supply chains have become highly concentrated in the last two decades with dominant firms that are integrated into upstream activities and multiple midstream activities.

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18. Fuglie et al., *Rising Concentration*, *supra* note 17, at 2. In 2009, the four-firm ratio was 54% for crop seed and biotechnology and 53% for agricultural chemicals. *Id.*

19. C. ROBERT TAYLOR & DIANA L. MOSS, AMERICAN ANTITRUST INST., THE FERTILIZER OLIGOPOLY: THE CASE FOR GLOBAL ANTITRUST ENFORCEMENT 16–18 (2013), *available at* http://www.antitrustinstitute.org/content/fertilizer-oligopoly-case-global-antitrust.

20. *Id.* at 14–15 ("Market shares based on production capacities can be used to calculate Herfindahl-Hirschman Indices (HHI) of market concentration for regional and global markets.").

21. Fuglie et al., *Rising Concentration*, *supra* note 17, at 2.

22. *Id.*

23. FUGLIE ET AL., RESEARCH INVESTMENTS, *supra* note 17, at 35; *see also* DIANA L. MOSS, AMERICAN ANTITRUST INST., TRANSGENIC SEED PLATFORMS: COMPETITION BETWEEN A ROCK AND A HARD PLACE? 13–14 (2009), *available at* http://www.antitrustinstitute.org/sites/default/files/AAI_Platforms%20and%20Transgenic%20Seed_102320091053.pdf.

24. Fuglie et al., *Rising Concentration*, *supra* note 17, at 4. The "Big 6" are: Monsanto, Syngenta, Dow, Bayer, DuPont, and BASF. *Id.* In the same year, Monsanto traits were reportedly planted on about 77% of total cotton acres, about 82% of corn acres, and about 95% of soybean acres. *See* MONSANTO SUPPLEMENTAL INFORMATION FOR INVESTORS: AS OF MONSANTO SECOND-QUARTER 2012 EARNINGS, MONSANTO (2012), *available at* http://www.monsanto.com/investors/Documents/2012/FINAL_Q2_Investor_Supplement_04.03.2012.pdf. *See also* MOSS, *supra* note 23, at 13.

Meat, poultry, and milling are leading examples of high and/or growing market concentration.

For example, in the cattle slaughter industry, the four-firm ratio increased from 79% in 2002 to 84% in 2011 for steers and heifers and from 39% to 53% for cows and bulls.[25] Fed-beef packing in the United States is essentially controlled by three firms—Cargill, Tyson, and JBS—which together accounted for 68% of the market in 2012.[26] The top four firms accounted for about 81% of output.[27] The four-firm concentration ratio for hog slaughter increased from 55% in 2002 to 64% in 2011.[28] Reports in early 2012 indicated that the top three firms—Smithfield, Tyson Foods, and Swift—controlled about 54% of pork-packing capacity in the United States, and the top four firms controlled 62%.[29] In poultry, USDA data reported that the four-firm concentration ratio for broilers decreased from 57% to 52% from 2008 to 2011.[30] Data from 2012 showed that the top four broiler processing firms—Tyson Foods, Pilgrim's Corp., Sanderson Farms, Inc., and Perdue Farms, Inc.—controlled about 54% of the market.[31]

In the milling of wheat flour, three firms—ConAgra, Cargill, and Archer Daniels Midland (ADM)—account for over 50% of the national market.[32] As is the case with most agricultural markets, however, transportation costs constrain the geographic region in which producers and consumers seek out alternative sources and outlets. Market shares and concentration are therefore typically higher on a local geographic market level. Food manufacturing also resides in the midstream segment and has become decidedly more concentrated. Single-firm dominance is prevalent in major food groups, with two to four companies holding a 75% to 95% market share in U.S. grocery stores for items such as baby formula, sport drinks, microwaveable packaged dinners, beer, granola

25. U.S. DEP'T OF AGRIC., GRAIN INSPECTION PACKERS & STOCKYARDS ADMIN., 2012 ANNUAL REPORT: PACKERS AND STOCKYARDS PROGRAM 35 (2013) [hereinafter GIPSA 2012 ANNUAL REPORT], *available at* http://www.gipsa.usda.gov/Publications/psp/ar/2012_psp_annual_report.pdf.

26. CME GROUP, DAILY LIVESTOCK REPORT (Jan. 18, 2013), *available at* http://www.dailylivestockreport.com/documents/dlr%2001-18-13.pdf.

27. *Id.*

28. GIPSA 2012 ANNUAL REPORT, *supra* note 25, at 35.

29. Steve Meyer, *Slaughter Projects Will Test Packer Capacities*, NAT'L HOG FARMER (May 15, 2012), http://nationalhogfarmer.com/marketing/slaughter-projections-will-test-packer-capacities.

30. GIPSA 2012 ANNUAL REPORT, *supra* note 25, at 42.

31. Gary Thornton, *U.S. Chicken Companies Enter 2013 with Production Increases*, WATT POULTRY USA, Mar. 2013, at 12, 13, *available at* http://www.wattpoultryusa-digital.com/201303#&pageSet=7.

32. GRAIN & MILLING ANNUAL 2013, at 94 (2013).

bars, pet food, potato chips, and many other categories of food.[33] PepsiCo, Nestle, General Mills, Kraft Foods, and ConAgra are dominant in a variety of food areas.[34]

Equally troubling is the growing concentration in the retail segment. The four-firm ratio increased from 30% in 2002 to 36% in 2011, while the eight-firm ratio in 2011 was 49%.[35] Another source estimates that about 54% of dollars spent on groceries in 2012 went to the top four retailers—Walmart, Kroger, Target, and Safeway.[36] Again, in regional geographic markets, market concentration can often be higher. The growth of Walmart factors significantly into increasing concentration in the retail grocery markets. The retailer's share of the national retail grocery market has increased from virtually nothing in the 1980s to 28–32% in 2013.[37] Growing concentration in the midstream and downstream segments of the supply chain sets the stage for examining the competitive problems associated with combined horizontal and vertical integration.

II. HORIZONTAL AND VERTICAL INTEGRATION IN AGRICULTURAL SUPPLY CHAINS

A. Efficiency Motivations for Integration

Market concentration and the emergence of dominant firms can result from organic growth through developing commercially successful technologies, products, and marketing strategies. But it can also result from horizontal and vertical integration. Consolidation of the input, midstream, and downstream segments of agricultural supply chains has been particularly pronounced over the last two decades. For example, firms have integrated horizontally and vertically to diversify geographically and in the array of products they offer. Consolidation can

33. FOOD & WATER WATCH, GROCERY GOLIATHS: HOW FOOD MONOPOLIES IMPACT CONSUMERS 7 (2013), *available at* http://documents.foodandwaterwatch.org/doc/Grocery_Goliaths_12-19-13.pdf.

34. *Id.* at 8.

35. *Retail Trends*, U.S. DEP'T OF AGRIC. ECON. RESEARCH SERV., http://www.ers.usda.gov/topics/food-markets-prices/retailing-wholesaling/retail-trends.aspx#.UpQwJChiwnh (last updated Dec. 29, 2013).

36. FOOD & WATER WATCH, *supra* note 33, at 2.

37. Grant Gerlock, *What Does Walmart Have to Do with ConAgra's Move into Store Brand Food?*, NET NEB. (Apr. 10, 2013, 6:30 AM), http://netnebraska.org/article/news/what-does-walmart-have-do-conagras-move-store-brand-food.

also lead to enhanced access to research and development, new or needed distribution channels, and the reduction of financial risk.[38]

Another incentive for integration is the exploitation of various economies. For example, some businesses have merged to streamline operations and to increase scale to reduce fixed costs. Funding research and development in proprietary agricultural genomics may be possible only on a relatively large scale.[39] In livestock production, scale has expanded significantly. The production "locus" between 1987 and 2002 "increased by 60 percent in broiler, 100 percent in fed-cattle, 240 percent in dairy, and 2,000 percent in hog production."[40] The ability of a single firm to produce a range of products at lower cost than individual firms manufacturing single products or product lines (scope economies) has often been at the heart of integration, particularly in food manufacturing. The same is true of vertical economies (or economies of coordination). Complementarities between traits and traited seed assets may achieve vertical economies such as reduced transaction costs; backward integration of food manufacturers into processing may ensure reliable supplies and maintain quality control.[41]

Vertical economies of coordination, coupled with scale and scope economies, are likely to factor into antitrust analysis of mergers on the efficiency side of the ledger, as are other merger-related efficiency arguments, such as quality control and the enhanced ability to get new products to market faster. However, with increasing concentration and the competitive concerns it raises, the burden on merging firms to defend their efficiencies claims becomes heavier.

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38. *See* DARREN HUDSON & CARY W. HERNDON, MISS. STATE UNIV. DEP'T OF AGRIC. ECON., MERGERS, ACQUISITIONS, JOINT VENTURES, AND STRATEGIC ALLIANCES IN AGRICULTURAL COOPERATIVES 23 (2000).

