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CHARLES M. BENBROOK

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PERSONAL INFORMATION

Birthdate: November 26, 1949
Place: Los Angeles, California
Children: Stephen, Rachel, Michael, Seth and Zacary
Wife: Karen Lutz Benbrook
Hobbies: Fishing, Raising Rabbits

EDUCATION

B.A. Degree - Economics, Harvard University (1971)
M.A. Degree - Agricultural Economics, University of Wisconsin (1979)
Ph.D. - Agricultural Economics, University of Wisconsin (1980)

EMPLOYMENT HISTORY

Benbrook Consultant Services (BCS), President. December 1, 1990 to present.

Analytical services for domestic and international clients in the public and private sectors. Areas of focus include biotechnology; pesticide use, risks, and regulation; adoption and costs-benefits of Integrated Pest Management; impacts of federal environmental and food laws, especially the Food Quality Protection Act of 1996. BCS specializes in the development of novel methodologies to assess environmental and public health risks and issues.

Washington State University, Center for Sustaining Agriculture and Natural Resources, Research Professor. August 16, 2012 to May 15, 2015.

Adjunct Faculty, Department of Crop and Soil Sciences, Washington State University, October 31, 2007 to August 26, 2015

Research scientist and program leader for the “Measure to Manage Program – Farm and Food Diagnostics for Sustainability and Health.”

The Organic Center, Chief Scientist. January 1, 2006 to May 31, 2012.

Developed and managed a program of research on the environmental and consumer health benefits of organic foods and farming.

National Research Council/National Academy of Sciences, Washington, D.C. Executive Director, Board on Agriculture. January 16, 1984 to November 30, 1990.

Responsible for overseeing and managing activities of the Board. Major BA/NAS reports published during this period addressed the methods and applications of agricultural biotechnology; unique risks faced by infants and children from pesticide exposure; resistance to pesticides; options to improve the nutritional composition of animal products; and, agricultural research and education.

Subcommittee on Department Operations, Research, and Foreign Agriculture, Committee on Agriculture, U.S. House of Representatives. Subcommittee chaired by Congressman George E. Brown, Jr., Staff Director. April 1981 - January 13, 1984.

Responsibilities included: (i) preparing and analyzing legislation within the jurisdiction of the subcommittee; (ii) organizing subcommittee hearings and business meetings; and, (iii) briefing members and staff on legislation and oversight activities.

Council on Environmental Quality, Executive Office of the President, Agricultural Policy Analyst. December 1979 - March 1981.

Represented CEQ on various Executive Branch committees; analyzed natural resource data and policy options; and (iii) conducted research and contributed to multiple Executive Branch reports.

AWARDS and HONORS

Excellence in Science Award, OTA/TOC Dinner, March 2014.

Appointed as member, USDA's AC 21 agricultural biotechnology advisory committee, 2010, and reappointed in 2013.

Appointed to AGree Advisory Committee, 2010.

Appointed as Adjunct Faculty Member, Department of Crop and Soil Sciences, Washington State University, Pullman, Washington, 2007.

Graduated cum laude from Harvard University, 1971.

Received \$1,000 cash award from the Council on Environmental Quality for contributions to the

completion of the National Agricultural Lands Study.

LITIGATION HISTORY

In addition to the above activities, Benbrook has participated in several lawsuits involving pesticide use and risks, agricultural biotechnology, and food labeling. The major cases are listed below:

