## References

- Abrahams, P. "ICI To Split and Shed 9,000 Jobs Worldwide: Investment in Petrochemicals Halted, Pounds 384m Pre-Tax Loss Reported." *Financial Times*. February 26, 1993, p. 1.
- Advanta, Facts and Figures. Accessed at URL: http://www.advantaseeds.com/show?id=11882& langid=96
- AgBiotech Reporter. "Banner Year at D&PL." January 2000, p. 4. AgrEvo. Accessed at URL: http://www.archive.hoechst.com/english/life\_sci-ences/ernaehrung/lw\_zahlenfakten.html
- Agrawal, P.K., B.D. Agrawal, P. Venkat Rao, and Jai Singh. "Seed Multiplication, Conditioning and Storage." In Morris, Michael L., *Maize Seed Industries in Developing Countries*. Boulder, CO: CIMMYT, 1998, pp. 103-24.
- Airy, John M., L.A. Tatum, and J.W. Sorenson, Jr. "Producing Seed of Hybrid Corn and Grain Sorghum. In *Seeds: The Yearbook of Agriculture*, *1961*. U.S. Department of Agriculture, 1961, pp. 145-53.
- Alston, J.M., and P.G. Pardey. *Making Science Pay: The Economics of Agricultural R&D Policy*. Washington, DC: AEI Press, 1996.
- Alston, J.M., and R.J. Venner. "The Effects of the U.S. Plant Variety Protection Act on Wheat Genetic Improvement." *Research Policy* 31(2002): 527-42.
- Appelbaum, E. "The Estimation of the Degree of Oligopoly Power." *Journal of Econometrics* 19(1982): 287-99.
- Appelbaum, E. "Testing Price Taking Behavior." *Journal of Econometrics* 9(1979): 283-94.
- Asgrow Seed Company. "History." Accessed at URL: http://www.asgrow.com/corporate/History.html, June 5, 2000.
- Aventis Agriculture. "Introducing Aventis." Accessed at URL: http://www2.aventis.com/introduce/agro.htm, June 5, 2000.
- Azzam, A. "Measuring Market Power and Cost-Efficiency Effects of Industrial Concentration." *Journal of Industrial Economics* 45(4)(1997): 377-86.

- Azzam, A., and E. Pagoulatos. "Testing Oligopolistic and Oligopsonistic Behavior: An Application to the U.S. Meat Packing Industry." *Journal of Agricultural Economics* 41(1990): 362-70.
- Azzam, A., and J.R. Schroeter. "The Tradeoff Between Oligopsony Power and Cost Efficiency in Horizontal Consolidation: An Example From Beef Packing." *American Journal of Agricultural Economics* 77(1995): 825-36.
- Bayer CropScience. "Bayer CropScience Launch." Accessed at URL: http://www.bayercropscience.co. uk/home, September 27, 2002.
- Beach, D.E., and J. Fernandez-Cornejo. "Setting Research Priorities in the Public Sector: A Suggested Framework for the AARC Center." *Journal* of Agricultural Economics Research 45 (Summer 1994): 3-16.
- Begemann, B.D. "Competitive Strategies of Biotechnology Firms: Implications for U.S. Agriculture." *Journal of Agricultural and Applied Economics* 29 (June 1997): 117-22.
- Bjornson, B. "Capital Market Values of Agricultural Biotechnology: How High and Why?" *AgBioForum*, 1(2)(1998): 69-73. Accessed at URL: *http://www.agbioforum.missouri.edu*, September 22, 1999.
- Blonigen, B.A., and Ch.T. Taylor. "R&D Intensity and Acquisitions in High-Technology Industries: Evidence From the U.S. Electronic and Electrical Equipment Industries." *Journal of Industrial Economics* 48(1) (March 2000): 47-70.
- Boswell, V.R. "The Importance of Seeds." In *Seeds: The Yearbook of Agriculture, 1961*. U.S. Department of Agriculture, 1961, pp. 1-10.
- Brennan, M.F., C.E. Pray, and A. Courtmanche. "Impact of Industry Concentration on Innovation in the U.S. Plant Biotech Industry." In Lesser, William H., ed., *Transitions in Agbiotech: Economics of Strategy and Policy. Proceedings of NE-165 Conference, June 24-25, 1999*, Washington, DC. Connecticut: University of Connecticut, 2000.