39. Nicholas Kalaitzandonakes, *Biotechnology and the Restructuring of the Agricultural Supply Chain*, 1 AGBIOFORUM 40, 40 (1998).

40. JAMES M. MACDONALD & WILLIAM D. MCBRIDE, THE TRANSFORMATION OF U.S. LIVESTOCK AGRICULTURE: SCALE, EFFICIENCY, AND RISKS iii (2009), *available at* http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib43.aspx#. UpuFiyhiwni. Locus statistics represent the midpoint of the range of farm sizes (in terms of annual sales) at which one half of national production comes from larger farms and half from smaller.

41. *See* Rachel E. Goodhue et al., *Biotechnology, Intellectual Property and Value Differentiation in Agriculture* 1, 8–9 (Univ. of Cal. at Berkeley Dep't of Agric. & Res. Econ. & Policy, Working Paper No. 901, Rev., 2002), *available at* http://escholarship.org/uc/item/9w85z5r6; *see also* Gregory D. Graff et al., *Agricultural Biotechnology's Complementary Intellectual Assets*, 85 REV. ECON. STAT. 349, 349, 360–61 (2003).

B. Corporate Wingspans and the Explosion of Integration

Description and analysis of the global food system is greatly complicated by large transnational corporations that have sizeable "wingspans" that reach into multiple levels of agricultural supply chains both domestically and abroad. Wingspans exist because many of the agribusiness corporations are not only dominant in certain product and geographic markets across the globe, but also because they are involved with the production of numerous agricultural and food products. For example, Cargill, the world's largest private corporation, is involved in almost every aspect of food.[42] It not only processes (mills) grains, but is also integrated upstream into commodity trading, marketing, risk management, and financial services that producers rely on to manage and market their production.[43] ConAgra is one of the largest packaged food companies in the United States[44] and is integrated upstream into processing operations (like flour milling).[45] Tyson—which began as a vertically integrated, specialized American poultry producer—is now engaged in the production and sales of not just poultry, but also of beef and pork in many parts of the world.[46]

Webs of corporate integration connect multiple agricultural inputs; processing and retailing firms through dozens of corporate subsidiaries; joint ventures; strategic alliances; and partial ownership of smaller, more specialized firms by transnational corporations. For example, Archer Daniels Midland (ADM) has sales around $90 billion annually and full or joint venture ownership interests in multiple companies scattered throughout the world.[47] The Potash Corporation of Saskatchewan (Potash

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42. *America's Largest Private Companies*, FORBES (Dec. 2013), http://www.forbes.com/largest-private-companies/list/.

43. *See Cargill Products & Services*, CARGILL, http://www.cargill.com/products/index.jsp (last visited Mar. 7, 2014).

44. *See* CONAGRA FOODS, http://www.conagrafoods.com/ (last visited Mar. 7, 2014) (stating ConAgra Foods can be found in "99 percent of America's homes").

45. *See, e.g.*, *More Than Just a Mill*, CONAGRA MILLS, http://www.conagramills.com/about_us/about_us.jsp (last visited Jan. 27, 2014).

46. *An Enduring Culture – A Commitment to Values*, TYSON FOODS, INC., http://www.tysonfoods.com/Our-Story/Heritage.aspx (follow "1950s" hyperlink; then select image number 3) (last visited Feb. 1, 2014) (describing Tyson's structural expansion to become vertically integrated from breeding to packaging); *A Snapshot of Tyson Foods, Inc.*, TYSON FOODS, INC., http://www.tysonfoods.com/Our-Story/Tyson-Overview.aspx (last visited Mar. 7, 2014).

47. *ADM Facts*, ARCHER DANIELS MIDLAND (ADM), http://origin.adm.com/en-US/company/Facts/Pages/default.aspx (last visited Jan. 27, 2014); *Profile: Archer Daniels Midland Co (ADM)*, REUTERS, http://www.reuters.com/finance/stocks/companyProfile?symbol=ADM (last visited Jan. 27, 2014). *See, e.g.*, Archer-Daniels-Midland Co., Transition Report (Form 10-K) (Feb. 28, 2013), *available at* http://www.sec.gov/Archives/edgar/data/7084/000000708413000014/adm10ktfy125.htm (detailing ADM annual reports and SEC filings).

Corp.) has interests that cover potash fertilizer operations in Canada, phosphate fertilizer operations in the United States, and nitrogen fertilizer operations in the United States and Trinidad and Tobago.[48] Their web includes membership in Canpotex, a Canadian potash export cartel with a limited exemption from Canadian antitrust laws[49] and significant smaller potash producers in Chile, Israel, and China.[50] Agrium, Inc., one of the three members of Canpotex, owns hundreds of retail fertilizer, seed, crop protection chemical, and agricultural service centers in the United States and Canada.[51]

C. Integration for Strategic Competitive Reasons

Unlike efficiency-driven integration, a major motivation for horizontal and vertical consolidation is strategic competition. Perhaps the simplest form of this is the accretion of market share and associated market power, which can be exercised to erect strategic entry barriers in the form of scale economies or brand-name loyalties or to engage in predatory behavior. In addition to the enhancement of seller market power, consolidation can reinforce monopsony (buyer) power, particularly at the processor level where firms are simultaneously buyers and sellers in a market. Integration at the midstream level is increasingly motivated by the quest to create or enhance countervailing market power between processors and retailers. Moreover, extensive vertical integration, coupled with concentration, can enhance the ability and incentive for dominant agribusinesses to exclude rivals in upstream and downstream markets.

Regardless of the motivation, integration in agriculture has, according to the USDA, resulted in "fewer, larger buyers that effectively control terms of trade" that "demand more from suppliers in specific product attributes, volume, timing, and costs."[52] Food manufacturers and grocery retailers want to deal with fewer, larger processors, which causes

48. *See Facilities & Investments*, POTASHCORP, http://www.potashcorp.com/about/facilities/potash/allan/ (last updated Feb. 28, 2014) (listing facilities by what they produce under each tab at the top of the screen).

49. *See* Ian Austen, *Takeover Bid Shines Spotlight on Crucial Player in Potash*, N.Y. TIMES, Sept. 9, 2010, http://www.nytimes.com/2010/09/10/business/global/10potash.html?_r=0.

50. POTASHCORP, FOOD MATTERS: 2013 ANNUAL INTEGRATED REPORT 10, 54 (2013), *available at* http://potashcorp.s3.amazonaws.com/2013_PotashCorp_Annual_Integrated_Report.pdf.

51. *See What We Do*, AGRIUM, http://www.agrium.com/about_us/what_we_do.jsp (last visited Mar. 7, 2014); *Where We Are*, AGRIUM, http://www.agrium.com/about_us/where.jsp#retail (last visited Mar. 7, 2014).

52. JOHN R. DUNN ET AL., U.S. DEP'T OF AGRIC., AGRICULTURAL COOPERATIVES IN THE 21ST CENTURY 3 (2002), *available at* http://www.rurdev.usda.gov/rbs/pub/cir-60.pdf.

ripple effects up the supply chain, particularly in the midstream processing segment.[53] Responses to these pressures have triggered countervailing consolidation in the midstream segment of the industry. It is well-known that Walmart exerts significant monopsony power over some of its suppliers, forcing down their prices and squeezing margins.[54] Food manufacturers whose products are considered second- and third-tier brands are particularly susceptible to the dictates of downstream retail grocers.[55]

For example, almost 20% of ConAgra's consolidated net sales in recent years were to Walmart.[56] Managing the "supply chain" in response to this pressure is what likely motivated ConAgra's 2012 joint venture with Cargill-dominated Horizon Milling, LLC.[57] As one industry source observed of retail grocers: "Keeping costs down is what keeps prices low for consumers. But the savings have to come from somewhere and the ripple effects can reach all the way back to the farm."[58] The result of midstream consolidation is to create a supply chain with producer and consumer segments that are highly disaggregated and in possession of relatively little economic power, and to create levels in the midstream segment that are dominated by tight oligopolies of highly integrated firms.

III. PRODUCERS AND THE "DEADLY" COMBINATION OF VERTICAL AND HORIZONTAL INTEGRATION

A. Backward Integration and Contracting

Production of raw agricultural commodities—farming and ranching—is relatively unconcentrated for most commodities in the United States and throughout much of the world. However, farmers and ranchers are often caught in what has been called a "vise" because many

53. DOJ, DAIRY WORKSHOP, *supra* note 5, at 85, 190, 235.

54. *See, e.g.*, Tom Van Riper, *The Walmart Squeeze*, FORBES (Apr. 24, 2007, 6:00 AM), http://www.forbes.com/2007/04/23/walmart-suppliers-margins-lead-cx_tvr_0423walmart.html.