1. Peterson, et al. v. BASF Corp. Plaintiff's attorney, Hugh Plunkett, Lockridge Grindal Nauen, St. Paul, Minnesota. Trial Ada, Minnesota, in the District Court for Northeastern Minnesota (Red River Valley)
2. James E. Fox, et al. v. Cheminova, Inc USDC, EDNY Case Number CV 00-5145, plaintiff's attorney Kevin Huddel, Jones, Verras, and Freiberg, LLC, New Orleans, Louisiana.
3. Ricardo Ruiz Guzman individually, Martin Martinez individually, and Miguel Farias and Ignacia Farias, husband and wife v. Amvac Chemical Corporation. Plaintiff's attorney, Richard Eymann, Eymann, Allison, Hunter, Jones, P.S., Spokane, Washington.
4. United Industries v. Dow AgroSciences. Plaintiff's attorney, Dudley Von Holt, Thompson Coburn LLP, St. Louis, Missouri.
5. Hardin, et al. v. BASF, U.S. District Court for the Eastern District of Arkansas. Plaintiff's attorney, William French, Looper Reed and McGraw, Dallas, Texas.
6. Timm Adams, et al. vs. U.S.A., et al., Idaho U.S.D.C. Case No. CIV 03-049-E-BLW, Plaintiff's attorneys, Holland and Hart, Boise, ID and Denver, CO.
7. Jim Aana, et al., vs. DuPont Pioneer and Gay Robinson, Inc. Civil No. CV12 00231 – LEK-BMK, United States District Court, District of Hawaii.
8. Conagra Foods, Inc, Case re Wesson oils, No. 11-cv-05379-MMM, U.S. District Court Central District of California Western District.
9. Laura Eggnatz, Katrina Garcia, and Julie Martin v. Kashi Company. Civil Case No.: 12-21678-CIV-Lenardo/O'Sullivan, U.S. District Court, Southern District of Florida, Miami Division.
10. Grocery Manufacturers Association et al. Plaintiffs, v. William H. Sorrell, Attorney General of Vermont, et al., Case No. 5:14-cv-117, United States District Court for the State of Vermont.
11. Barron v. Snyder's-Lance, Inc. No. 0:13-cv-62496-Leonard-Goodman (S.D. Fla.).

12. In re General Mills, Inc. Kix Cereal Litigation, Case No. 12-249 (KM) (JBC), U.S. District Court of New Jersey

RESEARCH and ANALYTICAL ACTIVITIES

1979-1983: Basic analytical work on the extent and distribution of soil erosion, findings used in development of the conservation provisions in the 1985 farm bill.

1981- 1983: Congressional oversight investigation of the pesticide regulatory activities of the Environmental Protection Agency, wrote a three-volume subcommittee report: "EPA Pesticide Regulatory Study." The report's findings and recommendations set in motion activities that led to the 1984-1987 NAS report *Regulating Pesticides in Food: The Delaney Paradox* (1987), the seminal 1993 NAS report *Pesticides in the Diets of Infants and Children*, and passage of the "Food Quality Protection Act" in 1996.

1988-1989: Compiled data and conducted analysis of private sector research investments in the food and agricultural industries, leading to Appendix B, "Private Sector Research Activities and Prospects", in *Investing in Research: A Proposal to Strengthen the Agricultural, Food, and Environmental System*, NAS Press, 1989.

1995-2000: Developed the first system in the U.S. that quantifies the level of adoption of Integrated Pest Management along the "IPM continuum." This early model of IPM adoption has been refined and augmented through several iterations and applications in multiple projects, some of which are ongoing.

1999-2004: Developed a method to estimate the usage of subtherapeutic antimicrobials in livestock production for growth promotion and disease prevention. Did the analytical work and was principle author of the Union of Concerned Scientists' report *Hoggin It! Estimates of Antimicrobial Abuse in Livestock* (2001).

2004-June 2012: Developed the "Nutritional Quality Index" (NQI), a food nutritional profiling system encompassing 26 essential nutrients. For the first time ever, applied the system to all foods consumed in a day by an individual. Utilized model in assessment of the fatty acid profile of organic versus conventional whole milk.

2013-2014: Posted on the M2M website at Washington State University interactive systems allowing access to: (i) USDA pesticide use data by crop, state, and over time in the U.S., and (ii) detailed information on pesticide residues and risk levels in food, for organic and conventional food, and imported foods and domestic production.