- Butler, L.J., and B.W. Marion. *The Impacts of Patent Protection on the U.S. Seed Industry and Public Plant Breeding*. North Central Region Research Publication 304, North Central Project 117, Monograph 16. Madison, WI: Research Division, College of Agricultural and Life Sciences, University of Wisconsin, September 1985.
- Carlton, D.W., and J.M. Perloff, *Modern Industrial Organization*, 2<sup>nd</sup> edition. Reading, MA: Addison-Wesley, 1994.
- Chen, Z., and R. Lent. "Supply Analysis in an Oligopsony Model." *American Journal of Agricultural Economics* 74(1992): 973-79.
- Clark, A. "Zeneca Spends Pound 46m on Dutch Genetic Engineer." *Daily Telegraph*. May 14, 1997, p. 29.
- Cohen, W.M., and R.C. Levin, "Empirical Studies of Innovation and Market Structure." In Schmalensee, R., and R.D. Willig, *Handbook of Industrial Organization*, Vol. II. Amsterdam: Elsevier, 1989.
- Cosun. "Advanta Seed Technology." Accessed at URL: http://www.cosun.com/advantagb.htm, June 5, 2000.
- Cotton USA. Accessed at URL: http://www.cottonus.org/NewsResources/ SouthMid.htm; http://www.cottonus.org/NewsResources/West.htm, no date.
- Cowling, K.G., and M. Waterson. "Price-Cost Margins and Market Structure." *Economica* 43(1976): 267-74.
- Daily Telegraph. "Zeneca's Seeds Business Merges." August 13, 1996, p. 25.
- Day-Rubenstein, K., and P. Heisey. "Agricultural Resources and Environmental Indicators: Crop Genetic Resources." Chapter 3.2 of ERS Agricultural Resources and Environmental Indicators, Agricultural Handbook No. AH722. April 2001. Accessed at URL: http://www.ers.usda.gov/publications/arei/arei2001/arei3\_2/AREI3\_2geneticresources.pdf
- Dow AgroSciences. "Company." Accessed at URL: http://www.dowagro.com/main/company/default.htm, August 7, 2000.
- Dow AgroSciences, News Release. "Dow Agro-Sciences To Reorganize, Eliminate 500 Positions Globally." September 19, 2002. Accessed at URL: <a href="http://www.dowagro.com/newsroom/news/091902.ht">http://www.dowagro.com/newsroom/news/091902.ht</a> m, September 27, 2002.

- Duvick, D.N. "Genetic Contributions to Yield Gains of U.S. Hybrid Maize, 1930 to 1980." In Fehr, W.R., ed., *Genetic Contributions to Yield Gains of Five Major Crop Plants*. Madison, WI: CSSA, 1984, pp. 15-48.
- Duvick, D.N. "Genetic Rate of Gain in Hybrid Maize Yields During the Past 40 Years." *Maydica* 22(1977):187-96.
- Duvick, D.N. Plant Breeding: Past Achievements and Expectations for the Future. *Economic Botany*, 40 (1992): 289-97.
- Duvick, D.N. "United States." In Morris, M.L., ed., *Maize Seed Industries in Developing Countries*. Boulder, CO: CIMMYT, 1998, pp. 193-211.
- Emsweller, S.L., "Fundamental Procedures in Breeding Crops." In *Seeds: The Yearbook of Agriculture*, *1961*. U.S. Department of Agriculture, 1961, pp. 127-33.
- Falck-Zepeda, J., and G. Traxler. "The Role of Federal, State, and Private Institutions in Seed Technology Generation." Greg Traxler and José Falck-Zepeda. In Fuglie, K.O., and D.E. Schimmelpfennig, eds., *Public-Private Collaboration in Agricultural Research: New Institutional Arrangements and Economic Implications*. Ames, IA: Iowa State University Press, 2000.
- Fernandez-Cornejo, J. "Adoption of Genetically Engineered Crops in the U.S." Data product. U.S. Department of Agriculture, Economic Research Service, November 2003. Accessed at URL: http://www.ers.usda.gov/data/BiotechCrops
- Fernandez-Cornejo, J., and C.R. Shumway. "Research and Productivity in Mexican Agriculture." *American Journal of Agricultural Economics* 79(1997): 738-53.
- Fernandez-Cornejo, J., and D. Spielman. *Concentration, Market Power, and Cost Efficiency in the Corn Seed Industry*. Selected paper presented at the 2002 AAEA meetings, Long Beach CA, July 28-31, 2002.
- Fernandez-Cornejo, J., and W.D. McBride. *Genetically Engineered Crops for Pest Management in U.S. Agriculture: Farm Level Effects*. Agricultural Economic Report 786. U.S. Department of Agriculture, Economic Research Service, April 2000.
- Fernandez-Cornejo, J., and W.D. McBride. *The Adoption of Bioengineered Crops*. Agricultural Economic