55. Martinne Geller & Jessica Wohl, *Analysis: Wal-Mart's Price Push Tests Manufacturers' Prowess*, REUTERS (Mar. 6, 2012, 3:59 PM), http://www.reuters.com/article/2012/03/06/us-usa-consumer-walmart-idUSTRE8250GM20120306.

56. ConAgra Foods, Inc. Annual Report (Form 10-K) (July 20, 2012), *available at* http://phx.corporate-ir.net/phoenix.zhtml?c=97518&p=irol-SECText&TEXT=aHR0cDovL2FwaS50ZW5rd2l6YXJkLmNvbS9maWxpbmcueG1sP2lwYWdlPTgzNzI4MjMmRFNFUT0wJlNFUT0wJlNRREVTQz1TRUNUSU9OX0VOVElSRSZzdWJzaWQ9NTc%3d.

57. *See* Owen Fletcher, *U.S. Scrutinizes Joint Venture by Cargill, ConAgra, CHS*, WALL ST. J., July 4, 2013, http://online.wsj.com/news/articles/SB10001424127887323899704578584652560048688.

58. Gerlock, *supra* note 37.

inputs to agricultural production must be obtained from oligopolistic input suppliers, while their raw commodities are marketed in highly concentrated, vertically integrated supply chains.[59] The economic models underlying monopsony and oligopsony assume that the buyer will permit sellers to determine the quantity to be sold at given prices. However, this may be an unrealistic assumption in the context of the food supply chain because powerful retailers (like Walmart) can dictate price and quantity to wholesalers (such as ConAgra or Tyson) who, in turn, dictate price and quantity to farmers and ranchers. This "all-or-nothing" model can result in economic inefficiency because producers are forced to accept lower-than-competitive prices.[60] But it also results in a significant redistribution of surplus from producers to downstream firms.[61]

Food processors have expanded control over distribution and have integrated backward into raw materials through ownership or various forms of legal control of production. The USDA has noted that these developments "rob producers of decision-making authority and market choices" and limit their bargaining power.[62] In light of this, it is not surprising that agricultural cooperatives have beefed up to countervail the growth of market power in the processing segment of various industries. For example, between 1975 and 2009, the percentage of total gross sales by large cooperatives (one billion dollars or more in annual sales) increased from 17%[63] to 43%.[64] But many of these cooperatives—such as Dairy Farmers of America, Inc. and Land O'Lakes, Inc.—are now dominant firms, expanding out of the production segment into processing and food production.[65]

Some industries—like poultry—are almost completely vertically integrated, while many—such as the cattle and beef industry—are only

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59. *Concentration in Agriculture and an Examination of the JBS/Swift Acquisitions: Hearing before the Subcomm. on Antitrust, Competition Policy and Consumer Rights of the S. Comm. on the Judiciary*, 110th Cong. 6–8 (2008) (statement of Peter Carstensen, Professor of Law, University of Wisconsin Law School), available at http://www.gpo.gov/fdsys/pkg/CHRG-110shrg45064/pdf/CHRG-110shrg45064.pdf.

60. *See, e.g.*, ROGER D. BLAIR & JEFFREY L. HARRISON, MONOPSONY: ANTITRUST LAW AND ECONOMICS 73 (1993).

61. *See* C. Robert Taylor, Monopsony and the All-or-Nothing Supply Curve: Putting the Squeeze on Suppliers 19 (Auburn Univ., Working Paper No. ES.6.2003, 2003) (on file with authors).

62. DUNN ET AL., *supra* note 52, at 4.

63. U.S. DEP'T OF AGRIC., FARM MARKETING, SUPPLY AND SERVICE COOPERATIVE HISTORICAL STATISTICS 71 (2004), *available at* www.rurdev.usda.gov/rbs/pub/cir1s26.pdf.

64. U.S. DEP'T OF AGRIC., COOPERATIVE STATISTICS 2009, at 18 (2009), *available at* www.rurdev.usda.gov/supportdocuments/sr70-2009.pdf.

65. JAMES J. WADSWORTH, U.S. DEP'T OF AGRIC. RURAL BUS. COOPERATIVE SERV., COOPERATIVE UNIFICATION: HIGHLIGHTS FROM 1989 TO EARLY 1999, at iv, 3–4 (1999), *available at* www.rurdev.usda.gov/supportdocuments/rr174.pdf.

partially integrated. Partial vertical integration can occur because a firm wants to satisfy predictable, high probability demand but does not want to fully integrate to meet demand that is riskier or has lower profit margins.[66] Coupled with horizontal consolidation, vertical integration creates a number of what have been termed "deadly" problems for farmers, ranchers, and eventually food consumers.[67] Full, backward-vertical integration of processors, for example, creates a capital barrier to entry because potential competitors cannot enter the vertical chain at a single stage of production but must enter as a vertically integrated business involving two or more stages of production. Moreover, potential entrants may have to enter on a large scale to meet the volume requirements of large retailers.

Second, and perhaps more important, there is a good deal of partial integration or integration via contract. "Marketing and production contracts covered 39[%] of the value of U.S. agricultural production in 2008."[68] Some contracts between processors, wholesalers, and food retailers are cost-plus contracts that attempt to lock in a profit margin for retailers.[69] Moreover, agricultural production that is vertically integrated via contract between producer and processor is often a one-sided arrangement, reflecting the relatively greater economic power of the processor.[70] This type of integration makes markets particularly susceptible to market manipulation by buyers further down the supply chain. This is best illustrated in the beef-packing markets where, because of partial vertical integration over the last two decades, buyers of slaughter cattle may also be sellers of slaughter cattle, blurring the lines between markets.[71]

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66. *See* Martin K. Perry, *Vertical Integration: Determinants and Effects*, *in* 1 HANDBOOK OF INDUSTRIAL ORGANIZATION 183, 185 (Richard Schmalensee & Robert Willig eds., 1989), *available at* http://www.economia.esalq.usp.br/intranet/uploadfiles/3557.pdf.

67. Neil Harl, *Why Worry about Changing Structure?*, IOWA ST. U. EXTENSION & OUTREACH: AG DECISION MAKER (Sept. 2000), http://www.extension.iastate.edu/agdm/articles/harl/HarlSept00.htm.

68. JAMES D. MACDONALD & PENNI KORB, AGRICULTURAL CONTRACTING UPDATE: CONTRACTS IN 2008, USDA ECONOMIC INFORMATION BULLETIN NUMBER 72, at i, 31 (2011), *available at* http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib72.aspx#UqsiK6WvvHg.

69. *Id.* at 1–3; *see* Benjamin F. Sturgeon, *Fiduciary Duties in Cost-Plus Contracts for Construction*, 34 CONSTRUCTION L. 24, 24 (2014) (defining cost-plus contracts).

70. Significant portions of the following two paragraphs and accompanying footnote text are drawn from C. ROBERT TAYLOR, THE MANY FACES OF POWER IN THE FOOD SYSTEM 6 (2004), *available at* http://www.justice.gov/atr/public/workshops/docs/202608.pdf.

71. *Id.* at 3, 6.

For example,

> [t]hrough ownership, joint ventures, and various contracts—collectively known as captive supply—the major beef packers own or control roughly 50% of their slaughter needs. The rest of their slaughter needs are obtained from the cash market. [Moreover,] packers feed cattle, and often sell slaughter cattle to other packers.[72]

Most captive supply is dispensed with through marketing agreements.[73] "In typical marketing agreements, the base price is tied by a 'formula' to an announced cash price . . . for slaughter cattle slaughtered in the same week."[74] With a fed-cattle marketing agreement, what firms pay on the cash market determines not just what they pay for the small proportion of fed cattle acquired through that channel but for the vast proportion they acquire through captive agreements.[75]

> Because a packer can satisfy (or threaten to satisfy) daily slaughter needs from his or her own cattle, from the cash market, or from contracted supplies, they have incentives to manipulate the market to their advantage. Being on both sides of the [often "thin" (weekly)] cash market for a perishable commodity provides beef packers with many opportunities that may result in cash prices below a competitive level.[76]

For example, depending on the packer's expectations regarding prices and their relative commitment of captive supply, it can delay entry or exit in the cash market and force feeders to accept prices lower than what would prevail in a competitive market.[77] Packers can also discriminate against different feedlots, giving preferential deals to feeders that agree

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72. *Id.* "Roughly 5% of fed cattle are in packer-owned or controlled feedlots and another 5% are known as forward contracts usually tied to the futures market for slaughter cattle." *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

> Some of the large beef packers also own or control a significant number of cattle in other countries, especially Canada, Australia and New Zealand. These international captive supplies provide additional opportunity to manipulate cattle and meat markets. . . . [The analytics] are further complicated by the fact that there is a futures market for cattle. As is well known, cash and futures prices tend to move together; directly manipulating one of these markets will indirectly manipulate the other market.

Id. at 5–6.

