

Cunningham et al. Environmental Science: A Global Concern 11e  
Further readings for Chapter 9 (food)

Albrecht, Harald 2003. "Suitability of arable weeds as indicator organisms to evaluate species conservation effects of management in agricultural ecosystems. " *Agriculture, Ecosystems & Environment* 98 (1/3): 201-211

Anderson, L. 1999. *Genetic Engineering, Food and Our Environment*. Chelsea Green Publishers. A beginner's guide to this controversial topic.

Ashman, Mark R. and Geeta Puri. 2002. *Essential Soil Science: A Clear and Concise Introduction to Soil Science*. Blackwell Publishing. A good introduction.

Bailey, Britt and Marc Lappé. 2002. *Engineering the Farm: The Social and Ethical Aspects of Agricultural Biotechnology*. Island Press. A wide-ranging examination of the social and ethical issues surrounding the production and consumption of genetically modified organisms (GMOs)

Baldwin, A. Dwight Jr., Judith DeLuce, and Carl Pletsch. 1994. *Beyond Preservation: restoring and inventing landscapes*. University of Minnesota Press. A good collection of case studies in landscape restoration.

Benbrook, Charles M. 1996. *Pest Management at the Crossroads*. Consumers Union. An excellent overview of integrated pest management.

Benbrook, Charles, 1999. "Evidence of the Magnitude and Consequences of the Roundup Ready Soybean Yield Drag from University-Based Varietal Trials in 1998," *AgBioTech InfoNet Technical Paper #1*, July 13, 1999.

Benbrook, Charles. 2001. "Do GM crops mean less pesticide use?" *Pesticide Outlook* 204-207 October 2001. Although fewer herbicide active ingredients are applied on the average acre of Roundup-Ready soybeans relative to the average conventional acre, the total amount of pesticide applied is higher on the genetically-modified varieties than on traditional crops.

Bergensen, H. O. et al. 1999. *Yearbook of International Co-operation on Environment and Development 1999/2000*. Earthscan. Environmental policies of the WTO and other international agencies.

Berry, Wendell. 1982. *The Gift of Good Land : Further Essays Cultural & Agricultural*. North Point Press. Elegant essays by a great author.

Berry, Wendell. 1996. *The Unsettling of America: Culture and Agriculture 3<sup>rd</sup> ed*. Sierra Club Books. A reprint of a classic on agriculture, culture and ecology.

- Berry, Wendell. 2002. "For Love of the Land." *Sierra* 87 (4): 50-55. A farmer and conservationist is tired of being on two losing sides.
- Berry, Wendell. 2003. "The Agrarian Standard." *Orion* 21 (3): 50-55. Agrarianism is both democratic and ecological.
- Biot, Yvan and Piers M. Blaikie. 1995. *Rethinking Research on Land Degradation in Developing Countries*. Discussion Paper No 289, World Bank. A political ecology approach to understanding soil erosion in developing countries.
- Blaikie, Piers. 1985. *The Political Economy of Soil Erosion in Developing Countries*. Longman Press. A classic study of the causes and effects of erosion from a post-modernist perspective.
- Bright, Chris. 2001. "The Chocolate Factor," *World Watch* 14(6): 7-28. Describes how shade-grown cocoa might help protect Brazil's Atlantic Forest. See "New Hope for a Rainforest" in the same issue.
- Brophy, B. et al. 2003. "Cloned transgenic cattle produce milk with higher levels of  $\beta$ -casein and k-casein." *Nature Biotechnology*, published online, doi:10.1038/nbt783 (2003). Protein-rich milk from modified cows could speed dairy processing.
- Brown, Kathryn. 2001. "Seeds of Concern," *Scientific American* 284(4): 50-57. First in a series of special reports on the safety of genetically modified food crops.
- Brown, Lester. 2005. *Outgrowing the Earth: The Food Security Challenge in an Age of Falling Water Tables and Rising Temperatures*. Earth Policy Institute. Environmental damage threatens food supplies.
- Brown, Lester 2002. "World's rangelands deteriorating under mounting pressure." *Eco-Economy Update #6*. Earth Policy Institute. Overgrazing causes soil erosion.
- Brown, Lester. 1999. "Feeding nine billion". In *State of the World 1999: A Worldwatch Institute Report on Progress Toward a Sustainable Society*. Norton. Will there be enough for everyone to eat? This author thinks not.
- Brown, Lester. 1997. "Who Will Feed China," *E Magazine* 8(1):36-41. The world's most populous country is industrializing rapidly, and the helter-skelter process is leading to wholesale destruction of cropland and creating a huge international grain deficit.
- Brown, Lester. R. 1994. "Facing Food Insecurity," *State of the World 1994*. Worldwatch Institute. A pessimistic appraisal of our chances of feeding future world populations.
- Buchs, W (ed). 2003. *Biotic Indicators for Biodiversity and Sustainable Agriculture*. Elsevier. A broad discussion of agriculture and biodiversity.

Buchman, Stephen L. and Gary Paul Nabhan. 1996. *The Forgotten Pollinators*. Island Press. The insects, birds, and mammals that pollinate our crops are disappearing.

Certini, Giacomo and Riccardo Scalenghe. 2006. *Soils: Basic Concepts and Future Challenges*. Cambridge University Press. A comprehensive text on all aspects of soil.

Charles, Daniel. 2001. *Lords of the Harvest: Biotech, Big Money, and the Future of Food*. Perseus Books. An investigative journalist gives us a fly-on-the-wall view of the agrobiotech industry.

Charman, P.E.V. and B.W. Murphy. 2000. *Soils: Their properties and Management 2<sup>nd</sup> ed.* Oxford University Press. Addresses the complex nature and needs of soils in a clear and practical manner

Chavez, F. P., Ryan, J., Lluch-Cota, S.E. & Niquen, M. 2003. "From anchovies to sardines and back: multidecadal change in the Pacific Ocean." *Science*, 299, 217 - 221, (2003). Man's greedy take from the sea may not have caused the demise in the 1950s California's sardine-canning business. A natural, five-decade Pacific Ocean cycle may have been to blame.

Chiappone, M., et al. 2004. "Impacts of lost fishing gear on coral reef sessile invertebrates in the Florida Keys National Marine Sanctuary" *Biological Conservation* 121 (2): 221-230. Although lost hook-and-line fishing gear is ubiquitous in the Florida Keys, less than 0.2% of the coral reef invertebrates in the habitats studied are adversely affected.