- Report 810. U.S. Department of Agriculture, Economic Research Service, May 2002.
- Fernandez-Cornejo, J., and W.D. McBride. "Genetically Engineered Crops: U.S. Adoption and Impacts." *Agricultural Outlook*, No. 294, September 2002a, pp. 24-27.
- Fernandez-Cornejo, J., D. Spielman, and J. Keller. *Concentration, Market Power, and Cost Efficiency in the Cotton Seed Industry*. Selected paper presented at the 2002 SAEA meetings, Orlando, FL, Feb. 4-6, 2002.
- Fernandez-Cornejo, J., M. Caswell, and C. Klotz-Ingram. "Seeds of Change: From Hybrids to Genetically Modified Foods." *Choices* (4th quarter 1999): 18-22.
- FIS/ASSINSEL (The International Seed Trade Federation / The International Association of Plant Breeders for the Protection of Plant Varieties). *Statistics*. Accessed at URL: <a href="http://www.worldseed.org/statistics.html">http://www.worldseed.org/statistics.html</a>, April 14, 2000.
- Food and Agriculture Organization (FAO). "Agreement Reached on Protecting Plant Genetic Resources," July 16, 2001. Accessed at URL: http://www.fao.org/news/2001/010703-e.htm, July 30, 2001.
- Fox, Patrick. *Biotechnology and the Seed Industry*. UK: PJB Publications, June 1990.
- Frey, Kenneth. J. National Plant Breeding Study-1: Human and Financial Resources Devoted to Plant Breeding Research and Development in the United States in 1994. Special Report 98. Ames, IA: Iowa Agriculture and Home Economics Experiment Station, Iowa State University, 1996.
- Frisvold, G., Sullivan, J., and Raneses, A. Who Gains From Genetic Improvements in U.S. Crops? *AgBio-Forum* 2 (3 & 4)(1999): 237-46. Accessed at URL: *http://www.agbio.forum.org*, July 17, 2000.
- Fuglie, K., N. Ballenger, K. Day, C. Klotz, M. Ollinger, J. Reilly, U. Vasavada, and J. Yee. Agricultural Research and Development. Acricultural Economic Report 735. U.S. Department of Agriculture, Economic Research Service, May 1996.
- Fulton, M., and K. Giannakas. "Agricultural Biotechnology and Industry Structure." *AgBioForum*. 4(2):137-51. Accessed at URL: *http://www.agbioforum.com*.

- Garst Seed Company. "Mike Muston Named Vice President for Advanta, Americas." Accessed at URL: http://www.garstseed.com/ articles/pres990313-muston.htm, June 6, 2000.
- Gollop, F.M., and M.J. Roberts. "Firm Interdependence in Oligopolistic Markets." *Journal of Econometrics* 10(1979): 313-31.
- Gould, F. "Genetics of Plant Herbivore Systems: Interactions Between Applied and Basic Study." In Denno, R.F., and M.S. McClure, eds, *Variable Plants and Herbivores in Natural and Managed Systems*. New York: Academic Press, 1983.
- Graff, G.D., G.C. Rausser, and A.A. Small. "Agricultural Biotechnology's Complementary Intellectual Assets." *Review of Economics and Statistics*, Forthcoming.
- Grain. "The Biotech Battle Over the Golden Crop." Seedling 13(3) (October 1996). Accessed at URL: http://www.grain.org/publications/oct964-en-p.htm.
- Grain. "Soybean: The Hidden Commodity." *Seedling* 14(2) (June 1997). Accessed at URL: http://www.grain.org/publications/oct973-en-p.htm.
- Groosman, A., A. Linnemann, and H. Wierma. *The International Dimension of Seed Industry Development: Draft Final Report of the Project*. Paper prepared for the seminar on "Technology Development and Changing Seed Supply Systems." Tilburg, 1988.
- Hansen, L., and M. Knudson. "Property Right Protection of Reproducible Genetic Material." *Review of Agricultural Economics* 18(1996): 403-14.
- Hayenga, M.L. "Structural Change in the Biotech Seed and Chemical Industrial Complex." *AgBioForum*, 1(2)(1998): 43-55. Accessed at URL: <a href="http://www.agbioforum.missouri.edu">http://www.agbioforum.missouri.edu</a>, September 22, 1999.
- Heisey, Paul, W. *Public Sector Agricultural Research* in an Era of Rapidly Expanding Private Sector Investment. Paper prepared for the Western Economic Association International, Huntington Beach, CA, July 10, 1999.
- Heisey, Paul, W. Private communication, September 23, 1999a.
- Heisey, P.W., C.S. Srinivasan, and C. Thirtle. *Public Sector Breeding in a Privatizing World*. Agricultural