76. *Id.*

77. *Id.* at 4–5.

to "expand production, which has the effect of lowering cash price" and facilitating the packers' control of "entry and exit of other feeders."[78] Exclusive deals between packers and some feedlots can also "preempt other buyers from accessing those cattle."[79]

B. Loss of Transparency and Inadequate Antitrust Metrics

Antitrust generally assumes that market power can be exercised by buyers or by sellers in any number of settings, including bilateral monopoly.[80] But it is not well equipped to handle cases where a single market participant has incentives to exercise both.[81] Reported concentration measures are typically on the seller side of the market.[82] While these may be appropriate indicators of the power imbalance farmers face in purchasing inputs, they are often irrelevant as indicators of the power imbalance farmers face in marketing production.[83] For example, transportation costs greatly limit the geographic range for marketing, and perishability puts a powerful buyer in a favorable power position of influencing the market by strategically delaying or threatening to delay the acquisition of raw commodities.[84] As a preliminary matter, therefore, concentration statistics need to be developed for "captive draw areas," reflecting economically viable time and distance constraints for marketing raw agricultural commodities.

Perhaps more troubling is that the combination of packers operating as buyers and sellers—coupled with distorted incentives created by captive supply arrangements—may result in the exercise of particularly damaging market power even in a market that is not highly concentrated by traditional standards.[85] Lack of transparent business transactions—

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78. *Id.* at 5.

79. *Id.*

80. *Id.* at 3.

81. *Id.*

82. *See, e.g.*, MARY HENDRICKSON & WILLIAM HEFFERNAN, CONCENTRATION OF AGRICULTURAL MARKETS (2007), *available at* http://www.nfu.org/media-galleries/document-library/func-startdown/392/.

83. PETER C. CARSTENSEN, BUYER POWER AND MERGER ANALYSIS–THE NEED FOR DIFFERENT METRICS 12–13 (2004), *available at* http://www.justice.gov/atr/public/workshops/docs/202606.pdf.

84. *See id.* at 15–16.

85. C. ROBERT TAYLOR, *supra* note 70, at 5.

> Packers hold a clear information advantage over feeders and undoubtedly use that information to their advantage. Even under mandatory livestock price reporting begun in April 2001 and revised in August 2001, some large transactions might not be reported. A merger of packers could thus result in even less price and captive supply information reported due to confidentiality requirements involved more often. Thus, a merger could strengthen the information advantage packers already hold over cattle feeders.

particularly in contracting—in the horizontally concentrated, vertically integrated web of large agribusiness market participants is increasingly problematic for farmers as well as food consumers. To the extent that retailers use contracts with processors to lock in a profit margin and processors use contracts with farmers to lock in their profits, farm-level production and prices become a shock absorber for the vertical industry. Farmers and ranchers who thus prefer the independence of traditional cash markets to contracts that restrict economic freedom may face more risk and uncertainty in prices and market access due to the contracts and business practices far upstream. Squeezing farmers in the foregoing ways will further impair the ability of growers to obtain competitive prices for their products.

IV. ADVERSE EFFECTS ON CONSUMERS

A. Market Dominance and the Façade of "Consumer Choice"

Big-box grocery stores project a visual impression of brand variety and magnitude, but looks can often be deceiving. Many companies sell multiple brands of the same product, and the grocery store down the street may be owned by the same corporate entity.[86] In addition to brand names masking limited consumer choice, large grocery chains operate under different names.[87] Kroger Co. owns chains that operate under numerous different names.[88] Similar examples of brand proliferation under the ownership of a single conglomerate are also available. JBS, a Brazilian corporation, markets poultry under at least ten brands.[89] JBS also offers at least five brands of pork and a plethora of private-label brands.[90] Smithfield Foods, now owned by a Chinese company, specializes in pork and markets under multiple brand names,[91] and Tyson

Id. at 6.

86. FOOD & WATER WATCH, *supra* note 33, at 4–5, 7.

87. *Id.* at 3–4.

88. *Id.* at 4. These include: Kroger, Ralphs, Food 4 Less, FoodsCo, Jay C, Owen's, Pay Less Super Markets, Scott's, Ruler Foods, City Market, King Soopers Marketplace, Fry's Food & Drug, Smith's, Fred Meyer, QFC, Dillon's Food Stores, and Baker's. *Id.* at 4 tbl.1.

89. *Chicken Brands*, JBS USA, http://www.jbssa.com/Brands/Chicken/default.aspx (last visited Jan. 13, 2014).

90. *Pork Brands*, JBS USA, http://www.jbssa.com/Brands/Pork/default.aspx (last visited Jan. 13, 2014).

91. *Our Brands*, SMITHFIELD FOODS, http://www.smithfieldfoods.com/our-brands/ (last visited Jan. 13, 2014).

Foods, which produces poultry, pork, and beef products, markets under numerous brand names and unidentified house brands.[92]

Major grocery chains also sell "private label" or "house" brands, suggesting that there is additional consumer choice. In fact, however, the same firm with numerous other brands on the same shelf likely manufactured private-label products.[93] The consumer cannot easily determine the source of private-label products, only that the product was "packaged" for the grocery chain.[94] Brand names and associated advertising are key product differentiation strategies for gaining market share. Yet for some products like poultry and pork, there may be little, if any, difference.[95] In the industrial food production system from which the bulk of products consumed are derived, practices are standardized even at the farm level. For example, the pork market is dominated by essentially a single genotype of pig raised under the same conditions, fed the same feed, and processed the same way.[96] Similarly, poultry comes from a very narrow genetic base raised under carefully controlled conditions.[97] Thus, while there may be numerous brands on the meat shelf in a grocery store, the products may have come from essentially the same hog or chicken.

The norm in the industrial food system is that consumers pay for numerous brand names for the same or essentially the same product. Yet in 2011, advertising amounted to about $31.5 billion (2.4%) of expenditure on food by U.S. consumers.[98] Informative advertising and marketing is often of value to consumers, but deceptive advertising is of highly questionable redeeming social value. Food advertising may be highly deceptive. For example, more foods are marketed as "natural,"

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92. *Branded Programs*, TYSON FOODS, http://www.tysonfoods.com/Great-Food/Branded-Programs.aspx (last visited Jan. 13, 2014).

93. *See, e.g.*, Ellen Byron, *101 Brand Names, 1 Manufacturer*, WALL ST. J., May 9, 2007, http://online.wsj.com/news/articles/SB117867462888496739.

94. *Id.*

95. *Id.*

96. PEW COMMISSION ON INDUSTRIAL FARM ANIMAL PRODUCTION, PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM ANIMAL PRODUCTION IN AMERICA 1 (2008), *available at* http://www.pewtrusts.org/our_work_report_detail.aspx?id=38442.

97. *Id. See also Special: Biodiversity for Food and Agriculture*, SDDIMENSIONS (Feb. 1998), http://www.fao.org/sd/epdirect/epre0040.htm.; *See, e.g.*, HOPE SHAND, HUMAN NATURE: AGRICULTURAL BIODIVERSITY AND FARM-BASED FOOD SECURITY 43–51 (1997).

98. Total food expenditures in 2011 were $1.312 trillion. Expenditure data is available in Table 1, downloadable at *Overview*, USDA ECON. RESEARCH SERV., http://www.ers.usda.gov/data-products/food-expenditures.aspx#.Ut_Y1nl6gmI (last updated Feb. 19, 2014) (open attachment labeled "Table 1-Food and alcoholic beverages: Total expenditures"). In 2011, advertising accounted for 2.4% of those expenditures, or roughly $31.5 billion. *Food Dollar Series: Documentation*, USDA ECON. RESEARCH SERV., http://www.ers.usda.gov/data-products/food-dollar-series/documentation.aspx#industry (last updated Mar. 5, 2013).

"local," from a "family farm," or a "natural food raised by a local family farmer." Such labels have no concrete legal meaning and are often used as marketing devices. "Natural" labeling does not equate to safety and "local" food products may be sourced from a variety of locations and relabeled. Likewise, a "family farm" is no guarantee of sourcing from a small family farming enterprise. The lack of legal labeling standards, coupled with growing concentration at the midstream level of the agricultural supply chain, puts consumers at a distinct disadvantage—not only in securing competitive prices and choice, but also in obtaining accurate information about what they consume.

B. Category Captains and Slotting Fees

The market power that accompanies size is often revealed by the emergence of "category captains" and "slotting fees" in retailing. For example, food retailers and manufacturers increasingly rely on a category captain to essentially run a sub-business for a related group of food products, such as meat, poultry, or breakfast foods.[99] A product category is typically defined as interrelated or even substitutable products. Because of the wingspan of food processors and the multiplicity of their brands (including house brands), employees of the processors—not employees of the grocery chain—may be managing sections for the store. For example, a JBS or Tyson employee may be responsible for stocking the meat counter in a grocery store and performing day-to-day management of inventory and display.