REPORTS, ARTICLES, AND PRESENTATIONS

Benbrook has published over 30 articles in peer reviewed journals, spanning multiple disciplines including agricultural biotechnology, pesticide use and residues in food, soil and water conservation, pesticide risk assessment methods, Integrated Pest Management, nutrition, germplasm conservation, scientific basis for evaluating agricultural technologies, antibiotic use and resistance, food safety, international agricultural development, sustainable agriculture, and agricultural policy.

Peer Reviewed Papers and Articles

Benbrook, C. 2016. Enhancements Needed in GE Crop and Food Regulation in the U.S. *Frontiers in Public Health, Environmental Section*. Accepted, in press.

Benbrook, C. 2016. Trends in the use of glyphosate herbicide in the U.S. and globally. *Environ. Sci. Europe* 28:3 doi 10.1186/s12302-016-0070-0

John Peterson Myers^{Email author}^[SEP], Michael N. Antoniou, Bruce Blumberg, Lynn Carroll, Theo Colborn, Lorne G. Everett, Michael Hansen, Philip J. Landrigan, Bruce P. Lanphear, Robin Mesnage, Laura N. Vandenberg, Frederick S. vom Saal, Wade V. Welshons and Charles M. Benbrook. (2016) Concerns over use of glyphosate-based herbicides and risks associated with exposures: a consensus statement. *Environmental Health* 15:19
DOI: 10.1186/s12940-016-0117-0

Dominika Średnicka-Tober, Marcin Barański, Chris J. Seal, Roy Sanderson, Charles Benbrook, Håvard Steinshamn, Joanna Gromadzka-Ostrowska, Ewa Rembiałkowska, Krystyna Skwarło-Sońta, Mick Eyre, Giulio Cozzi, Mette Krogh Larsen, Teresa Jordon, Urs Niggli, Tomasz Sakowski, Philip C. Calder, Graham C. Burdge, Smaragda Sotiraki, Alexandros Stefanakis, Sokratis Stergiadis, Halil Yolcu, Eleni Chatzidimitriou, Gillian Butler, Gavin Stewart and Carlo Leifert (2016). Higher PUFA and n-3 PUFA, conjugated linoleic acid, α -tocopherol and iron, but lower iodine and selenium concentrations in organic milk: a systematic literature review and meta- and redundancy analyses. *British Journal of Nutrition*, 115, pp 1043-1060.
doi:10.1017/S0007114516000349.

Średnicka-Tober D, Barański M, Seal C, Sanderson R, Benbrook C, Steinshamn H, Gromadzka-Ostrowska J, Rembiałkowska E, Skwarło-Sońta K, Eyre M, Cozzi G, Krogh Larsen M, Jordon T, Niggli U, Sakowski T, Calder PC, Burdge GC, Sotiraki S, Stefanakis A, Yolcu H, Stergiadis S, Chatzidimitriou E, Butler G, Stewart G, Leifert C. Composition differences between organic and conventional meat: a systematic literature review and meta-analysis. *Br J Nutr.* 2016 Mar;115(6):994-1011. doi: 10.1017/S0007114515005073. Epub 2016 Feb 16.

Philip Landrigan, Charles Benbrook. "GMOs, Herbicides, and Public Health," *New England J. Medicine* 373 (8): 693-695, August 20, 2015.

Marcin Baranski, Dominka Srednicka-Tober, Nikolaos Volakakis, Chris Seal, Roy Sanderson,

Gavin B. Stewart, Charles Benbrook, Bruno Biavati, Emilia Markellou, Charilaos Giotis, Joanna Gromadzka-Ostrowska, Ewa Rembiałkowska, Krystyna Skwarło-Son, Raija Tahvonen, Dagmar Janovska, Urs Niggli, Philippe Nicot and Carlo Leifert, “Higher antioxidant and lower cadmium concentrations and lower incidence of pesticide residues in organically grown crops: a systematic literature review and meta-analyses,” *British Journal of Nutrition*, <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=9289221&fulltextType=RA&fileId=S0007114514001366> (2014).