- Economic Report 772. U.S. Department of Agriculture, Economic Research Service, August 2001.
- Hoechst Schering AgrEvo. "Agriculture." Accessed at URL: http://www.archive.hoechst.com/english/life\_sciences/ernaehrung/lw\_agrevo.html and http://www.archive.hoechst.com/english/life\_sciences/ernaehrung/lw\_kooperationen.html, August 7, 2000.
- Huffman, W.E., and R.E. Evenson. *Science for Agriculture*. Ames, IA: Iowa State University Press, 1993.
- International Union for the Protection of New Varieties of Plants (UPOV). *UPOV Convention (1991 Act)*. Accessed at: URL: http://www.upov.int/eng/convntns/1991/w\_up910\_.htm#\_1, July 24, 2001.
- . "States Party to the International Convention and Addresses of Plant Variety Protection Offices." Accessed at URL: http://www.upov.int/eng/ratif/index.htm, July 30, 2001a.
- Iwata, G. "Measurement of Conjectural Variations in Oligopoly. *Econometrica* 42(1974): 947-66.
- James, C. "Progressing Public-Private Sector Partnerships in International Agricultural Research and Development." *ISAAA Briefs* 4(1997).
- James, C., and A.F. Krattiger. "Global Review of the Field Testing and Commercialization of Transgenic Plants: 1986-1995: The First Decade of Crop Biotechnology." *ISAA Briefs* 1(1996).
- Jenkins, M.T. "Corn Improvement." In *Yearbook of Agriculture*, *1962*. U.S. Department of Agriculture, 1936, pp. 455-522.
- Jewett, T.O. "Thomas Jefferson: Father of Invention." The Early America Review, Vol. III, n. 1. (Winter 2000). Anna Maria, Florida. Downloaded from http://www.earlyamerica.com on December 17, 2001.
- Joly, Pierre-Benoit, and S. Lemarie "Industry Consolidation, Public Attitude and the Future of Plant Biotechnology in Europe." AgBioForum 1(2)(1998): 85-90. Accessed at URL: http://www.agbioforum. missouri.edu, September 22, 1999
- Just, R.E., and D.L. Hueth. "Multimarket Exploitation: The Case of Biotechnology and Chemicals." *American Journal of Agricultural Economics* 75(4)(1993): 936-45.

- Kalaitzandonakes, N. "Mycogen: Building a Seed Company for the Twenty-First Century." *Review of Agricultural Economics* 19(2)(1997): 156-66.
- Kalaitzandonakes, N., and B. Bjornson. "Vertical and Horizontal Coordination in the Agrobiotechnology Industry: Evidence and Implications." *Journal of Agricultural and Applied Economics* 29(4)(1997): 129-139.
- Kalaitzandonakes, N. and M.L Hayenga. *Structural Change in the Biotechnology and Seed Industrial Complex: Theory and Evidence*. Paper presented at the Transitions in AgBiotech: Economics of Strategy and Policy Conference, Washington, DC, June 24-25, 1999.
- Kalton, R.R., P.A. Richardson, and N.M. Frey. "Inputs in Private Sector Plant Breeding and Biotechnology Research Programs in the USA." *Diversity* 5(1990): 22-25.
- Kidd, George H. (L. William Teweles and Co.). *Ag Biotech* (statement). Proceedings of the Conference held in Arlington, VA, March 28-30, 1989.
- Kimle, K. and M.L. Hayenga. "Structural Change Among Agricultural Input Industries." *Agribusiness* 9(1)(1993): 15-27.
- Kimle, K., and M.L. Hayenga. *Agricultural Inputs and Processing Industries*. Ames, IA: Iowa State University, 1992.
- King, John L. Concentration and Technology in Agricultural Input Industries. U.S. Department of Agriculture, Economic Research Service, Agriculture Information Bulletin 763, March 2001.
- Klotz, Cassandra, K. Fuglie, and C. Pray. *Private-Sector Agricultural Research Expenditures in the United States, 1960-1992.* NRED-9525. U.S. Department of Agriculture, Economic Research Service, October 1995. Update for 1993-1997 released in July 1998.
- Klotz-Ingram, C. Private communication. July 24, 2000.
- Kloppenburg, J.R. First the Seed: A Social History of Plant Breeding and the Seed Industry in the United States. Ph. D. dissertation, Cornell University, January 1985.
- Knudson, M.K. "The Role of the Public Sector in Applied Breeding R&D: The Case of Wheat in the U.S.A." *Food Policy* 15(3)(1990): 209-217.