Clay, Jason. 2003. *World Agriculture and the Environment*. Island Press. A commodity-by-commodity guide to agricultural practices and impacts.

Conway, Gordon. 2000. "Genetically modified crops: risks and promise." *Conservation Ecology* 4(1):2 [online] URL: <http://www.consecol.org/vol4/iss1/art2>. Suggestions for actions to improve research, innovation, and acceptance of GMOs (genetically modified organisms) in developing countries.

Conway, Gordon. 2000. "Food for All in the 21<sup>st</sup> Century." *Environment January/February 2000*: 9-1. Suggests policies for a doubly green revolution that could boost crop yields to keep pace with population growth.

Cordain, L. et al. 2002. "Fatty acid analysis of wild ruminant tissues: evolutionary implications for reducing diet-related chronic disease". *European Journal of Clinical Nutrition*, 56, 181 – 191. The meat of wild animals has less total fat and more omega-3 fatty acids than grain-fed animals. Reverting to a diet more like that of hunter-gatherer societies might be healthier for us.

Crawley, M. et al., 2001. "Transgenic Crops in Natural Habitats." *Nature* Vol. 409, No. 6821 (February 8, 2001), pgs. 682-683.

Crosby, Alfred. 1997. *Germs, Seeds, and Animals: Studies in Ecological History*. M.E. Sharpe Co. A study in how rich countries benefit from biological and agricultural resources or poorer countries.

Curtis, T. P., Sloan, W. T. & Scannell, J. W. 2002. "Estimating prokaryotic diversity and its limits". *Proceedings of the National Academy of Sciences USA*, doi:10.1073/pnas.142680199. There could be more species of bacteria in a ton of soil than all the species in the oceans, say UK researchers.

Dansinger, M. L., et al. 2005. "Comparison of the Atkins, Ornish, Weight Watchers, and Zone Diets for Weight Loss and Heart Disease Risk Reduction: A Randomized Trial." *Journal of the American Medical Association* 293 (1): 43-53. It doesn't matter much which diet you choose as long as you stick with it.

Davison, P. A., Hunter, C. N. & Horton, P. 2002. "Overexpression of beta-carotene hydroxylase enhances stress tolerance in Arabidopsis." *Nature*, 418, 203 - 206, (2002). Extra gene copies could increase crops' natural protection against light and heat.

Daniels, Tom and Deborah Bowers. 1997. *Holding Our Ground: Protecting America's Farms and Farmlands*. Island Press. Promotes small-scale, regenerative farming.

Dawkins, M. S., Donnelly, C. A. & Jones, T. A. 2004. "Chicken welfare is influenced more by housing conditions than stocking density." *Nature* 427: 342-345. Studies suggest that temperature and humidity are more important to chicken welfare than stocking density.

Diamond, Jared and Peter Bellwood. 2003. "Farmers and their languages: the first expansions." *Science* 300: 597-603. Comparative linguistics can show us routes of migration and relationships between cultures and farming practices.

Diamond, Jared. 1998. *Guns, Germs, and Steel*. W.W. Norton & Co. A fascinating look at how the environment has shaped human cultures.

Dobbs, David. 2000. *The Great Gulf: Fishermen, Scientists, and the Struggle to Revive the World's Greatest Fishery*. Island Press. A fascinating and compelling look at the collapse of the New England cod fishery.

Doebly, J. F. 2004. The genetics of maize evolution. *Annual Review of Genetics* 38:37-59. Genetic analysis of maize and its closest wild relative, teosinte, help understand the domestication and breeding of this important crop.

Dower, Roger, et al. 1997. *Frontiers of Sustainability: Environmentally Sound Agriculture, Forestry, Transportation, and Power Production*. Island Press. A plan for achieving sustainable development in the United States.

Drinkwater, L. E., Wagoner, P. & Sarrantonio, M. 1998. "Legume-based cropping systems have reduced carbon and nitrogen losses". *Nature* 396: 262-265. Organic soils hold nutrients better than those farmed with conventional techniques.

Eggermont, H. and D. Verschuren. 2003. "Impact of soil erosion in disturbed tributary drainages on the benthic invertebrate fauna of Lake Tanganyika, East Africa." *Biological Conservation* 113 (1): 99-109. Siltation is a leading cause of aquatic ecosystem damage.

Ellis, Richard. 2003. *The Empty Ocean*. Island Press. Documents the precipitous decline of world fisheries and the dire state of the marine environment.

Estabrook, Barry. 2003. "The Ugly Fish Tale." *OnEarth*. 25 (2): 23-25. How the Patagonia Toothfish became endangered Sea Bass.

Finney, Bruce P. et al. 2002. "Fisheries productivity in the northeastern Pacific Ocean over the past 2,200 years." *Nature* 416: 729-733 (18 April 2002). Paleocological studies suggest that over the past 2,000 years ocean productivity has fluctuated widely. This environmental variable complicates analysis of the effects of global warming and industrial-scale fishing on seafood supplies.

Food and Agriculture Organization (UN). 2002. *The State of World Fisheries and Aquaculture*. Published on-line <http://www.fao.org/docrep/005/y7300e/y7300e00.htm> an up to date summary of aquaculture and fishing.

Food and Agriculture Organization. 2003. *World agriculture: towards 2015/2030* Published online at <http://www.fao.org/docrep/004/y3557e/y3557e00.htm>. A good data source.

Food and Agriculture Organization (UN). 2004. *The State of Food Insecurity in the World: Monitoring progress towards the World Food Summit and the Millennium Development Goals*. Published by the Food and Agriculture Organization of the United Nations Viale delle Terme di Caracalla, 00100 Rome, Italy. Available in pdf form at [http://www.fao.org/documents/show\\_cdr.asp?url\\_file=/docrep/007/y5650e/y5650e00.htm](http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/007/y5650e/y5650e00.htm). Very useful data.

Fowler, Cary and Pat Mooney. 1990. *Shattering: Food, Politics, and the Loss of Genetic Diversity* University of Arizona Press. How modern agriculture has reduced the genetic diversity of traditional crops.

Freking, B.A et al. 2002. "Identification of the single base change causing the callipyge muscle hypertrophy phenotype, the only known example of polar overdominance in Mammals." *Genome Research* 10.1101/gr.571002 (2002). DNA change between genes causes big-bottomed sheep.