Charles M. Benbrook and Brian P. Baker, “Perspective on Dietary Risk Assessment of Pesticide Residues in Organic Food,” *Sustainability* 6 (6): 3552-3570; doi:10.3390/su6063552, (2014).

Charles M. Benbrook, Gillian Butler, Maged A. Latif, Carlo Leifert, and Donald R. Davis. 2013. “Organic Production Enhances Milk Nutritional Quality by Shifting Fatty Acid Composition: A United States-Wide, 18-Month Study,” *PLOS ONE*, <<http://dx.plos.org/10.1371/journal.pone.0082429> > (2013).

Benbrook, C.M. IMPACTS OF CHANGING PEST MANAGEMENT SYSTEMS AND ORGANIC PRODUCTION ON TREE FRUIT PESTICIDE RESIDUES AND RISK. *Acta Hort.* (ISHS) 1001:91-102, http://www.actahort.org/books/1001/1001_8.htm (2013).

Benbrook, C. “Are organic foods safer or healthier?,” *Annals Internal Medicine* 158 (4): 296-297 (2013).

Benbrook, C. Impacts of Genetically Engineered Crops on Pesticide Use in the U.S. – the First Sixteen Years, *Environmental Sciences-Europe*, 24:24 (2012).

Benbrook, C. “The Impacts of Yield on Nutritional Quality: Lessons from Organic Farming,” *HortScience* 44(1): 12-14 (2009).

Benbrook, C, Davis DR, and Andrews, PK. “Methodological flaws in selecting studies and comparing nutrient concentrations led Dangour et al to miss the emerging forest amidst the trees,” *Am. J. Clinical Nut.*, 90 (6): 1700-1701 (2009)

Benbrook, C McCullum-Gomez, C. “Organic vs conventional farming,” *J. Amer. Dietetic Assoc.*, 109 (5): 809-811 (2009).

Zhao, X, Carey T, Benbrook, C. “The influence of organic production on nutritional quality of fruit and vegetables: a meta-analysis,” *Hortscience* 42 (4): 885-886 (2007).

McCullum, C., C.M. Benbrook, L. Knowles, S. Roberts, T. Schryver, “Application of Modern Biotechnology to Food and Agriculture: Food Systems Perspective”, *J. Nutr. Educ Behav.*, 35: 319 (2003).

Benbrook, C. et. al. “Use of ‘resistance risk profiles’ to guide resistance management planning”,

Pesticide Outlook, 14 (3): 107-110 (2003).

Baker, B. P., Benbrook, C. M., Groth, E., and K.L. Benbrook. "Pesticide residues in conventional, integrated pest management (IPM)-grown and organic foods: insights from three US data sets." *Food Addit. Contam* 19.5 (2002): 427-46.

Benbrook, C. M. et al. "Developing a pesticide risk assessment tool to monitor progress in reducing reliance on high-risk pesticides." *American Journal of Potato Research*, 79 (2002): 183-99.

Benbrook, C. M. "Organochlorine residues pose surprisingly high dietary risks." *J Epidemiol Community Health* 56 (11): 822-23 (2002).

Benbrook, C. "Do GM Crops Mean Less Pesticide Use?," *Pesticide Outlook*, Royal Society of Chemistry, October 2001.

Benbrook, C. M. "Performance criteria for IPM: measuring IPM results," Henk, M. Kogan M. IPM in Oregon: Achievements and Future Directions, Special Report 1020 , 19-27. Corvallis: Integrated Plant Protection Center, Oregon State University Extension Service. 2000.

Benbrook, C. "Apples, Kids and Core Science," *Choices*, Am. Ag. Econ. Assoc. (2000).

Nigh, R., Benbrook, C., Brush, S., Garcia-Barrios, L., Ortega-Paczka, R., Perales, H.R. "Transgenic crops: a cautionary tale," *Science*, 287 (5460): 1927 (2000).

Lynch, S., D. Sexson, C.M. Benbrook, M. Carter, J. Wyman, P. Nowak, J. Barzen, S. Diercks, J. Wallendal, "Working out the Bugs", *Choices*, Am. Ag. Econ. Assoc. (2000).