- Knudson, M.K. and C. E. Pray. "Plant Variety Protection, Private Funding, and Public Sector Research Priorities." *American Journal of Agricultural Economics*, 73:3 (August 1991): 882-86.
- Knudson, M. K. and L. Hansen, *Intellectual Property Rights and the Private Seed Industry*. Agricultural Economic Report 654. U.S. Department of Agriculture, Economic Research Service, November 1991.
- Krull, D.F., J.M. Prescott, and C.W. Crum. "Seed Marketing and Distribution." In Morris, Michael, L., *Maize Seed Industries in Developing Countries*.Boulder, CO: CIMMYT, 1998, pp. 125-41.
- Leibenluft, R.F. Competition in Farm Inputs: An Examination of Four Industries. Federal Trade Commission, Office of Policy Planning, February 1981.
- Lerch, V.D. "The Plant Variety Protection Act: A Current Look." Seed World. U.S. Department of Agriculture, Agricultural Marketing Service, Plant Variety Protection Office, 1989.
- Lesser, W. "Intellectual Property Rights and Concentration in Agricultural Biotechnology." *AgBioForum* 1(2) (Fall 1998): 56-61. Accessed at URL: *http://www.agbioforum.missouri.edu*, August 21, 2001.
- Lucier, G., A. Chesley, and M. Ahearn. Farm Income Data: A Historical Perspective. Statistical Bulletin 740. U.S. Department of Agriculture, Economic Research Service, 1986.
- Maredia, M.K., and D. Byerlee. "Toward Efficiency Allocation of Research Resources in the Presence of Spillovers: Lessons From Wheat Iimprovement Research." In Maredia, M.K, and D.Byerlee, eds., Global Wheat Improvement System: Prospects for Enhancing Efficiency in the Presence of Spillovers. Mexico, DF (Mexico): CIMMYT. 1999. pp. 118-26.
- Maredia, M.K., and R. Ward. "Wheat Breeding Environments: A Conceptual and Empirical Analysis." In Maredia, M.K, and D. Byerlee, eds., *The Global Wheat Improvement System: Prospects for Enhancing Efficiency in the Presence of Spillovers*. Mexico, DF (Mexico): CIMMYT. 1999, pp. 12-21.
- McKay, John W. "How Seeds Are Formed." In *Seeds: The Yearbook of Agriculture*, *1961*. U.S. Department of Agriculture, 1961, pp. 11-17.
- McMullen, N. *An Introduction to Seed Production*. NPA Report Series No 227. National Planning Association, 1987a.

- McMullen, N. *Seeds and World Agricultural Progress*. National Planning Association, 1987b.
- Meredith, W.R., Jr., and R.R. Bridge. "Genetic Contributions to Yield Changes in Upland Cotton." In Fehr, W.R., ed., *Genetic Contributions to Yield Gains of Five Major Crop Plants*. Madison, WI: CSSA, 1984, pp. 75-87.
- Merrill Lynch. *Ag. Biotech Update: Franken-Potato Revisted.* Merrill Lynch, Global Securities Research & Economics Group, Global Fundamental Equity Research Department, February 1, 1999.
- \_\_\_\_\_. Global Chemical Benchmark: The New Ag Products Industry, Chemicals. Merrill Lynch, Global Securities Research & Economics Group, Global Fundamental Equity Research Department, July 7, 2000.
- Monsanto Company. "About Monsanto." Accessed at URL: http://www.monsanto.com/monsanto/about/past/index5.htm, June 2, 2000.
- Morris, M.L., ed. *Maize Seed Industries in Developing Countries*. Boulder, CO: CIMMYT, 1998.
- Morse, L. "Dow Chemical Buys Out Partner." *Financial Times*, May 16, 1997, p. 33.
- Mycogen Corporation. "Dow Subsidiary Purchases Mycogen Shares in Tender Offer." October 5, 1998. Accessed at URL: http://www.mycogen.com/pressre-lease.asp?ID=11, August 24, 2001.
- \_\_\_\_\_. "Dow to Acquire All Outstanding Mycogen Shares." August 31, 1998. Accessed at URL: http://www.mycogen.com/pressrelease.asp?ID=14, August 24, 2001.
- National Research Council, Board on Agriculture and Natural Resources, Committee on Genetically Modified Pest-Protected Plants. *Genetically Modified Pest-Protected Plants: Science and Regulation*. Washington, DC: National Academy Press, 2000.
- Northrup-King Co. "Northrup-King Co. History." Accessed at URL: http://www.nk.com/helper/1998/12\_28\_history\_northrupking.html, June 9, 2000.
- Ollinger, M., and J. Fernandez-Cornejo. *Regulation, Innovation, and Market Structure in the U.S. Pesticide Industry*. Agricultural Economic Report 719. U.S. Department of Agriculture, Economic Research Service, 1995.