Freyfogle, Eric T. (ed). 2001. *The New Agrarianism*. Island Press. A group of academics, historians, Amish farmers, and urban activists discuss alternatives to industrial agriculture.

Frongillo, E.A., et al. 2000. "Nutritional consequences of food insecurity in a rural New York State County" Discussion Paper no. 1120-97. Institute for Research on Poverty, University of Wisconsin. Those who can't afford a good diet often buy the wrong kinds of food.

Fukuoka, M. 1978. *One Straw Revolution: An Introduction to Natural Farming*. Rodale Press. An inspiring account of one man's successful experiments in organic gardening.

Gadsby, Patricia. 2004. "The Inuit Paradox." *Discover* 26 (10): 48-55. How did traditional Inuit diets provide enough vitamins?

Gallavotti, A. et al., 2004. "The role of barren stalk1 in the architecture of maize." *Nature* 432: 630 - 635. Genetic analysis of maize and its closest wild relative, teosinte, help understand the domestication and breeding of this important crop.

Gardner, Gary and Brian Halweil. 2000. "Escaping Hunger, Escaping Excess." *World Watch* 13 (4): 24-35. Some of us are overfed while others are starving. What can we do about it?

Gasser, C., and F. Fraley. 1992. "Transgenic Crops," *Scientific American* 266 (6): 62-70. Argues that genetic engineering has the potential to make important contributions to world food supplies.

Glanz, James. 1995. *Saving Our Soil: Solutions for sustaining Earth's vital resource*. Jonson Books. Without soil, we don't eat.

Glatzel, M. et al. 2002. "Sharply increased Creutzfeldt-Jakob disease mortality in Switzerland." *Lancet* 360,: 139 – 141. The number of people dying from sporadic Creutzfeldt-Jakob disease (CJD) has risen sharply in Switzerland. The finding is raising fears that 'mad cow disease' could have spread to humans in another form

Gliessman, S. R., ed. 1990. *Agroecology: Researching the Ecological Basis for Sustainable Agriculture*. Springer Verlag. Describes ecological basis of agriculture, soil conservation, nutrient restoration, and biological pest control.

Geertz, Clifford. 1963. *Agricultural Involution: The Process of Ecological Change in Indonesia*. Association of Asian Studies Monographs and Papers, no.11. University of California Press. A classic study of the peasant agriculture in Southeast Asia.

Gerrard, John. 2000. *Fundamentals of Soil*. Routledge Press. An introduction to soil properties and worldwide classification.

Gold, Paul E. et al. 2003. "The Lowdown on Ginkgo Bioloba." *Scientific American* 288 (4): 86-91. This popular herbal supplement may slightly improve your memory, but you can get the same effect by eating a candy bar.

Gollin, Douglas. 1997. *Conserving Genetic Resources for Agriculture: Local Farmers, International Organizations, and Intellectual Property Rights..* Paper presented to Globalization and Sustainable Livelihood Systems Workshop, Institute for Social, Economic and Ecological Sustainability (ISEES), April 11-12, 1997. University of Minnesota.

Goodall, Jane. 2004. "When primates become bushmeat." *WorldWatch* 17 (4): 20. Great apes could become extinct in the Congo Basin within the next 15 years.

Grant, C. A., and G. P. Lafond. 1993. "The Effects of Tillage Systems and Crop Sequences on Soil Bulk-Density and Penetration Resistance on a Clay Soil in Southern Saskatchewan," *Canadian Journal of Soil Science* 73 (2): 223-225. An interesting comparison of no-till, minimum-till, and conventional tillage on soil compaction and water content of clay soils.

Greenpeace. 1996. "Turning the Tide," *Greenpeace Quarterly* 1 (3): 6-8. The reauthorization of the Magnuson Act finally provides some protection for America's fisheries.

Hager, A.G. 1996. "Weed Resistance to Herbicides: Understanding How Resistance Develops in Weeds is the First Line of Defense," *Weed Control Manual: Volume 30*. Willoughby, Ohio: Meister Publishing Company.

Hall-Spencer, J., Allain, V. & Fossa, J. H. 2002. Trawling damage to Northeast Atlantic ancient coral reefs. *Proceedings of the Royal Academy of Sciences B*, (online publication) DOI: 10.1098/rspb.2001.1910 (2002). Trawling is destroying deepwater corals, some of which may be 8,000 years old.

Halweil, Brian. 2004. *Eat Here: Homegrown Pleasures in a Global Supermarket*. W.W. Norton Co. A modest proposal for slow-cooked, locally grown food.

Halweil, Brian. 2000. "Where Have All the Farmers Gone?" *World Watch* 13 (5): 12-28. As farms become industrialized, those who are the most knowledgeable stewards of the land are being forced into servitude or driven out.

Halweil, Brian. 2002. "Farming in the Public Interest." *State of the World 2002*. W.W.Norton & Co for the Worldwatch Institute,

Halweil, Brian. 2003. "The Argument for Local Food." *World Watch* 16 (3):20-27. A diner in Barre, Vermont shows how local food can make sense.

Hamilton, N. D. (Spring) 1993. "Issues Shaping the Future," *William Mitchell Law Review* 19 (2): 265-270. Raises some interesting questions about the right to farm and duties of stewardship from owning or using farmland.

Hansen, Laura C. and John J. Obrycki, "Field Deposition of BT Transgenic Corn Pollen: Lethal Effects on the Monarch Butterfly," *Oecologia* Vol. 125 (2): 241-248.

Hardell, Lennart and Mikael Eriksson, 1999 "A Case-Control Study of Non-Hodgkin Lymphoma and Exposure to Pesticides," *Cancer* Vol. 85 (6): 1353-1360. There is a significant correlation between exposure to common agricultural pesticides and some lymphomas.

Hartshorn, A. S., et al. 2006. "Prehistoric agricultural depletion of soil nutrients in Hawai'i" *PNAS* 103 (29): 11092-11097. Geochemical and archaeological studies show that prehistoric farmers significantly depleted soil nutrients in Hawaii

Harwood, R. R. 1990. "A History of Sustainable Agriculture," in *Sustainable Agricultural Systems*. Edited by C. A. Edwards, et al. The Soil and Water Conservation Society. A readable survey of sustainable agriculture through history.

Hellmich, R. L. et al. Monarch larvae sensitivity to *Bacillus thuringiensis* purified proteins and pollen. *Proceedings of the National Academy of Sciences*, published on-line September 14, 2001, 10.1073/pnas.211297698 .