Benbrook, C, Foster, R. "Pest management at the crossroads," *J. Econ. Entomology* 91 (2): 559-560 (1998).

Benbrook, C. "What We Know, Don't Know, and Need to Know About Pesticide Residues in Food," January 23, 1990. Chapter 15 in *Pesticide Residues and Food Safety: A Harvest of Viewpoints*, Edited by B.G. Tweedy, et. al., Amer. Chemical Society Symposium Series # 446, 1991.

Benbrook, C. "The Den Bosch Declaration: Grappling with the challenges of sustainability," *J. Soil Water Conservation* 46 (5): 349-352 (1991).

Benbrook, C. "Protecting Iowa's common wealth: Why A Leopold Center for Sustainable Agriculture?," *Journal of Soil and Water Conservation* 46 (2): 89-95. Jan-Feb. 1991.

Benbrook, C. "Sustainable agriculture: policy options and prospects," *Amer. J. Alt. Agriculture*, 4 (3-4): 153-159 (1989).

Benbrook, C. "Is American Environmental Policy Ready for de Minimis Risks in Water?," *Regulatory Toxicology and Pharmacology* 8 (3): 300-307 (1988).

Benbrook, C. "The environment and the 1990 farm bill," *J. Soil and Water Conservation* 43 (6): 440-443 (1988).

Benbrook, C. "First Principles: The Definition of Highly Erodible Land and Tolerable Soil Loss," *Journal of Soil and Water Conservation*, 43 (1): 35-38. January-February 1988.

Benbrook, C. "The Science and Art of Conservation Policy," *Journal of Soil and Water Conservation*, 41 (5): 285-291. September-October 1986

Benbrook, C., and Moses, P. "Engineering Crops to Resist Herbicides," *Technology Review*, MIT Press, 89 (8): 55-61, 79. November-December 1986.

Benbrook, C. "Funding Agricultural Economics Research: Discussion," *Am. J. Agric. Economics*, 67 (5): 1262-1263. (1985).

Benbrook, C. "Carcinogen Policy at EPA," *Science*, 219 (4586): 798. (1983).

Benbrook, C. "Erosion vs. soil productivity," *J. Soil Water Conservation*, 36 (3): 118-119 (1981).

Benbrook, C. "An examination of the fledging alliance of soil conservation and commodity price support programs," *N. Central J. Agric. Economics*, 1: 1-16. 1980

Reports, Papers, and Book Chapters (partial list)

Benbrook, C. *Transforming Jane Doe's Diet*, Critical Issue Report, The Organic Center, Boulder, CO., 2011, access at – http://www.organic-center.org/science.nutri.php?action=view&report_id=190

Benbrook, C. *The Organic Center's "Dietary Risk Index" – Tracking Relative Pesticide Risks in Foods and Beverages*, The Organic Center, Boulder, CO., 2011, access at www.organic-center.org/DRI

Benbrook, C., and D.R. Davis. *Identifying Smart Food Choices on the Path to Healthier Diets: Documentation and Applications of TOC-NQI, Version 1.1*. The Organic Center, Boulder, CO., 2011, access at: www.organic-center.org/TOC-NQI

Benbrook, C. et al. *A Dairy Farm's Footprint: Evaluating the Impacts of Organic and Conventional Dairy Production Systems*, Critical Issue Report, The Organic Center, Boulder, Co., 2010, access at –

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Benbrook, C. *What Does Sustainable Agriculture Have to Offer? Conclusions and Recommendations in Two NAS Reports*, Critical Issue Report, The Organic Center, Boulder, Co., 2010, access at –

http://www.organic-center.org/science.environment.php?action=view&report_id=180

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C., Benbrook, C., X. Zhao, J. Yanez et al. *New Evidence Confirms the Nutritional Superiority of Plant-Based Organic Foods*, State of Science review, The Organic Center, Boulder, CO., 2008, access at -- http://www.organic-center.org/science.nutri.php?action=view&report_id=145

Benbrook, C. *Simplifying the Pesticide Risk Equation: The Organic Option*, Critical Issue Report, The Organic Center, Boulder, Co., 2008, access at http://www.organic-center.org/science.pest.php?action=view&report_id=125

Benbrook, C. “Principles Governing the Long-Run Risks, Benefits, and Costs of Agricultural Biotechnology,” Chapter 11, *Biodiversity and the Law: Intellectual Property, Biotechnology, and Traditional Knowledge*. Edited by Charles McManis, Earthscan, 2007.