- Panos. "Greed of Need? Genetically Modified Crops." Panos Media Briefing No. 30. October 1998. Accessed at URL: http://www.oneworld.org/panos/
- Pharmacia Corporation. "Corporate Facts." Accessed at URL: http://www.pharmacia.com/facts\_monsanto.html, June 6, 2000.
- Pioneer Hi-Bred International, Inc. "75 Years: A Legacy of Values." Accessed at URL: http://pioneer.com/75th/default.htm, August 24, 2001.
- Plant Variety Protection Act. 7 U.S.C. § 2321-2583. 1970.
- Pollak, A. "Green Revolution Yields to the Bottom Line." The New York Times, May 15, 2001.
- Preckel, P.V., T.G. Baker, and J. Eide. "Seed Corn Tournament and Excess Nitrogen Applications." Unpublished manuscript, Purdue University, February 12, 1997.
- PR Newswire. "Monsanto Completes Sale of Stoneville to Hicks, Muse, Tate & Furst and Emergent Genetics, Inc." December 29, 1999.
- PRNewswire-FirstCall (via COMTEX). "As Pharmacia Completes Monsanto Spinoff, Monsanto CEO Says Company Retains Focus and Strategic Direction, August 13, 2002." Accessed at URL: http://www.corporate-ir.net/ireye/ir site.zhtml?ticker=MON&script= 410&layout=-6&item\_id=325145 Sept 27, 2002.
- Rivlin, R. "Monsanto Sells Seeds Business." Financial Times, August 7, 1999, p. 19.
- Ross, D. "Antitrust Enforcement and Agriculture." Address before the Organization of Competitive Markets. U.S. Department of Justice, Nashville, TN, July 20, 2001, http://www.usdoj.gov/atr/public/ speeches/8661.htm
- Ruttan, V.W. "Biotechnology and Agriculture: A Skeptical Perspective." AgBioForum 2(1)(2000): 54-60. Accessed at URL: http://www.agbioforum.org/ vol2no1/ruttan.html.
- Schimmelpfennig, D.S., and Thirtle, C. "Research Spillovers Between the European Community and the United States." Contemporary Economic Policy, Vol. 19, No. 4, October 1999, pp. 457-68.
- Schimmelpfennig, D.S., Thirtle, C., and van Zyl, J. "Short and Long Run Returns to Agricultural R&D in South Africa, or Will the Real Rate of Return Please Stand Up?" Agricultural Economics, Vol. 24, No. 1, June 2000, pp.1-15.

- Schmalensee, R., and R.D. Willig. Handbook of Industrial Organization Vol. II. In Arrow, K.J., and M.D. Intriligator. Handbooks in Economics. Amersterdam: Elsevier, 1989.
- Schor, J. The Evolution and Development of Biotechnology: A Revolutionary Force in American Agriculture. AGES 9424. U.S. Department of Agriculture, Economic Research Service, August 1994.
- Schroeter, J.R. 1988. "Estimating the Degree of Market Power in the Beef Packing Industry." Review of Economics and Statistics 70(1988): 158-62.
- Schroeter, J.R., and A. Azzam. "Marketing Margins, Market Power, and Price Uncertainty." American Journal of Agricultural Economics (1991): 990-99.
- Sears, E.R. "Genetics and Farming." In Science of Farming - Yearbook of Agriculture 1943-1947. U.S. Department of Agriculture, 1947, pp. 245-55.
- Seedquest. "AstraZeneca Merger Approved; U.S. Names Senior Management." Accessed at URL: http://www.seedquest.com/News/releases/europe/Zen eca/N1710.htm, April 6, 1999.
- . "Dupont and Pioneer Hi-Bred International, Inc. Merger Completed." Accessed at URL: http://www.seedquest.com/News/releases/usa/ Dupont/n2145.htm, October 1, 1999.
- \_. "KWS and Limagrain Merge Their Corn Activites in North America." Accessed at URL: http://www.seedquest.com/News/releases/europe/ Limagrain/n2406.htm, January 19, 2000.
- "Monsanto Agrees To Purchase Cargill International Seed Operations in Central and Latin America, Europe, Asia, Africa." Accessed at URL: http://www.seedquest.com/News/Press%20releases/ Monsanto/N1119.htm, June 29, 1998.
- . "Monsanto and Pharmacia & Upjohn To Merge, Creating Global Leader in Pharmaceuticals With Top-Tier Growth Prospects – Leading Global Agricultural Business To Be Operated as a Separate Entity, With a Partial IPO." Accessed at URL: http://www.seedquest.com/News/releases/usa/ Monsanto/n2331.htm, December 19, 1999.
- Seed World. "Building Business With Seed Treatment," December 1999.
- Sexton, R.J. "Imperfect Competition in Agricultural Markets and the Role of Cooperatives: A Spatial