Helvarg, David. 2003. "The last fish." *Earth Island Journal* 18 (1):26-30. America's fish stocks are crashing faster than Wall Street stocks last July, mostly for the same reason: The sea lions are guarding the salmon pens.

Hemenway, Toby. 2001. *Gaia's Garden: A Guide to Home-Scale Permaculture*. Chelsea Green.. Describes how the husbandry of living resources, particularly partnerships between plants and soil organisms, can help support sustainable agriculture.

Hilbeck, A et al, 1998. "Effects of Transgenic *Bacillus thuringiensis* corn-fed prey on Mortality and Development Time of Immature *Chrysoperla carnea* (Neuroptera: Chrysopidae)." *Environmental Entomology* Vol. 27 (2): 480-487.

Hilborn, R. et al . 2003. "Biocomplexity and fisheries sustainability." *Proceedings of the National Academy of Sciences USA* 100: 6564 –6568. Salmon follow complex and mysterious population swings.

Hildyard, N., et al. 1991. "Declaration of the International Movement for Ecological Agriculture," *The Ecologist* 21 (2): 1107-1112. The conclusion of a special issue devoted to a critique of the FAO and modern, high-technology agriculture, with strategies for encouraging traditional indigenous forms of food production.

Hites, R. A. *et al.* 2004. "Global assessment of organic contaminants in farmed salmon." *Science* 303: 226-229. Farmed salmon carry up to ten times as much carcinogens as wild fish.

Holdrege, Craig and Steve Talbott. 2001. "Sowing Technology." *Serra* 86 (4): 34-47. A series on biotechnology.

Hopper, K., *et al.* 1997. "Analysis of Breast Milk to Assess Exposure to Chlorinated Contaminants in Kazakhstan," *Environmental Health Perspectives* 105 (11): 1250-1254. Fat-soluble persistent pollutants are concentrated in mother's milk.

Huang, J., Rozelle, S., Pray, C. & Wang, Q. 2002. "Plant biotechnology in China." *Science*, 295, 674 - 677, (2002). China is spending more on plant biotechnology products than country outside North America

Imhoff, Daniel. 2003. *Farming with the Wild: Enhancing Biodiversity on Farms and Ranches*. Watershed Media and Sierra Club Books. Beautiful photos and inspiring stories of regenerative agroecology.

Iudicello, S. *et al.* 1999. *Fish, Markets, and Fishermen: The Economics of Overfishing*. Island Press. Why are world fisheries collapsing and what can be done about it?

Jackson, Dana L. and Laura L. Jackson. 2002. *Farm as Natural Habitat: Reconnecting Food Systems with Ecosystems*. Island Press. This book offers compelling examples of an alternative agriculture that can produce not only healthful food, but fully functioning ecosystems and abundant populations of native species.

Jackson, Wes, Wendell Berry, and Bruce Colman (eds). 1984. *Meeting the Expectations of the Land: Essays in Sustainable Agriculture and Stewardship*. North Point Press. A classic in sustainable agriculture.

Jones Dena. 2004. "Crimes Unseen." *Orion* 23 (4): 60-67. Slaughterhouses are more brutal than they need to be.

Johnson, D.G. 2000. "Population, food and knowledge". *American Economic Review* 90(1): 1-14. Argues that we need more agricultural research if we are to feed everyone.

Juteau, P. *et al.* 2004. "Swine waste treatment by self-heating aerobic thermophilic bioreactors." *Water Research* 38 (3): 539-546. An innovative method for treating hog waste.

Kaplinsky N, Braun D, Lisch D, Hay A, Hake S, and Freeling M. 2002. "Maize transgene results in Mexico are artifacts". *Nature* 416: 601-604. Shows that reports of GMO contamination in Mexico are incorrect.

Kaati, G., Bygren, L.O. & Edvinsson, S. 2002. "Cardiovascular and diabetes mortality determined by nutrition during parents' and grandparents' slow growth period." *European Journal of Human Genetics*, published online, doi:10.1038/sj.ejhg.5200859 (2002). How you eat may affect your descendant's health.

Kimbrell, Andrew (ed). 2002. *Fatal Harvest : The Tragedy of Industrial Agriculture*. Island Press. An impassioned collection of essays arguing for an end to industrial agriculture and a return to an agrarian way of life.

Kingsolver, Barbara. 2008 *Animal, Vegetable, Miracle: A Year of Food Life*. Harper Perennial. The author and her family attempt to eat only what they can grow on their farm in Virginia or buy from local sources.

Kleijn, D., et al. 2001. "Agri-environment schemes do not effectively protect biodiversity in Dutch agricultural landscapes". *Nature* 413, 723–725 (2001)

Klinkenborg, V. 1993. "Barnyard Biodiversity," *Audubon* 95 (1): 78-82. Traditional domestic breeds around the world are being replaced by a few commercial varieties. The resulting loss of genetic diversity could spell disaster in the future.

Knight, Richard L., et al. 2002. *Ranching West of the 100th Meridian: Culture Ecology and Economic*. Island Press. A thought-provoking look at ranchers' ecological commitments to the land, their cultural commitments to American society, and the economic role ranching plays in sustainable food production and the protection of biodiversity.

Kong, Q. et al. 2001. "Oral immunization with hepatitis B surface antigen expressed in transgenic plants". *Proceedings of the National Academy of Sciences*, 98, 11539 - 11544, (2002). GMO crops could provide edible vaccines.

Kratz, Vikky. 2001. "The Hidden Life of a Biogineered Meal." *Sierra* 103(1): 24-25. A brief but useful summary of what's in our food.

Krimsky, Sheldon and Roger Wrubel. 1996. *Agricultural Biotechnology and the Environment*. University of Illinois Press. A comprehensive and thoughtful analysis of both the promise and the hazards of biotechnology as it is being applied in agriculture.

Kuiper, Harry A. 2000. "Risks of the release of transgenic herbicide-resistant plants with respect to humans, animals and the environment." *Crop Protection* 19: 733. Will we create superweeds?

Lappe, Marc and Britt Bailey 1998. *Against the Grain : Biotechnology and the Corporate Takeover of Your Food*. Island Press. A hard-hitting critique of biotechnology and genetically modified food crops.

Larsen, Janet. 2003. "Deserts advancing, civilization retreating." *Eco-Economy Update* #23. Earth Policy Institute. Degrading soil damages our economy.