Benbrook, C. *Unfinished Business: Preventing E. coli O157 Outbreaks in Leafy Greens*, Critical Issue Report, The Organic Center, 2007. 21 pages.

Benbrook, C., Greene, Al., Lu, C., and Landrigan, P. *Successes and Lost Opportunities to Reduce Children’s Exposure to Pesticides Since the Mid-1990s*, Critical Issue Report, The Organic Center, 2006. 41 pages.

Benbrook, C. *E. coli – Frequently Asked Questions*, Critical Issue Report, The Organic Center, 2006. 30 pages.

Benbrook, C. *Breaking the Mold – Impacts of Organic and Conventional Farming Systems on Mycotoxins in Food and Livestock Feed*, State of Science Review, The Organic Center, 2005. 70 pages.

Benbrook, C. *Elevating Antioxidant Levels in Food through Organic Farming and Food Processing*, State of Science Review, The Organic Center, 2005. 78 pages.

Benbrook, C. “Tracking the Impacts of the FQPA on Pesticide Dietary Risks -- A Preliminary Assessment,” report commissioned by the EPA Office of Inspector General, 2005.

Benbrook, C. *Minimizing Pesticide Dietary Exposure Through the Consumption of Organic*

Food, State of Science Review, The Organic Center, 2004. 63 pages.

Benbrook, C. “Impacts of Genetically Engineered Crops on Pesticide Use in the United States: The First Thirteen Years,” Critical Issue Report, The Organic Center, 2009.

Benbrook, C. “Impacts of Genetically Engineered Crops on Pesticide Use in the United States: The First Eight Years”. 2003.

Benbrook, C. “Genetically Engineered Crops and Pesticide Use in the United States: The First Nine Years,” Ag BioTech InfoNet Technical Paper #7, 2005.

Mellon, M., Benbrook, C., and K.L. Benbrook. *Hogging It!: Estimates of Antimicrobial Abuse in Livestock*, Published by the Union of Concerned Scientists, January 2001.

Benbrook, C. et al. “Update: Pesticides in Children’s Foods, An analysis of 1998 USDA PDP Data on Pesticide Residues,” Consumers Union of the U.S., Inc. May 2000.

Benbrook, C., Groth, E., Hanson, M., and S. Marquardt. *Pest Management at the Crossroads*, Consumers Union, 1996. 272 pages.

Benbrook, C. et al. “Do You Know What You Are Eating?” Consumers Union of U.S., Inc. Public Service Projects Department, Technical Division, February 1999.

Benbrook, C., and Marquardt, D. *Challenge and Change: A Progressive Approach to Pesticide Regulation in California*, Cal-EPA, Department of Pesticide Regulation, 1993. 153 pages.

Benbrook, C. “The Road from Rio: An International Policy and Action Framework for Sustainable Agriculture and Rural Development,” (Client: FAO/UN), 1994.

Benbrook, C. “U.S. Foreign Aid: What Counts for Sustainable Development?,” (Client: Coalition of NGO/PVO groups led by Bread for the World), 1995.

Benbrook, C. “Unraveling Delaney's Paradox: Challenges for the 102nd Congress,” (Client: Institute for Science in Society).

Benbrook, C. “Costs and Benefits of Water Quality Best Management Practices,” (Client: Environmental Protection Agency).

Benbrook, C. “Sustainable Agriculture in the 21st Century: Will the Grass Be Greener?,” (Client: Humane Society of the United States), 1992.