- Analysis." American Journal of Agricultural Economics (1990): 609-720.
- Shields, M. "Novartis and AstraZeneca Mix Agribusiness." *American Seed Trade Association Newsletter*, December 1999. Accessed at URL: <a href="http://www.amseed.com/newsletter/newsletr.htm">http://www.amseed.com/newsletter/newsletr.htm</a>, January 19, 2000.
- Shimoda, S.M. "Agricultural Biotechnology: Master of the Universe?" *AgBioForum* 1(2) (1998): 62-68. Accessed at URL: *http://www.agbioforum.missouri.edu*, September 22, 1999.
- Shoemaker, R., J. Harwood, K. Day-Rubenstein, T.
  Dunahay, P. Heisey, L. Hoffman, C. Klotz-Ingram,
  W. Lin, L. Mitchell, W. McBride, and J. Fernandez-Cornejo. *Economic Issues in Agricultural Biotechnology*. Agriculture Information Bulletin 762. U.S.
  Department of Agriculture, Economic Research Service, February 2001.
- Smale, M., and K. Day-Rubenstein. "The Demand for Crop Genetic Resources: International Use of the U.S. National Germplasm System." World Development (2002): 1639-55.
- Sprague, G.F. "Hybrid Corn." In *After a Hundred Years Yearbook of Agriculture, 1962*. U.S. Department of Agriculture, 1962, pp. 106-107.
- St. Louis Post-Dispatch. "Justice Officials Looking Into Flurry of Cottonseed Mergers." July 20, 1996: p. 1C.
- Stoneville Pedigreed Seed Company. "News." Accessed at URL: http://www.stoneville.com/news.htm, June 8, 2000.
- Storck, W.J. "Pesticide Growth Slows." *Chemical and Engineering News*, November 16, 1987.
- Strachan, J.L. Private communication. U.S. Department of Agriculture, Agricultural Marketing Service, Plant Variety Protection Office, 2003.
- Strachan, J.M. *Plant Variety Protection: An Alternative to Patents*. U.S. Department of Agriculture, Agricultural Marketing Service, Plant Variety Protection Office, 1992.
- Syngenta About Syngenta, Facts and Figures. Accessed at URL: http://www.syngenta.com/en/about\_syngenta/figures.aspx, May 2003
- Teitelbaum, G.L., and A. Figueroa. "Seed Companies, A Review of the Investment Case," Merrill Lynch, 1997.

- Tripp, R. "Regulatory Issues: Varietal Registration and Seed Quality Control." In Morris, M.L., *Maize Seed Industries in Developing Countries*. Boulder, CO: CIMMYT, 1998, pp. 159-73.
- U.S. Congress, Office of Technology Assessment. New Developments in Biotechnology Patenting Life—Special Report. OTA-BA-370, April 1989.
- U.S. Congress (USC). Plant Variety Protection Act. 7 U.S.C. 1970. § 2321-U.S. Department of Agriculture, Agricultural Marketing Service, Cotton Program, Market News Branch. Cotton Varieties Planted, Crops of (1970-1997). Accessed at URL: http://www.ams.usda.gov/cotton/cnpubs/htm, June 14, 2000.
- U.S. Department of Agriculture. Agricultural Biotechology. Frequently Asked Questions. What Is Biotechnology? Accessed at URL: <a href="http://www.usda.gov/agencies/biotech/faq/html">http://www.usda.gov/agencies/biotech/faq/html</a>, 2003
- U.S. Department of Agriculture, Agricultural Marketing Service, Plant Variety Protection Office. "Science and Technology Programs." Accessed at URL: <a href="http://www.ams.usda.gov/science/PVPO/pvp.htm">http://www.ams.usda.gov/science/PVPO/pvp.htm</a>, August 10, 2000.
- U.S. Department of Agriculture, Agricultural Marketing Service. Plant Variety Protection Act and Regulations and Rules of Practice. Revised March 2001, 45 pp, http://www.ams.usda.gov/science/PVPO/PVPO\_Act/whole.pdf
- U.S. Department of Agriculture, Agricultural Marketing Service, Plant Variety Protection Office. "Plant Variety Protection Listings." Accessed at URL: <a href="http://www.ars-grin.gov/cgi-bin/npgs/html/pvplist.pl?">http://www.ars-grin.gov/cgi-bin/npgs/html/pvplist.pl?</a> May 30, 2001a.
- U.S. Department of Agriculture, Agricultural Marketing Service, Plant Variety Protection Office. *Cotton PVP Accessions*. Accessed at URL: http://www.ars-grin.gov/cgi-bin/npgs/html/pvp.pl?Cotton, May 30, 2001b.
- U.S. Department of Agriculture, Animal and Plant Health Inspection Service. "Regulating Biotechnology in Agriculture." Accessed at URL: http://www.aphis.usda.gov/oa/biotech.html, August 14, 2000.
- U.S. Department of Agriculture, Cooperative State Research, Education, and Extension Service, Current Research Information System. *Manual of Clas*-