Food manufacturers and grocery chains employ category managers.[100] Typically these captains are in charge of a product line not just for area stores but nationally or even globally.[101] Often a retailer's category captain may be working with the manufacturer's captain in a form of bilateral monopoly. This business arrangement can skew competition, affecting product pricing and also limiting market access, particularly for potential large entrants and for small, local producers or producers of specialty products.[102] Many manufacturers pay slotting fees to get their products in highly visible, high-traffic areas of a grocery store or for introduction of a new grocery product. A new grocery product or brand introduced nationally may require several million dollars in

99. *See, e.g.*, *Deadline Draws Near for Category Captains Award Entries*, PROGRESSIVEGROCER.COM (July 26, 2013), http://www.progressivegrocer.com/page-category-captains-128.html (discussing categories for awards by the Progressive Grocer organization that gives insight into grocery management).

100. *See, e.g.*, Albert A. Foer, *Divestiture and the Category Captain: New Considerations in Merger Remedies*, FTC: WATCH (Nov. 21, 2001), http://www.antitrustinstitute.org/node/10508.

101. *Id.*

102. *See id.*

slotting allowances.[103] The antitrust concern is that these fees may lead to anticompetitive exclusion of rivals or potential small entrants into food manufacturing.[104]

V. CHALLENGES FOR ANTITRUST ENFORCEMENT

A. What the Merger Enforcement Statistics Tell Us

The complexity of market power in agricultural supply chains is revealed in a number of ways, ranging from noncompetitive prices or noncompetitive contract terms, asymmetric information, price discrimination, barriers to entry, control of market entry and exit, and control of innovation. But economic power in agriculture has also translated to the use of intimidation, capture of regulatory agencies and trade associations, and attempts to control or influence legislation aimed at restoring competition. Agribusiness and agribusiness organizations—generally aligned with corporate interests—wield considerable political power. This can be used to change the rules of the market and to obtain legislation that favors them over independent farmers, ranchers, and food consumers. Political influence may thus dynamically worsen the plight of producers and consumers in concentrated agricultural and food supply chains, eventually raising the cost of food.[105]

Over a decade ago, the USDA characterized consolidation at the processing, wholesale, and retail levels as "unabated" and

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103. Fed. Trade Comm'n, Slotting Allowances in the Retail Grocery Industry: Selected Case Studies in Five Product Categories 56–57 (2003), *available at* http://www.ftc.gov/reports/use-slotting-allowances-retail-grocery-industry.

104. *See, e.g.*, Gregory T. Gundlach, *Antitrust Analysis of Exclusionary Arrangements Involving Slotting Allowances and Fees: Issues and Insights* 4–5 (American Antitrust Inst., Working Paper No. 05-03, 2005), *available at* http://www.antitrustinstitute.org/content/aai-working-paper-no-05-03-antitrust-analysis-exclusionary-arrangements-involving-slotting.

105. Examples of use of political influence and political contributions to influence rules of the agricultural and food industries include delaying implementation of mandatory Country of Origin Labeling (COOL) for meat and poultry products, *see* Chanjin Chung, *Effects of Country of Origin Labeling in the U.S. Meat Industry with Imperfectly Competitive Processors*, 38 AGRIC. & RESOURCE ECON. REV. 406, 406 (2009), *available at* http://ageconsearch.umn.edu/bitstream/59255/2/ARER%2038-3%20406-417%20Chung.pdf; defunding implementation of the USDA's Grain Inspection and Packers and Stockyards (GIPSA) rules intended to establish competition and fairness as called for in the 1921 Packers & Stockyards Act, *see* Joel L. Greene, Cong. Research Serv., R41673, USDA's "GIPSA Rule" on Livestock and Poultry Marketing Practices 13–14 (2014); and implementing food safety legislation that would essentially create barriers for small food producers marketing directly to final consumers, *see* Jim Slama, *Will Feds Bankrupt Small Farms with Food Safety Rules?*, HUFFINGTON POST (Nov. 7, 2013, 4:55 PM), http://www.huffingtonpost.com/jim-slama/food-safety-rules_b_4235080.html.

"unprecedented."[106] Agriculture is one of several industries where antitrust enforcement is shared by two agencies—the DOJ and the FTC. Traditionally, the DOJ has taken clearance on all mergers involving downstream segments of the industry, ranging from production of crops and animals to processing of meat and grains. The FTC, in contrast, has historically handled enforcement involving food manufacturing through the retail grocery segment.

A look at antitrust enforcement statistics for animal production, crop production, food manufacturing, and food and beverage stores (such as supermarkets) over the last ten years is helpful in determining the intensity and characteristics of antitrust enforcement.[107]

For example, over the last ten years (2003–12), over 80% of total agricultural and food transactions reported under the Hart-Scott-Rodino Premerger Notification Program involve processing and food manufacturing.[108] Mergers of grocery stores account for about 13% of total transactions reported, and crop and animal production account for the remaining 7%.[109] Key merger challenges over the period from 2008 to 2012 include two grocery mergers, four mergers involving agricultural inputs, three mergers of agricultural processors, and two food manufacturing transactions.[110] Since 2013, the FTC has allowed the merger of branded and private-label food manufacturers ConAgra and Ralcorp to move forward.[111] The joint venture involving ConAgra and Horizon Milling, LLC is, as of the time of this writing, still under review

106. DUNN ET AL., *supra* note 52, at 3–4.

107. North American Industry Classification System (NAICS) codes are 111 (crop production), 112 (animal production and aquaculture), 311 (food manufacturing), and 445 (food and beverage stores). *See Introduction to NAICS*, CENSUS.GOV, http://www.census.gov/eos/www/naics/ (last updated Feb. 27, 2014).

108. The following text draws from analysis and calculations performed by the authors using information contained in the Annual Reports to Congress filed pursuant to the Hart-Scott-Rodino Antitrust Improvements Act of 1976. Percentages and other figures were generated using numbers from the reports from 2003 through 2012. The calculations and analyses are on file with the authors. For the individual reports, see *Annual Competition Reports*, FED. TRADE COMMISSION, http://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports (last visited Mar. 23, 2014) (containing links to the reports covering the years from 1977 to 2012).

109. *See id.*

110. *See United States v. Grupo Bimbo*, No. 1:11-CV-01857 (D.D.C. Feb. 16, 2012); *United States v. George's Foods, LLC*, No. 5:11-CV-00043 (W.D. Va. Nov. 4, 2011); *United States v. Dean Foods Co.*, No. 10-CV-0059 (E.D. Wis. July 29, 2011); *United States v. Monsanto Co.*, No. 1:07-CV-00992 (D.D.C. Nov. 6, 2008); *United States v. JBS S.A.*, No. 08CV5992 (N.D. Ill. Oct. 20, 2008); *F.T.C. v. Whole Foods Mkt., Inc.*, No. 07-cv-01021 (D.D.C. Aug. 16, 2007); *In re Koninklijke Ahold N.V.*, No. C-4367 (F.T.C. Aug. 16, 2012); *In re NuFarm, Ltd.*, No. C-4298 (F.T.C. Sept. 7, 2010); *In re Agrium Inc.*, No. C-4277 (F.T.C. Feb. 3, 2010); *In re McCormick & Co.*, No. C-4225 (F.T.C. Sept. 12, 2008); *In re Agrium Inc.*, No. C-4219 (F.T.C. June 10, 2008).

111. Donahue, *supra* note 9.

by the DOJ.[112] The joint venture would create an entity with about 36% of the national market in wheat flour milling, with the top two suppliers accounting for 56%.[113]

Reported mergers in food production show a large increase in the mid-2000s (2005–06), with a fall off until 2009, followed by a sharp rise by 2010.[114] From 2003–12, there were no second requests for mergers involving crop and animal production.[115] Alternatively, 5.6% of reported transactions involving food manufacturing and grocery stores went to a "second request," or were further investigated by the antitrust agency to which the transaction was cleared (assigned).[116] This compares to a 3.4% second request issuance rate for all types of mergers over the same period.[117] While the rate of second requests for merger transactions involving food manufacturing and retail grocery is higher than the all-industry average, it is important to qualify this observation. First, the rate of second requests involving food manufacturing mergers has trended downward over the 2003–12 period, falling below the average for all types of mergers in 2012.[118] Moreover, grocery store mergers have received second requests on a highly erratic basis, with investigatory action only in 2007 and 2012, and none in the intervening years[119] despite a 70% annual average rate of increase in reported transactions over the 2003–12 period.[120]

B. Expanding Antitrust's Narrow Focus on Economic Efficiency

Antitrust enforcement focuses on the relatively narrowly dimension of economic efficiency. Depending on the school of thought, mergers and various forms of exclusionary conduct are generally evaluated in the context of static effects on consumer surplus or total economic surplus. The focus is therefore on anticompetitive output restrictions and supra-competitive prices as well as any cost-lowering effects of, or

112. Diane Bartz, *Exclusive: States Join U.S. Probe of Cargill/ConAgra Flour Deal*, REUTERS (July 3, 2013, 4:21 PM), http://www.reuters.com/article/2013/07/03/us-cargill-conagra-antitrust-idUSBRE96218P20130703.