Leonard, William R. 2002 "Food for thought: Dietary change was a driving force in human evolution." *Scientific American* 288(6): 106-115. An interesting comparison of energy content of different diets.

Lewis, W.J., et al. 1997. "A total system approach to sustainable pest management," *Proceedures of the National Academy of Sciences, USA* 94(23):12243-12248. A fundamental shift to a total system approach for crop protection is urged to resolve escalating economic and environmental consequences of combating agricultural pests.

Losey, J. E., Rayor, L. S. & Carter, M. E. Transgenic pollen harms monarch larvae. *Nature*, 399, 214, (1999).

Mader, P. et al. 2002. "Soil fertility and biodiversity in organic farming." *Science* 296: 1694-1697. A long-term study of organic farms Switzerland shows lower yields but more healthy fields than conventional agriculture.

Manning, Richard. 2004. "The Oil We Eat." *Harper's Magazine* 308 (1845): 37-43. Following the food chain back to Iraq.

Manning, Richard. 2004. *Against the Grain: How Agriculture Has Hijacked Civilization*. North Point Press. A provocative claim that agriculture has been bad for us and our environment.

Manning, Richard. 2000. *Food's Frontier: The Next Green Revolution*. North Point Press. Hopeful stories of development of sustainable agriculture around the world.

Martineau, Belinda. 2001. *First Fruit: The Creation of the Flav'r Savr™ Tomato and the Birth of Biotech Food*. McGraw Hill. A geneticist explores the development and eventual failure of the Flav'r Savr tomato.

Marris, Emma. 2005. "The forgotten ecosystem." *Nature* 437: 944-945. Everyone has heard about the Amazon rainforest, but Brazil's Cerrado is arguably under greater threat.

Mas, A. H. and T. V. Dietsch. 2004. "Linking Shade Coffee Certification To Biodiversity Conservation: Butterflies And Birds In Chiapas, Mexico." *Ecological Applications* 14 (3): 642-654. Shade-grown coffee have higher numbers of birds and butterflies than sun grown coffee plantations.

McCann, E., et al. 1997. "Environmental Awareness, Economic Orientation, and Farming Practices: A Comparison of Organic and Conventional Farmers," *Environmental Management* 21 (5): 747-758. An examination of similarities and differences in awareness of and concern for environmental problems between organic and conventional farmers.

McKibben, Bill. 2005. "The Cuba Diet." *Harper's* 310 (1859): 61-70. Semi-organic agriculture, low-input agriculture has allowed Cuba to feed its population in spite of a lack of oil, machines, and chemicals.

Meir, J. S. et al. 2000. "Primary Prevention of Coronary Heart Disease in Women through Diet and Lifestyle." *New England Journal of Medicine* 343 (1): 16-22. Women, also, are susceptible to heart disease.

Menzel, Peter and Faith D'Aluisio. 2005. *Hungry Planet: What the world eats.* Ten Speed Press. An interesting comparison of what 30 families from 24 countries eat in a typical week.

Mittal, Anuradha. 1997. "Food Security: A Human Right," *Earth Island Journal* 12 (1): 24-26. The case for recognizing the human right to food.

Mittal, Anuradha. 2000. "Behind Indonesia's Hunger Myth," *Earth Island Journal* 14 (4): 32-34. Claims of food shortages are used as an excuse for repression

Montaigne, Fen. 2007. "Still Waters: The global fish crisis." *National Geographic* 211 (4): 32-41. High tech harvesting and wasteful management hve brought world fish stocks to dangerous lows. Great photos.

Montgomery, David R. 2003. *King of Fish: The Thousand-Year Run of Salmon.* Westview Press. The author shows how we have damaged habitat and depleted once-huge runs of the valuable fish.

Motavalli, Jim. 2002. "Across the Great Divide Environmentalists and Animal Rights Activists Battle Over Vegetarianism." *E Magazine* Vol XIII(1): 23-25. Looks at why environmental and animal rights groups tend to antagonize one another, rather than work together, when it comes to vegetarianism.

Musick, J.A. et al., November 2000, "Marine, estuarine, and diadromous fish stocks at risk of extinction in North America (exclusive of pacific salmonoids)," *Fisheries* 25 (11): 6-10. Makes a case for protection of endangered fish stocks.

Myers, Ransom A. and Boris Worm. 2003. "Rapid Worldwide Depletion of Predatory Fish Communities." *Nature* 423: 280-283. Ninety percent of all large predatory marine fish are estimated to have been eliminated by overfishing.

Nabhan, Gary P. 2001. *Coming Home to Eat: The Pleasures and Politics of Local Foods.* W.W. Norton Company. A celebration of food and culture with a social conscience chronicles a year of living on a diet consisting of 90% native flora and fauna, found within 250 miles of his Arizona home.

Nabhan, Gary P., Wendell Berry, and Miguel A. Altieri. 2002. *Enduring Seeds: Native American Agriculture and Wild Plant Conservation*. Univ. of Arizona Press. A history of and the principles behind Native American farming methods and how they can help us achieve sustainability.

National Research Council. 1996. *Ecologically Based Pest Management: New Solutions for a New Century*. National Academy Press. A good survey of biocontrol.

National Research Council. 2002. *Animal Biotechnology: Science Based Concerns*. National Academy Press. Identifies science-based and policy-related concerns about animal biotechnology.

Naylor, Rosamond L., et al. 2003. "Salmon aquaculture in the Pacific Northwest: a global industry with local impacts." *Environment* 45 (8): 18-39. Aquaculture has many adverse environmental impacts.

Naylor, Rosamond L., et al. 2000. "Effect of Aquaculture on World fish Supplies." *Nature* 405: 1017-1024. Farming of carnivorous species such as salmon and sea bass consumes more protein than it produces.

Nestle, Marion. 2007. *What to Eat*. North Point Press. How do we choose what to eat? A distinguished nutritionist gives practical advice on diet and health.

Nestle, Marion. 2003. *Safe Food*. University of California Press. Describes how current policies failed to prevent outbreaks of numerous food-borne pathogens.

Nestle, Marion. 2002. *Food Politics: How the Food Industry Influences Nutrition and Health*. University of California Press. A convincing description of how the food industry shapes government policy and public opinion.

Nierenberg, Danielle. 2004. "Factory Farming in the Developing World." *World Watch* 17 (3): 10-19. Explores the environmental and social costs of industrial agriculture.