Benbrook, C. “Natural Resources Assessment and Policy,” Chapter 12 in *Soil Management for Sustainability*, Edited by R. Lal, and F.J. Pierce. Proceedings of a Special Symposium held in Edmonton, Alberta, August, 1989 honoring the work and accomplishments of Dr. William E.

Larson.

Benbrook, C. Appendix B, "Private Sector Research Activities and Prospects", in *Investing in Research: A Proposal to Strengthen the Agricultural, Food, and Environmental System*, NAS Press, 1989.

Benbrook, C., and Brown, W. "Public Policies and Institutions to Enhance Crop Productivity," *Crop Productivity Research Imperatives Revisited*, proceedings of the Crop Productivity Revisited Conference, December 11-13, 1985, Airlie, Virginia, pp. 239-257.

Partial List of Presentations, Congressional Testimony, and Opinion Pieces

Benbrook, C. "Private Sector Initiatives to Reduce Children's Pesticide Exposures," AAAS annual meeting symposium on reducing children's pesticide risks, February 19, 2006, St. Louis, Missouri.

Landrigan, P., and Benbrook, C. "Impacts of the Food Quality Protection Act on Children's Exposures to Pesticides," AAAS annual meeting symposium on reducing children's pesticide risks, February 19, 2006, St. Louis, Missouri.

Benbrook, C. "Sowing the Seeds of Destruction," Op-Ed in the New York Times, July 11, 2003. Accessible at http://www.biotech-info.net/sowing_seeds_NYT.html

Benbrook, C.M., "Why pesticide risks matter and pose tough challenges for ecolabel programs", In Proceedings of a Conference on Ecolabels and the Greening of the Food Market, Tufts University, Boston MA, November 7-9, 2003.

Benbrook, C., and E. Groth. "Who Controls and Who Benefits from Plant Genomics?," AAAS Genomics Seminar Paper, February 19, 2000.

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1998-2002 comments to the EPA and reports on the implementation of the Food Quality Protection Act are accessible through the Consumers Union FQPA website at <http://www.ecologic-ipm.net>.

Benbrook, C. and J. Cook.. "Striving Toward Sustainability: A Framework to Guide On-Farm Innovation, Research, and Policy Analysis," March 2, 1990. Paper presented at the 1990 Pacific Northwest Symposium on Sustainable Agriculture, Vancouver, Washington.

Benbrook, C. "Conflict or Cooperation: The Path to a 1990 Farm Bill," March 22, 1990.

Speech presented before the "Who's Writing the Farm Bill?" Conference, sponsored by Governor George Mickelson and the South Dakota Department of Agriculture, Sioux Falls.

Benbrook, C., and Moses, P. "Herbicide Resistance: Environmental and Economic Issues," Proceedings, BioExpo 1986.

Agriculture and Groundwater Quality: Policy Implications and Choices. January 17, 1989. Paper presented as part of the "Technical Session on Agriculture and Groundwater Quality," 1989 Annual Meeting of the American Association for the Advancement of Science, San Francisco, California.

Practical Realities and Political Options in Overcoming World Hunger. February 28, 1989. Invited testimony before the Subcommittee on Natural Resources, Agriculture Research, and the Environment, House Committee on Science and Technology.

Sustainable Agriculture: Policy Options and Prospects. February 28, 1989. Speech before the Institute for Alternative Agriculture Symposium on Sustainable Agriculture, Washington, DC. Published in the American Journal of Alternative Agriculture 4:3-4, pp. 153-159.

Coping With Delaney's Paradox. May 15, 1989. Invited testimony before the Subcommittee on Toxic Substances, Environmental Oversight, Research and Development of the Senate Committee on Environment and Public Works.

Will S. 7222 Unravel Delaney's Paradox? June 6, 1989. Invited testimony before the Senate Labor and Human Resources Committee's Food Safety Hearing.