113. Letter from Diana Moss, Vice President, American Antitrust Inst., to William J. Baer, Assistant Attorney Gen., U.S. Dep't of Justice Antitrust Div., & Edith Ramirez, Chairwoman, Fed. Trade Comm'n (April 29, 2013), *available at* http://www.antitrustinstitute.org/sites/default/files/AAI%20Letter_Horizon-ConAgra_FL.pdf.

114. *See supra* note 108 (analysis on file with authors).

115. *See supra* note 108 (analysis on file with authors).

116. *See supra* note 108 (analysis on file with authors).

117. EDITH RAMIREZ, FED. TRADE COMM'N & WILLIAM J. BAER, DEP'T OF JUSTICE, HART-SCOTT-RODINO ANNUAL REPORT: FISCAL YEAR 2012, at 7 (2012), *available at* http://www.ftc.gov/policy/reports/policy-reports/annual-competition-reports.

118. *See supra* note 108 (analysis on file with authors).

119. *See supra* note 108 (analysis on file with authors).

120. *See supra* note 108 (analysis on file with authors).

consumer benefits from, mergers or certain types of business practices. Antitrust analysis also considers, when appropriate, dynamic measures such as the effect of mergers or anticompetitive conduct on innovation. But generally speaking, little else is typically considered in an assessment.

Antitrust's traditional focus on price and output may be adequate in the context of some industries. But in others, such as agriculture, traditional antitrust concerns surrounding price and output intersect more visibly with broader public policy objectives such as quality, human health and safety, stability of the supply chain, and promoting sustainability and the development of alternative food systems such as organics and locally grown products. For example, the concept of supply chain "fragility" is increasingly relevant in operations research, marketing, economics, and even sociology. Supply chains featuring only a few competitors and high entry barriers at critical junctures are excessively exposed to the risk of disruption and collapse following an exogenous shock. Shocks can range from input-market disruptions to political events, weather, and quality control problems. Under the influence of the "Chicago School," antitrust analysis has focused primarily on attaining efficiency, which entails the relentless reduction of redundancy.[121] This has direct implications for consolidation in agricultural supply chains. In determining whether a merger is likely to substantially lessen competition, antitrust enforcers may not consider its effect on exacerbating the fragility of a supply chain by eliminating numbers and diversity of suppliers.

Excessive consolidation also has effects on quality and reliability. The vertical and horizontal integration that is typical of large agribusiness calls into question the ability of managers to effectively implement and monitor quality control programs that ensure safety and reliability of the food supply. Indeed, the Center for Disease Control (CDC) reported that in 2012, "data showed a lack of recent progress in reducing foodborne infections and highlight[ed] the need for improved prevention."[122] CDC data indicate upward trends in rates of certain types of foodborne infections from 1999 to 2012.[123] Whether these statistics are related to consolidation in the food supply chains—particularly processing and food manufacturing—is worthy of additional study.

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121. *See* Richard A. Posner, *The Chicago School of Antitrust Analysis*, 127 U. PA. L. REV. 925, 926–32 (1979).

122. *Trends in Foodborne Illness in the United States, 2012*, CENTER FOR DISEASE CONTROL & PREVENTION, http://www.cdc.gov/features/dsfoodnet2012/index.html (last updated Apr. 18, 2013).

123. *Trends in Foodborne Illness in the United States, 2012, Figure 2*, CENTER FOR DISEASE CONTROL & PREVENTION, http://www.cdc.gov/features/dsfoodnet2012/figure2.html (last updated Apr. 18, 2013).

C. Antitrust Immunities and Exemptions: The Case of Fertilizer

Producers have struggled with powerful buyers at the midstream level for decades. This gave rise to protectionist legislation near the turn of the twentieth century through laws such as the 1918 Webb-Pomerene Act[124] and the 1921 Capper-Volstead (Cooperative Marketing Associations) Act.[125] These statutes generally exempt certain "cooperative" forms of conduct and organization from the antitrust laws, thus allowing producers to band together to create countervailing seller power against more powerful "middlemen."[126] Without statutory exemptions, such cooperation could otherwise raise concerns about anticompetitive agreements under Section 1 of the Sherman Act.[127]

Supra-competitive pricing of fertilizers is a particularly good illustration of the perils of outdated and harmful statutory antitrust exemptions. Industrial farming in much of the world is heavily dependent on external inputs of nitrogen, phosphorus, and potassium or potash fertilizer. The global industry is dominated by two government-sanctioned export associations: PhosChem in the United States and Canpotex in Canada, a privately traded monopoly sanctioned and likely controlled by the Moroccan government (Office Chérifien des Phosphates (OCP)), and a cabal of three potash companies in the former Soviet Union (Belaruskali, Silvinit, and Uralkali, operating through their marketing cartel, Belarusian Potash Company (BPC)).[128] "Collusive

124. 15 U.S.C. §§ 61–66 (2012).

125. 7 U.S.C. §§ 291, 292 (2012).

126. *See, e.g.*, *Sunkist Growers, Inc. v. F.T.C.*, 464 F. Supp. 302, 309 (C.D. Cal. 1979).

127. 15 U.S.C. § 1.

128. The current web page for Belarusian Potash Company (BPC) states that it is "a sole supplier of potash fertilizers manufactured by JSC Belaruskali (the Republic of Belarus)." BELARUSIAN POTASH COMPANY, http://www.belpc.by/en (last visited Mar. 8, 2014). Governmental involvement amplifies the problematic nature of the competition issue in fertilizer markets. Reports indicate that the Belarusian government "skims" Belaruskali's high profits. *Semashko: Skimming of Excess Profit Will Not Shatter Belaruskali's Economy*, BUS. NEWS BELARUS (Nov. 26, 2012), http://doingbusinessby.com/semashko-skimming-of-excess-profit-will-not-shatter-belaruskalis-economy. This response is not fundamentally different from the Canadian government's support for maintaining Canpotex because high prices generate commensurately high tax revenues. Rob Gillies, *Potash Corp Criticizes Government Report*, SEATTLE TIMES, Oct. 5, 2010, http://seattletimes.com/html/businesstechnology/2013080821_apcncanadapotashcorpbhp.html. PotashCorp notes the contribution of government involvement (which favors "production over profitability") to price volatility for phosphate. *Business Risks: Cyclicality in Phosphate*, POTASHCORP 2011 ANN. REP., http://www.potashcorp.com/annual_reports/2011/our_business/risk_management/business_risks/phosphate/ (last visited Mar. 30, 2014). For example, in their hostile takeover offer for PotashCorp, mining giant BHP Billiton asserted it would break up the cartel. Brenda Bouw, *Canpotex Fate Spurs Closer Look at Potash Corp. Takeover*, THE GLOBE & MAIL (Aug. 24, 2010, 7:51 PM), http://www.theglobeandmail.com/globe-investor/canpotex-fate-spurs-closer-

agreements between fertilizer producers on prices and market shares pepper the history of the global commercial fertilizer industry dating back to the 1880s."[129] The underlying structure of the current global industry remains conducive to anticompetitive coordination—a landscape that likely prompted *The Wall Street Journal* commentators to observe that "the global price sets a benchmark so American farmers pay essentially what the cartels dictate."[130]

Recent analysis strongly supports the notion that "global fertilizer producers have likely acted in a coordinated fashion to raise prices, to the detriment of competitors and consumers."[131] For example,

> [f]ollowing an industry shakeout from 1998 to 2004, fertilizer prices increased dramatically in 2008. High prices persisted for several quarters, dipped in 2009, and have since returned to supra-competitive 2008 levels. The fertilizer industry has, and continues to be, marked by considerable excess capacity. At the same time, large buyers of fertilizer such as China and India are becoming increasingly powerful, putting downward pressure on high prices. Earlier in 2013, the decision of key eastern European potash producers to refuse to deal with such buyers or cut their prices has caused significant disturbance among global producers, with falling profits industry-wide.[132]

The disruption caused by powerful buyers and the subsequent breakdown in any tacit or explicit agreement among fertilizer manufacturers should be a strong signal that anticompetitive coordination has been at play and that fertilizer markets are long overdue for rigorous and meaningful investigation by global antitrust enforcers. Frédéric Jenny and Eleanor Fox note that sanctioned export-cartel exemptions and the implicitly sanctioned Russian potash cabal are flagrant manifestations of a "beggar thy neighbor" approach to competition law.[133]

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look-at-potash-corp-takeover/article1378108/. The Canadian government blocked the takeover, noting that a breakup of Canpotex was unacceptable because it would lower tax revenues. Christopher Donville, *Canada Blocks BHP's $40 Billion Bid for Potash Corp.*, BLOOMBERG NEWS (Nov. 3, 2010, 7:09 PM), http://www.bloomberg.com/news/2010-11-03/bhp-billiton-s-40-billion-takeover-bid-for-potash-corp-blocked-by-canada.html.