Nordhaus, Hannah.. 2007. "The Silence of the Bees" *High Country News* 39 (5): 8-13. A mysterious die-off is decimating American bee colonies.

Normile, Dennis. 2000. "Hopes Grow for Hybrid Rice to Feed Developing World" *Science* (US) 288 (5465): 429-433. Progress towards high-yielding rice varieties at the International Rice Research Institute in the Philippines.

Norse, D. 1992. "A New Strategy for Feeding a Crowded Planet," *Environment* 34 (5): 6-10. Discusses the carrying capacity of the earth and the need for new strategies and structures to feed expected world populations.

Norse, E. and L. Watling. 1999. "Clearcutting the Ocean Floor," *Earth Island Journal* Summer 1999: 29-32. Trawling for bottom fish is destroying ocean habitat.

Oberhauser, K. S. et al. 2001. "Temporal and spatial overlap between monarch larvae and corn pollen." *Proceedings of the National Academy of Sciences* 98: 11913-11918. published on-line at [www.pnas.org/cgi/doi/10.1073/pnas.211234298](http://www.pnas.org/cgi/doi/10.1073/pnas.211234298).

Papadaki, A. & Scott, J. A. 2002. "The impact on eating habits of temporary translocation from a Mediterranean to a Northern European environment". *European Journal of Clinical Nutrition*, 56: 455 – 461. A group of Greek students who had eaten a healthy Mediterranean diet at home, switched to chips and savory snacks washed down with sugary drinks and beer while in Scotland.

Pauly, Daniel and Jay Maclean. 2002. *In a Perfect Ocean: The State of Fisheries and Ecosystems in the North Atlantic Ocean*. Island Press. While the effects of a fisheries collapses on local economies and fishing-dependent communities have generated much discussion, little attention has been paid to their impacts on the overall health of the ocean's ecosystems.

Pauly, Daniel and Reg Watson. 2003. "Counting the Last Fish" *Scientific American* 289 (1): 42-47. Overfishing has decimated marine fish and reduced ecosystem complexity.

Pauly, Daniel, et al. 2003. "The future of fisheries." *Science* 302: 1359-1361. Part of a special issue on the state of the planet.

Pauly, D, et al. 1998. "Fishing down marine food webs." *Science* 279: 880-883. We are harvesting lower trophic levels as top predators decline.

Pieri, Christian, et al. 2002. *No-till Farming for Sustainable Rural Development*. Agricultural & Rural Development Working Paper. International Bank for Reconstruction and Development. Low-input farming can save money while preserving the soil.

Pimentel, D. 1995. "Protecting Crops," pp. 49-66 in *The Literature of Crop Science*, W.C. Olsen (ed). Cornell University Press. A good survey of agricultural pesticide use in world agriculture.

Pinstrup-Andersen, Per. 2007. "Still Hungry" *Scientific American* 297 (3): 96-103. One eighth of the world still doesn't have enough to eat.

Pleasants, J. M. et al. 2001 "Corn pollen distribution on milkweeds in and near cornfields". *Proceedings of the National Academy of Sciences* 98: 11919-11924. published on-line at [www.pnas.org/cgi/doi/10.1073/pnas.211287498](http://www.pnas.org/cgi/doi/10.1073/pnas.211287498).

Pollan, Michael 2008. *In Defense of Food: An Eater's Manifesto*. Penguin Press. Three essays on what we should and shouldn't eat.

- Pollan, Michael. 2007. *The Omnivore's Dilemma: A Natural History of Four Meals*. Penguin. A fascinating tour of both conventional and alternative food producers.
- Pollan, Michael. 2002. *The Botany of Desire: A Plant's-Eye View of the World*. Random House. A fascinating history of our relationship with plants.
- Pollan, Michael. 2002. "Power Steer" *New York Times Magazine* 31 Mar 2002 p 44-77. A sobering look at how the U. S. meat industry works.
- Pollan, Michael. 2003. "Getting Over Organic." *Orion* 22 (4): 11-15. Argues that organic has lost much of its meaning.
- Pollan, Michael. 1991. *Second Nature: A gardener's education*. Atlantic Monthly Press. A delightful set of essays on philosophy, nature, and gardening.
- Popkin, Barry M. 2007 "The World Is Fat." *Scientific American* 297 (3): 88-95. More people are now overweight than underweight.
- Postel, Sandra. 2001. "Growing More Food with Less Water." *Scientific American* 284 (2): 46-51. Argues that if the world hopes to feed growing populations, irrigation must become less wasteful and more widespread.
- Pretty, Jules. 2003. "The Promise of a Sustainable Harvest: Agroecology in Developing Countries" *Environment* 45 (9): 8-21. Sustainable farming seeks to make the best use of nature's goods and services without significant damage to the environment.
- Quist, David & Ignacio H. Chapela 2001. "Transgenic DNA introgressed into traditional maize landraces in Oaxaca, Mexico" *Nature* 414: 541-543 (29 November 2001). DNA from transgenic maize was reported in native varieties in Oaxaca, Mexico where the crop is thought to have originated. This report was subsequently withdrawn due to experimental errors.
- Reijnders, L. and S. Soret. 2003. "Quantification of the environmental impact of different dietary protein choices." *American Journal of Clinical Nutrition* 78 (3): 664-668. Quantitative environmental evaluations of meat, fresh vegetables, and processed protein.
- Reganold, J. P., Glover, J. D., Andrews, P. K. & Hinman, H. R. 2001. "Sustainability of three apple production systems." *Nature*, 410: 926-930. Organic apple orchards in the United States were more profitable and sustainable than non-organic ones.
- Reagnold, J. P., R. I. Papendick, and J. F. Parr. 1990. "Sustainable Agriculture," *Scientific American* 262 (6): 112-120. Describes environmental and economic rewards of alternative agriculture.
- Rissler, Jane and Margaret Mellon, 1996. *The Ecological Risks of Engineered Crops* MIT Press. Suggests ways to evaluate ecological risks of genetically modified organisms.

Rogers, P., et al. 1999. "Biological Warfare against Crops," *Scientific American* 280(6): 70-75. Intentionally releasing organisms that kill an enemy's food crops is a potentially devastating weapon of warfare and terrorism.

Rosset, Peter and Medea Benjamin. 1994. *Greening the Revolution: Cuba's Experiment with Organic Agriculture*. Ocean Press.