Priority Setting Mechanisms Utilized by the U.S. Department of Agriculture. June 20, 1989. Testimony before the Senate Agriculture Committee's Agricultural Research and General Legislation Subcommittee.

The United States' Progress Toward Sustainable Resource Development. July 31, 1989. Paper presented at the Forty-fourth Annual Meeting of the Soil and Water Conservation Society, Edmonton, Alberta, Canada.

Balancing Agricultural Production and Resource Conservation Goals Through Commodity Program Reform: Recommendations from the NAS Report Alternative Agriculture. September 21, 1989. Invited testimony before the Senate Committee on Agriculture, Nutrition, and Forestry's Subcommittee on Agriculture Production and Stabilization.

Alternatives to Pesticides: Findings and Recommendations from the NAS Report Alternative Agriculture. September 22, 1989. Invited testimony by Dr. Charles M. Benbrook and Dr. Robert M. Goodman before the Senate Committee on Environment and Public Works' Subcommittee on Toxic Substances, environmental Oversight, Research and Development Hearing on Pesticides.

Agriculture's Contribution to Water Quality Protection: Lessons from the NRC Report Alternative Agriculture. October 3, 1989. Invited testimony before a joint hearing of the House Committee on Agriculture's Subcommittee on Department Operations, Research, and Foreign Agriculture, and the House Committee on Science and Technology's Subcommittee on Natural Resources, Agricultural Research, and the Environment.

Unraveling Delaney's Paradox: Unfinished Business. October 19, 1989. Invited testimony before the House Committee on Agriculture's Subcommittee on Department Operations, Research, and Foreign Agriculture.

Opportunities to Protect Water Quality: Lessons from the NRC Report Alternative Agriculture. October 24, 1989. Invited testimony before a hearing of the Senate Committee on Agriculture, Nutrition, and Forestry's Subcommittee on Conservation and Forestry.

Quality in the American Food Industry: Lessons from the NRC Alternative Agriculture Report. November 3, 1989. Paper presented at the Seventh International Conference on Gastronomy; "Tradition and Innovation in American Food and Wine--A View From the Midwest," Chicago, Illinois.

Beware the Future: Pesticides, Public Policy, and Pest Management. Presented before the 14th Illinois Crop Protection Workshop sponsored by the Illinois Cooperative Extension Service, March 9-11, 1988.

Pesticide Food Safety Act of 1988. September 7, 1988. Invited testimony before the Subcommittee on Department Operations, Research, and Foreign Agriculture, Committee on Agriculture, U.S. House of Representatives.

Florida's Food Safety Challenges. September 27, 1988. Speech presented at the 45th Annual Convention of the Florida Fruit and Vegetable Association in Naples, Florida.

Pesticide Regulatory Policy: Creating a Positive Climate for Innovation. Presented before the Conference on Technology and Agricultural Policy on December 12, 1986. Published in Technology and Agricultural Policy: Proceedings of a Symposium, 1990, pp. 122-140.

Federal-State Cooperation in the Regulation of Pesticides, chapter in the Primer Agricultural Chemicals and the Midwestern States. Proceedings of a conference held March 27-28, 1987.

Major Board on Agriculture NAS/NRC Reports

Soil Conservation: An Assessment of the National Resources Inventory, Volumes 1 and II (1986)

Pesticide and Groundwater Quality: Issues and Problems in Four States (1986)

Pesticide Resistance: Strategies and Tactics for Management (1986)

Agricultural Biotechnology: Strategies for National Competitiveness (1987)

Educating the Next Generation of Food and Agricultural Professionals (1987)
 Regulating Pesticides in Food: The Delaney Paradox (1987)
 Designing Foods: Animal Product Options in the Marketplace (1988)
 Understanding Agriculture: Education in the Secondary Schools (1988)
 Alternative Farming (1989)
 Investing in Research: A Proposal to Strengthen the Agricultural, Food, and Environmental System (1990)
 Pesticides in the Diets of Infants and Children (1993, started in 1989)
 Soil and Water Quality: An Agenda for Agriculture (1993, started in 1988)

References

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