129. TAYLOR & MOSS, *supra* note 19, at 7. *See also* MIRKO LAMER, THE WORLD FERTILIZER ECONOMY 621–35 (1957); GEORGE W. STOCKING & MYRON W. WATKINS, CARTELS IN ACTION: CASE STUDIES IN INTERNATIONAL BUSINESS DIPLOMACY 118–71 (1946) (describing the role of cartels in the distribution of nitrogen fertilizers).

130. Lauren Etter, *Lofty Prices for Fertilizer Put Farmers in a Squeeze*, WALL ST. J., May 27, 2008, http://online.wsj.com/article/SB121184502828121269.html.

131. *See* TAYLOR & MOSS, *supra* note 19, at 9.

132. *See id.*, at 6.

133. Eleanor Fox, *Antitrust Challenges of Deep Globalization*, AMERICAN ANTITRUST INST. (June 23, 2011), http://www.antitrustinstitute.org/sites/default/files/

Supra-competitive fertilizer prices initially harm farmers and quickly translate into higher food prices throughout the world. Because this problem raises related strategic, food sustainability, and environmental issues for the United States and other countries, it transcends traditional competition policy concerns.

D. Challenges of Antitrust and Intellectual Property: The Case of Transgenic Seed

High concentration in the markets for genetic traits for crop seed such as corn, soybeans, and cotton has attracted significant attention in recent years. This has resulted in more intense scrutiny of mergers and firm conduct, particularly in light of the central role played by intellectual property. Merger activity has likely accounted for the major increases in market concentration in genetic traits and transgenic seed markets over the past two decades.[134] During the late 1990s through the 2000s, for example, Monsanto alone acquired almost forty companies, including agricultural biotechnology firms and independent seed companies that historically held the substantial base of seed germplasm needed by traits developers to breed new varieties.[135] Also, between 1985

Fox%20Presentation.pdf; *see also* Frédéric Jenny, *Export Cartels in Primary Products: The Potash Case in Perspective*, *in* TRADE, COMPETITION, AND THE PRICING OF COMMODITIES 99, 126 (Simon J. Evenett & Frédéric Jenny eds., 2012), *available at* http://www.voxeu.org/sites/default/files/CEPR-CUTS_report.pdf; Frederic Jenny, *Global Potash Trade & Competition*, ECON. TIMES, (Nov. 25, 2010, 7:55 AM), http://articles.economictimes.indiatimes.com/2010-11-25/news/29382665_1_potash-saskatchewan-bhp-billiton.

134. The second wave brought a number of large mergers, including the formation of Syngenta from AstraZeneca and Novartis Seeds in 2000, Bayer's acquisition of Aventis Crop Sciences in 2002, and BASF's takeover of Cyanamid in 2000. It was during this period that seed companies such as Pioneer, DeKalb, Trojan, Northrup-King, Cargill, and Golden Harvest were acquired. *See* JORGE FERNANDEZ-CORNEJO, ECON. RES. SERV., U.S. DEP'T AGRIC., AGRIC. INFO. BULL. NO. 786, THE SEED INDUSTRY IN U.S. AGRICULTURE: AN EXPLORATION OF DATA AND INFORMATION ON CROP SEED MARKETS, REGULATION, INDUSTRY STRUCTURE, AND RESEARCH AND DEVELOPMENT 32–34 (2004), *available at* http://www.ers.usda.gov/media/260729/aib786_1_.pdf; U.N. CONFERENCE ON TRADE & DEV., TRACKING THE TREND TOWARDS MARKET CONCENTRATION: THE CASE OF THE AGRICULTURAL INPUT INDUSTRY 5, 9–10 (2006), *available at* http://unctad.org/en/Docs/ditccom200516_en.pdf; Gregory D. Graff et al., *Agricultural Biotechnology's Complementary Intellectual Assets*, 85 REV. ECON. & STATISTICS 349, 360–61 (2003); Carl Pray et al., *Innovation and Dynamic Efficiency in Plant Biotechnology: An Introduction to the Researchable Issues*, 8 AGBIOFORUM 52, 60 (2005), *available at* http://agbioforum.org/v8n23/v8n23a01-oehmke.pdf.

135. Monsanto acquired biotechnology firms and seed companies such as Agrecetus, Calgene, Holdens, and Asgro. *See* FERNANDEZ-CORNEJO, *supra* note 134, at 33–34.

and 2000, the Big 6 biotechnology firms acquired about 75% of small-to-medium-sized enterprises engaged in biotechnology research.[136]

Perhaps one of the most important findings in recent empirical research is that increasing levels of concentration in agricultural input markets (including crop seed) are no longer generally associated with higher research and development or a permanent rise in research and development intensity.[137] Concentration in genetic crop traits has important implications for farmers and, ultimately, consumers in direct and subtler ways. For example, growers pay supra-competitive prices and agree to restrictive licensing requirements to use proprietary, genetically modified varieties. However, a more subtle competition story is revealed in how genetic traits are combined in crop seed for soybeans, corn, and cotton.

Stacked traits have quickly become the industry standard in corn and cotton and are beginning to emerge in soybeans, which have until recently been single-traited (herbicide-tolerant) products. The USDA notes "tracking traits will become increasingly complex as multiple GM [genetically modified] traits from a variety of firms are inserted into individual varieties."[138] Stacking addresses multiple issues, including the drive for higher yields from multiple modes of action (for example, insect resistance and herbicide tolerance) and "refuge" concerns—or "requirements that growers plant both conventional and non-transgenic seed to combat growing resistance of insects to a particular aging mode of action."[139]

Growers and consumers benefit when there is competition to develop new stacks of genetic traits for corn, soybeans, and cotton.

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136. Fuglie et al., *Rising Concentration*, *supra* note 17, at 4 ("Of 27 crop biotechnology [small and medium-sized enterprises] . . . 20 were acquired either directly by one of the Big 6 or by a company that itself was eventually acquired by a Big 6 Company.").

137. FUGLIE ET AL., RESEARCH INVESTMENTS, *supra* note 17, at 2, 14–16. (The USDA examined whether market concentration was correlated with the share of industry revenues invested in research and development.).

138. *Id.* at 44.

139. Diana L. Moss, *Competition, Intellectual Property Rights, and Transgenic Seed*, 58 S.D. L. REV. 543, 553 (2013) ("In 2000, just 1% of corn acres and 20% of cotton acres were planted with stacked trait varieties. These each increased to 52% by 2012."). *See* NAT'L AGRIC. STATISTICS SERV., 2000 USDA ACREAGE 25, 26, 29 (2000), *available at* http://usda01.library.cornell.edu/usda/nass/Acre//2000s/2000/Acre-06-30-2000.pdf; NAT'L AGRIC. STATISTICS SERV., 2012 USDA ACREAGE 29 (2012), *available at* http://usda01.library.cornell.edu/usda/current/Acre/Acre-06-29-2012.pdf. Market penetration of stacked traits is also apparent in the "profiles" of traits available on the market. For example, of the forty-five total trait profiles on the market in 2009, over one-third were single trait profiles, and the remainder were conventional or stacked trait profiles. *See* DMRKYNETEC & MONSANTO, CORN TRAIT PROFILES, COTTON TRAIT PROFILES, AND SOYBEAN TRAIT PROFILES 1–3 (2009), *available at* http://www.monsanto.com/newsviews/Documents/corn_and_soybean_agronomic_traits.pdf.

Competition means choice in comparable stacked products, vigorous price competition, and ongoing pressure on rivals to innovate. "New stacked trait 'profiles' are possible through" both "intra-firm" and "inter-firm" stacking, which is enabled by innovators engaging in a variety of technology licensing agreements, including cross-licensing and outlicensing of patented genetic traits.[140] In the case of intra-firm stacking, a single innovator combines its own traits.[141] In 2009, "38% of all stacks were intra-firm combinations."[142] A second possibility is "inter-firm" stacking, "or combinations of multiple rival innovators' traits."[143] "These accounted for 62% of total stacks."[144] High concentration and the dominance of a single firm (Monsanto) have a number of competitive implications for stacking competition. For example, it is not surprising that "Monsanto traits appear in 91% of intra-firm stacks."[145] And "Monsanto traits appear in 50% of inter-firm stacks" for corn, soybeans, and cotton.[146] "All inter-firm stacks in soybeans and cotton involve a Monsanto trait."[147]

Even the simple, foregoing statistics on trait stacking reveal a number of competitive problems. For example, the presence of a dominant Monsanto traits "'platform' serves as a barrier to entry or expansion to competing inter-firm stacks that do not contain Monsanto traits."[148] Inter-firm stacking that involves collaborating with a dominant firm is also "potentially limited by licensing conduct of the sort that has been the subject of antitrust counterclaims in patent infringement cases. This includes selective or discriminatory royalties and cross-licensing or outlicensing requirements."[149] Finally, "the 'ubiquity' of a dominant firm's traits in inter-firm stacks creates incentives for both seed companies and rival biotechnology developers to 'standardize' on that platform,"[150] particularly given the seed-saving restrictions that keep farmers buying new seed every year create recurring revenue streams for biotechnology innovators.[151]

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140. Moss, *supra* note 139, at 554.
141. *Id.*
142. *Id.*
143. *Id.*
144. *Id.*
145. *Id.*
146. *Id.*at 554–55.
147. *Id.* at 555.
148. *Id.*
149. *Id.*
150. *Id.*
151. Peter Carstensen, *Post-Sale Restraints via Patent Licensing: A "Seedcentric" Perspective*, 16 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 1053, 1073 (2006).