Roughgarden, J and Smith, F. 1996. Why fisheries collapse and what to do about it. *Proc. Nat. Acad. Sci. (USA)* 93: 5078-5083. A plea for rational resource management.

Royal Society of Canada, 2001. *Elements of precaution: recommendations for the regulation of food biotechnology in Canada* (Ottawa: Royal Society of Canada, January 2001). Available from the Royal Society at (Ottawa, Canada) phone: (613) 991-6990 or at <http://www.rsc.ca/foodbiotechnology/-GMreportEN.pdf>.

Royte, Elizabeth. 2003. "Don't Spoil the Soil" *On Earth* 25 (2): 26-31. Describes the values and threats to crytobiotic desert soil.

Rudenko, L, & Matheson, J.C. (2007). The US FDA and animal cloning: Risk and regulatory approach. *Theriogenology* 67(1), 198-206. Discusses safety of cloned meat and milk for human consumption.

Runge, C. F., et al. 2003. *Ending Hunger in Our Lifetime: Food Security and Globalization*. International Food Policy Research Institute. Suggests that scientific innovation, global economics and increased investment can end world hunger.

Ruttan, V. W. 2004. *Social Science Knowledge and Economic Development: An Institutional Design Perspective*. Univ. of Michigan Press. Argues that government investments and programs often have unintended consequences, sometimes for the better.

Ruttan, V. W. 2002. "Productivity growth in world agriculture: sources and constraints." *Journal of Economic Perspectives* 16 (4): 161-184. Examines technology transfer in world agriculture?

Ruttan, V. W. 1999. "The Transition to Agricultural Sustainability". *Proceedings of the National Academy of Science USA*. 96: 5960-5967. A distinguished economist looks at technological innovation and sustainability.

Ryan, John E. 2003. "Feedlots of the Sea." *World-Watch* 16 (5): 22-29. A good discussion of the problems of fish farming.

Salanoubat, M. 2002 Genome sequence of the plant pathogen *Ralstonia solanacearum*. *Nature* 415: 497-502. Southern wilt or brown may be the most important plant disease in the world.. Sequencing its genome may reveal ways to combat this important plant pathogen.

Samaha, F. F., et al. 2003. "A Low-Carbohydrate as Compared with a Low-Fat Diet in Severe Obesity." *New England J. Med* 348: 2074-2081. Recommends more studies evaluating long-term cardiovascular outcomes before a carbohydrate-restricted diet can be endorsed.

Savory, Allan with Jody Butterfield. 1999. *Holistic Management: A New Framework for Decision Making (2<sup>nd</sup> ed)*. Island Press. The bible for intensive grazing management.

Saxena, Deepak, et al, 1999. "Insecticidal Toxin in Root Exudates from BT Corn," *Nature* 402, (676): 480-484. Genetically modified corn plants can contaminate soil.

Scherr, Sara J. and Sajal Sthapit. 2009. *Mitigating Climate Change Through Food and Land Use*. Worldwatch. The authors claim that innovations in food production and land use could reduce greenhouse gas emissions equivalent to 25 percent of global fossil fuel emissions.

Schettler, Ted, et al. 1999. *Generations at Risk: Reproductive Health and the Environment*. MIT Press. Presents evidence that toxic chemicals can have lifelong, even intergenerational effects on human reproduction and development.

Schubert, Robert 2005. "Farming's New Peudalism: Percy Schmeiser and Other Casualties of Industrial Agriculture's Drive to Own It All." *World Watch* 18 (3): 10-16. How a Canadian farmer was sued because genetically modified rapeseed plants invaded his land.

Schlosser, Eric. 2001. *Fast Food Nation*. Houghton Mifflin. A muckraking exposé of how the fast food industry has transformed America's diet, landscape, economy, and workforce.

Sears, M.K., et al. 2001. Impact of Bt corn pollen on monarch butterfly populations: A risk assessment. *PNAS* 98: 11937-11942.

Sen, A. 1993. "Economics of Life and Death," *Scientific American* 268 (5): 40-48. A compelling case that famines and starvation are caused much more by human institutions than natural disasters.

Serratos-Hernandez, J. A., et al. 2007. "Transgenic proteins in maize in the Soil Conservation area of Federal District, Mexico." *Frontiers in Ecology and the Environment*. Evidence of GMOs in the homeland for maize, which is supposedly protected from contamination.

Shiva, Vandana. 1999. *Stolen Harvest: The Hijacking of the Global Food Supply*. South End Press. An eloquent blend of environment, agriculture, spirituality, intellectual policy, and women's rights

Shiva, Vandana. 1992. *The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics*. Zed Books. The green revolution has been a disaster for many poor farmers.

Shiva, V. 1991. "The Failure of the Green Revolution," *The Ecologist* 21 (2): 57-62. Criticizes the green revolution as ecologically destructive and socially inequitable.

Smil, Vaclav. 2001. *Enriching the Earth: Fritz Haber, Carl Bosch, and the Transformation of World Food Production*. MIT Press. The benefits and problems associated with synthetic nitrogen fertilizers.

Smil, Vaclav. 2000. *Feeding the World: A Challenge for the Twenty-First Century*. MIT Press. How will we feed ten billion people?

Smith, Jeffrey M. 2003. *Seeds of Deception*. Yes! Books. A critique of GM foods.

Solis-Montero, L., et al. 2005. "Shade-Coffee Plantations as Refuges for Tropical Wild Orchids in Central Veracruz, Mexico." *Conservation Biology* 19 (3): 908-916. Shade-grown coffee offers a refuge for forest-dependent plants and animals.

Soule, J. D., and J. Piper. 1992. *Farming in Nature's Image: An Ecological Approach to Agriculture*. Island Press. A detailed look at the pioneering work on permaculture at Wes Jackson's Land Institute in Kansas.

Stanley-Horn, D. E.. 2001. Assessing the impact of Cry1Ab-expressing corn pollen on monarch butterfly larvae in field studies. *Proceedings of the National Academy of Sciences*, 98: 11931-11936.

Steinfeld, Carol. 1997. "Permaculture," in *Environmental Encyclopedia 2e*, Cunningham, William P., et al. eds. Detroit, MI: Gale Research.

Syversen, Nina and Marianne Bechmann. 2004. "Vegetative buffer zones as pesticide filters for simulated surface runoff" *Ecological Engineering* 22 (3): 175-184. Vegetated buffer zones between agricultural land and surface waters have proved to be effective filters for sediments and sediment-bound nutrients.