- U.S. Department of Agriculture, Economic Research Service. *Agricultural Resources Inputs Situation and Outlook*, AR-13, February 1989.
- \_\_\_\_\_. Agricultural Resources Inputs Situation and Outlook, AR-32, October 1993.
- \_\_\_\_\_. Agricultural Resources and Environmental Indicators, 1996-97. Agricultural Handbook 712. July 1997.
- \_\_\_\_\_. *AREI Updates 1998*, No. 8, December 1998.
- \_\_\_\_\_\_. "Farm Sector Performance Situation and Outlook." Accessed at URL: http://www.ers.usda.gov/briefing/farmincome/s&o.htm, August 20, 1999.
- \_\_\_\_\_\_. Agricultural Resources and Environmental Indicators 2000, AREI 2000, August 2000.
- \_\_\_\_\_\_. Agricultural Resource Management
  Survey (ARMS): Recommended Data. Accessed at
  URL:http://www.ers.usda.gov/Briefing/ARMS/
  moredata.htm, March 28, 2002.
- U.S. Department of Agriculture, National Agricultural Statistics Service. *Agricultural Statistics*. Various years.
- U.S. Department of Agriculture, National Agricultural Statistics Service. "Published Estimates Data Base." Accessed at URL: www.nass.usda. gov:81/ipedb/, accessed May 25, 2001.

- U.S. Department of Energy, Energy Information Agency. "Electricity." Accessed at URL: www.eia.doe.gov/fuelelectric.html, May 21, 2001.
- U.S. Department of Labor, Bureau of Labor Statistics. Bureau of Labor Statistics Data: Series ID:
  EES00500049, Seasonally Adjusted, Industry: Total
  Private Industry, SIC Code: na, Average Hourly
  Earnings, 1982 Dollars; 2: Series ID:
  EES30000006, Seasonally Adjusted, Industry: Manufacturing, SIC Code: 20-39, Average Hourly Earnings of Production Workers. Accessed at: URL:
  www.bls.gov, May 18, 2001
- U.S. International Trade Commission. *Industry & Trade Summary: Seeds.* USITC 2859, May 1995.
- Van Wijk, Jeroen, J.I. Cohen, and J. Komen. *Intellectual Property Rights for Agricultural Biotechnology: Options and Implications for Developing Countries. A Biotechnology Research Management Study*. ISNAR Research Report No. 3. The Hague: International Service for National Agricultural Research, 1993.
- Virginia Polytechnic Institute and State University. "Information Systems for Biotechnology, Environmental Release Database of Field Test Releases in the U.S." Accessed at URL: www.isb.vt.edu/cfdocs/fieldtests1.cfm, June 28, 2001.
- The Wall Street Journal Interactive Edition. "Monsanto To Expand Internationally With \$1.4 Billion Purchase From Cargill," June 29, 1998. Accessed at URL: http://interactive.wsj.com, June 29, 1998.
- Wann, J.J., and R. J. Sexton. "Imperfect Competition in Multiproduct Food Industries With Application to Pear Processing." *American Journal of Agricultural Economics* (1992): 980-90.
- Williamson, O.E. "Economies as an Antitrust Defense: The Welfare Tradeoff. *American Economic Review* (58)(1968):18-36.
- Zeneca Agrochemicals. "Plant Biotechnology." Accessed at URL: http://www.zeneca.com/page.asp? section=research&sub=biotech, June 6, 2000.