Whether inter-firm collaborations can inject sufficient competitive discipline in the market for stacked traits remains unclear.

> Since 2009, the firms that occupy the portion of the inter-firm stacking market that do not involve Monsanto collaborations have largely continued their associations. For example, Dow and Syngenta have reached an agreement to cross-license corn traits. . . . [And] Dow entered into cross-licensing agreements with Bayer and Syngenta to develop stacked trait cotton varieties. Also worthy of note is that Monsanto and DuPont-Pioneer recently reached an agreement to [dismiss] their longstanding patent infringement and antitrust counterclaim issues relating to stacking traits.[152]

CONCLUSION: OBSERVATIONS AND IMPLICATIONS

The foregoing analysis highlights a number of issues that are central to both competition and public policy in agriculture moving forward. Given the complexity of agricultural supply chains, the range of products and services that are encompassed by them, and the complex incentives motivating (and created by) consolidation, many observers are asking how policy can be realigned to address what are recognized now as serious and systemic competitive problems in parts of the U.S. agricultural supply chain. Protecting the producer and consumer will require competition enforcers domestically and abroad to craft a comprehensive, multipronged competition policy that: (1) promotes the competitive health of the supply chain overall; (2) recognizes the nature of competitive relationships between the production, processing, and retailing levels; and (3) prioritizes competition problems at any given level in light of the severity of competitive issues elsewhere in the supply chain. Four specific recommendations are also in order.

The first is the need for a coordinated, multi-jurisdictional approach to antitrust enforcement. Midstream processing and food manufacturing markets are critically interrelated with upstream producers and downstream retail grocers. Thus, a comprehensive approach to evaluating the potential competitive consequences of mergers and certain types of conduct involving participants in the agricultural supply chains is needed. Domestically, this would take the form of increased coordination between the DOJ and FTC on mergers and would include tapping the USDA's institutional knowledge of markets. The coordinated

152. Moss, *supra* note 139, at 556. Furthermore, "[t]he settlement includes a licensing agreement that would, in part, allow DuPont-Pioneer to stack traits in exchange for Monsanto's access to DuPont-Pioneer technologies for disease and defoliation control." *Id.*

involvement of all agencies involved in competition enforcement and policy would also better capture some of the broader implications of consolidation and conduct on food safety, security, and supply chain stability.

A. Increased Domestic and International Cooperation in Antitrust Enforcement

As agriculture markets become more globalized—particularly involving input markets—it will be important for competition enforcement agencies to coordinate on issues of cartel enforcements and merger review, especially when there are international jurisdictional issues that can only be resolved through cooperation and simultaneous action by enforcement agencies. Fertilizer is a prime example. Markets are global, and the damages from collusive pricing impact millions of growers and billions of consumers. As the meat industry becomes more global, this will also become an issue. Part of a globally oriented competition enforcement effort will be to coordinate rollback of exemptions for "beggar thy neighbor" export associations and to revamp statutes that grant immunity to cooperative marketing associations that themselves have become dominant, integrated players in the market.

B. Importance of a Complementary, Public, and Private Enforcement Approach

The complexity of competition issues in agriculture emphasizes the importance of a complementary balancing approach that recognizes the value of both public and private enforcement. A lack of government antitrust enforcement has arguably put more pressure on private antitrust litigation to address the harm to direct and indirect purchasers resulting from collusive behavior. Private litigation alone, however, cannot protect competition and consumers from the harm caused by anticompetitive conduct in food and agricultural markets for two reasons. First, the effectiveness of private litigation is limited in many instances because anticompetitive conduct at any one of many vertical stages of the chain may be passed downstream through several stages to food consumers through cost-plus pricing or market adjustments. In such a case, food consumers may be harmed, but they do not have standing to sue under *Illinois Brick v. Illinois*.[153]

Second, the threat of private litigation will be an inadequate deterrent when the firm directly harmed by anticompetitive conduct is immediately downstream, and must rely on one or a few large firms for

153. 431 U.S. 720, 728–29 (1977).

inputs. For example, a fertilizer retailer in the United States can obtain product only from a few manufacturers with wide-reaching wingspans and interconnecting webs. The retailer—which would not have standing in this case—may be intimidated by explicit or tacit threats by manufacturers that they will restrict or cut off the retailer's supplies. The very real threat of retaliation, which in itself is an anticompetitive issue, may thus dampen the effectiveness of private litigation in deterring anticompetitive practices. These examples demonstrate the importance of a complementary public-private approach to antitrust enforcement. At the same time, while it can compensate for limits on private enforcement, public enforcement should not attempt to displace the private bar for purposes of compensatory damages and deterrence.

C. Reconciling Regulatory and Antitrust Approaches to Competition Enforcement and Policy

A final recommendation in beginning to address competitive problems involving agricultural supply chains is to reconcile regulatory and antitrust approaches. One troubling development in recent agricultural and food antitrust litigation is that courts have departed from deference to *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*,[154] ignoring the long-standing interpretation of antitrust legislation by the USDA and DOJ. In particular, courts have opined that plaintiffs must show "harm to competition" to recover damages under the 1921 Packers & Stockyards Act (PSA)[155] even though the plain wording of Sections 202 (a)–(b) refers only to business practices "with the purpose or effect" of being unfair or deceptive and does not refer to "competition" as in other sections of the Act.[156] For example, if individual producers are not able to show that a meat packer's business practices harmed competition, legislation intended to protect livestock and poultry producers will be essentially eviscerated, assuming this interpretation prevails in future litigation. Also, circuit court opinions on the issue of harm to competition—or on what constitutes harm to competition—are not consistent. If federal regulatory actions are to be consistent with the courts' determinations, regulations and enforcement may—to be applied consistently—force the interpretation that such rules differ by region. This was not the intent of the original legislation.

A second troubling development is that in the historic *Pickett v. Tyson Fresh Meats, Inc.*[157] cattle case, the Court dismissed a substantial body of case law and economics reflecting application of the

154. 467 U.S. 837 (1984).

155. *Been v. O.K. Indus., Inc.*, 495 F.3d 1217, 1230 (10th Cir. 2007).

156. 7 U.S.C. § 192(a)–(b) (2012).

157. 420 F.3d 1272, 1278–87 (11th Cir. 2005).

long-standing rule-of-reason (ROR).[158] The ROR, which dates back to a 1911 Supreme Court opinion, is a doctrine that any pro-business benefit of a contested practice should be balanced against harm to the market.[159] The *Pickett* trial judge departed from the ROR standard by adding separate questions on the jury verdict form such as: "Did Tyson lack a legitimate business reason for using captive supply?" and "Did use of captive supply have an anticompetitive effect on the cash market?"[160] The jury found Tyson's arguments about having a legitimate business reason to be pretextual, answered "yes" to both of these (and other) questions, and awarded $1.3 billion in actual damages.[161] However, the Eleventh Circuit overturned the verdict, essentially appointing themselves "fact-finders" by opining that Tyson did indeed have a legitimate business reason for engaging in captive supply.[162] Departing from the ROR in this way means that any pro-business benefit (no matter how small) trumps harm to the market (no matter how large). These fundamental inconsistencies between regulatory and private litigation create considerable confusion in the agricultural and food sector, leading to associated inefficiencies and murkiness related to what business practices market participants can legally employ.

158. *Id.* at 1286–88; C. Robert Taylor, *Buyer Power Litigation in Agriculture:* Pickett v. Tyson Fresh Meats, Inc., 53 ANTITRUST BULL. 455, 645–67 (2008).

159. *Standard Oil Co. of N.J. v. United States*, 221 U.S. 1, 58–66 (1911).

160. *Pickett v. Tyson Fresh Meats, Inc.*, 315 F. Supp. 2d 1172, 1174 (M.D. Ala. 2004).

161. *Id.* For additional discussion of legal and economic issues in the *Pickett* case, see Taylor, *supra* note 158.

162. *Pickett*, 420 F.3d at 1286–88.