Tillman, David, et al. 2002. "Agricultural sustainability and intensive production practices." *Nature* 418: 671-677. Agriculture will shape, perhaps irreversibly, the surface of the Earth in the coming decades.

Tollenaar, M. 1985. "What is the current upper limit of corn productivity?" *Proceedings of the Conference on Physiology, Biochemistry and Chemistry Associated with Maximum Yield Corn*. Foundation for Agronomic Research and Potash and Phosphate Institute. St Louis Missouri, 11-12 Nov. 1985. The author calculated that highest practical yield for maize (corn) would be 500 bu/acre (37 t/ha) but that the maximum theoretical yield is 1,312 bu/acre (83.3 t/ha).

Townsend, M. S., et al. 2001. "Food insecurity is positively related to overweight in women." *Journal of Nutrition*, 131: 1738-1745. Women who report not having enough to eat are more likely to be overweight than those who have plenty.

Trewayas, Anthony. 2002. "Malthus foiled again and again." *Nature* 418: 668-670. Increased efficiency has averted "Malthusian disasters" but as the population grows towards nine billion, new methods must be found to grow food while preserving biodiversity.

Troeh, F. R. et al. 1998. *Soil and Water Conservation: Productivity and Environmental Protection*. Protecting soil and water doesn't have to mean lower profits.

Tsai, A.G. and T.A. Wadden. 2005. "Systematic review: an evaluation of major commercial weight loss programs in the United States." *Annals of Internal Medicine* 142 (1): 56-66. Evidence for long-term benefits of diet programs is suboptimal.

Tuxill, John. 2000. "The Biodiversity that People Made." *Worldwatch* 13 (3): 24-35. The genetic diversity of crops is largely a human invention, but now is being lost as we concentrate on a small handful of cultivars.

U.S. Environmental Protection Agency, "Biopesticide Fact Sheet: *Bacillus thuringiensis* Cry1Ab Delta-Endotoxin and the Genetic Material Necessary for Its Production (Plasmid Vector pCIB4431) in Corn [Event 176]," April 2000. *EPA Publication* No. 730-F-00-003. Available at <http://www.epa.gov/pesticides/biopesticides/>.

Van Buskirk, J. and Y. Willi. 2004. "Enhancement of Farmland Biodiversity within Set-Aside Land." *Conservation Biology* 18 (4): 987-995. Meta-analysis of previously published studies shows that land withdrawn from conventional production unequivocally enhances biodiversity in North America and Europe.

Vorley, Bill and Dennis Keeney, eds. 1998. *Bugs in the System; Reinventing the Pesticide Industry for Sustainable Agriculture*. Island Press. The realities of pesticide production and use, the leverage points for change, and potential consequences of sustainability.

Walsh, Lance P. et al, "Roundup Inhibits Steroidogenesis by Disrupting Steroidogenic Acute Regulatory (StAR) Protein Expression," *Environmental Health Perspectives* Vol. 108, No. 8 (August 2000), pgs. 769-776.

Watson, R. and Pauly, D. 2001. "Systematic distortions in world fisheries catch trends." *Nature* 414: 534 - 536. Inaccurate reporting of fish catches has created a false impression that fish stocks are plentiful, but new calculations reveal a global industry and food supply in peril.

Watling, Les and Elliott A. Norse. 1998. "Disturbance of the Seabed by Mobile Fishing Gear: A Comparison to Forest Clearcutting" *Conservation Biology* 12 (6): 1180-1197. Trawling for bottom fish causes damage equivalent to forest clearcutting.

Webster, D. E. et al. 2002. "Successful boosting of a DNA measles immunization with an oral plant-derived measles virus vaccine". *Journal of Virology* 76: 7910 – 7912. GMO crops could provide edible antigens.

Whitefield, P. 2000. *Permaculture in an Nutshell.*: Chelsea Green Publishers. A beginner's guide to permaculture.

Whiteside, M. 1999. *Living Farms: Encouraging Sustainable Smallholders in Southern Africa*. Earthscan. An interdisciplinary look at land security and sustainability of family farms in South Africa.

Willett, Walter C., 2001. *Eat, Drink, and Be Healthy: The Harvard Medical School Guide to Healthy Eating*. Free Press. Based on evidence from large cohort studies of diet and disease, the author has interesting and useful suggestions for our diet.

Willett, Walter C. and Meir J. Stampfer. 2003. "Rebuilding the Food Pyramid." *Scientific American* 288 (1): 64-71. Suggests that the old food recommendations place too much emphasis on bread, cereal, rice and pasta.

Wirzba, Norman. 2003. *The Essential Agrarian Reader: The Future of Culture, Community, and the Land*. University of Kentucky Press. A collection of essays that encourage us to develop practices and policies that promote the health of land, community, and culture

Wohlmeyer, Heinrich and Theodor Quendler. 2002. *The WTO, Agriculture and Sustainable Development*. Greenleaf Press. Although liberalized world trade in agriculture and forest products are major agenda items for the WTO, sustainability in these areas is only tangentially mentioned in WTO documents.

Wolfenbarger, L. L. and P.R. Phifer, 2000. "The Ecological Risks and Benefits of Genetically Engineered Plants." *Science* 290 (5499): 2088-2093. A comprehensive survey of the ecological risks of genetically modified organisms.

World Bank. 1996. *Integrated Pest Management: Strategy and Policy Options for Promoting Effective Implementation*. World Bank. Environmentally Sustainable Development. Suggestions for promoting IPM.

Worm, B., et al. 2006. "Impacts of Biodiversity Loss on Ocean Ecosystem Services" *Science* 314 (5800): 787-790. If current trends in overfishing and habitat destruction continue, all the world's major fish and seafood populations will collapse by 2048.

Worster, Donald. 1982. *Dust Bowl: The Southern Plains in the 1930s*. Oxford University Press. Examines the social and environmental causes and consequences of the American dust bowl.

Zangerl, A.R. et al. 2001. "Effects of exposure to event 176 *Bacillus thuringiensis* corn pollen on monarch and black swallowtail caterpillars under field conditions". *Proceedings of the National Academy of Sciences* 98: 11908-11912..

Zhu, Y. et al. Genetic diversity and disease control in rice. *Nature* 406: 718-722. Planting different varieties of rice together helps combat diseases.