

Sustainable Ag Reading List.

Essays and Journal Articles

J. P. Reganold, et. al., 2011. "Transforming U.S. Agriculture," *Science*, May 6, Vol 332. (A brief, cogent, and comprehensive statement re. the need to transform agriculture at the science, policy and market levels to achieve sustainability).

W.J. Lewis, et. al., 1997. "A Total Systems Approach to Sustainable Pest Management," *Proceedings National Academy of Sciences*, Vol. 94, pp. 12243-12248. (One of the most lucid, brief statements making the case for the need to make a "fundamental shift" in our "sustainable" pest management strategies, from a "therapeutic intervention" strategy to a "natural systems management" approach.)

Francis Moore Lappe, 2013. "What India Taught me About How to End Hunger," *Yes Magazine Report*, January 29. (Great story about new approaches to food security taking place in India)

Ann Reid and Shannon E. Greene, 2012. "How Microbes Can Help Feed the World," *Report of an American Academy of Microbiology Colloquium*. December. (An important analysis of how we need to begin including the microbiome in our food and agriculture assessments.)

Lindsay Turnbull & Andy Hector, 2010, "How to get Even with Pests," *Nature*, Vol. 466, July. (This brief essay and Crowder's article below, confirm much of W.J. Lewis' observations [see above] via peer reviewed research.)

David Crowder, et. al., "Organic Agriculture Promotes Evenness and Natural pest Control," *Nature*, Vol. 466, July.

Richard Heinberg, 2011. "How Oil Prices Affect the Price of Food," *Post Carbon*, December 21, 2011. (A succinct statement making the case for the need to redesign both our food and energy systems if we are to achieve "sustainability".)

Joshua Farley et. al. 2012. "How Valuing Nature Can Transform Agriculture," *Ecological Economics*, Vol 2, Issue 6, January. (A compelling case for the fact that our conventional food system may be the leading cause of soil, biodiversity and habitat loss, as well as significant environmental pollution threats, and that a new design based on ecological principles will be essential on both ecological and economic grounds.)

Michael Porter and Mark Kramer, 2011, "Creating Shared Value," *Harvard Business Review*, January/February. (A compelling case for the need to redesign our business models and reinvent capitalism to achieve economic success in the future---including our food and agriculture systems.)

Aldo Leopold, 1945. "The Outlook for Farm Wildlife," and, 1946 "The Land-Health Concept and Conservation. Both in Callicott & Freyfogle, 1999, *For The Health of the Land*, Island Press. (Two of Leopold's most prescient, brief, essays relating to agriculture and the critical components of sustainability).

Wendell Berry, "It All Turns on Affection" 2012 Jefferson Lecture. Available on Google. (One of Wendell's most passionate and insightful statements on the need to move beyond our mechanistic, linear culture to one that "connects" us to each other, our communities and the land.)

C.S. Holling, 1996. "Engineering Resilience versus Ecological Resilience," Engineering Within Ecological Constraints. *National Academy of Sciences*. (Here Holling, one of the leading thinkers of modern ecology, articulates the two contrasting views of resilience thinking---one that is focused on maintaining **efficiency** of function, and one that is focused on maintaining the **existence** of function. These two views are critical to our understanding of the current two schools of thought which dominate the current discourse on "sustainability."

Kenneth M. Weiss and Anne V. Buchanan, 2011. "Is Life Law-Like?" *Genetics*, Vol 188, August (One of the clearest statements concerning the limitations of recent gene science and technology and suggestions for a new evolving perspective. An analysis that is critical to the future of sustainable agriculture designs).

Charles Benbrook, 2010. "What Does Sustainable Agriculture have to Offer? Conclusions and Recommendations in Two NAS/NRC Reports. *The Organic Center*, July. (a brief, cogent, critical review of the new NAS/NRC report on sustainable agriculture).

E. Toby Kiers, et. al. 2008. "Agriculture at a Crossroads," *Science*, 18 April. (An excellent, brief overview of the UN IAASTD report and its implications for the sustainability of agriculture.)

David Ehrenfeld, 2006. "Friendly Fire," *Resurgence*, Issue # 239. (By way of example, this brief essay, alerts us to the many unintended consequences of some of our most noble intentions)

E. Ann Clark, 2011. "The Future is Organic: But It's More than Organic!" *Counter Currents.Org*. (<http://www.countercurrents.org/print.html>) (Clark provides a cogent argument for the fact that none of our agriculture was "designed" to be sustainable, hence none of it likely will succeed. While organic agriculture may harbor some of the principles of sustainability it must also be significantly redesigned to achieve that goal.)

Jeremy Grantham, 2011. "Time To Wake Up: Days of Abundant Resources and Falling Prices Are over Forever." *GMO quarterly Newsletter*, April. (Summary: The world is using up its natural resources at an alarming rate, and this has caused a permanent shift in their value. We all need to adjust our behavior to this new environment. It would help if we did it quickly.)

A few books:

Ernest L. Schusky, 1989. *Culture and Agriculture: An Ecological Introduction to Traditional and Modern Farming Systems*, New York: Beregin & Garvey Publishers. (An excellent historical overview of how we humans have fed ourselves over our long evolutionary journey, and future challenges)

Brian Walker & David Salt, 2006. *Resilience Thinking*. Washington, DC, Island Press. (An excellent, brief, and very readable overview of the concept of resilience.)

Ivette Perfecto, et. al. 2010. *Nature's Matrix: Linking Agriculture, Conservation and Food Sovereignty*. Washington, DC, Earthscan. (A comprehensive critique of our current cultural investment in "maximizing production" regardless of unintended costs, and a detailed description, together with case studies, of an alternative paradigm, based on agro-ecological principles.)

Wes Jackson, 1980. *New Roots for Agriculture*. Lincoln, Nebr.: University of Nebraska Press. (One of the early books questioning the assumptions of industrial agriculture and a new vision for the future of food production.)

Janine Benyus 2002. *Biomimicry: Innovation Inspired by Nature*, William Morrow Press (A popular, modern, rendition of how to live sustainably on planet earth by mimicking nature.)

Is Sustainability Still Possible? State of the World, 2013. The Worldwatch Institute. (A comprehensive, critical and cogent collection of essays which analyze the prospects for achieving sustainability, including Robert Engelman's "Beyond Sustainababble," a very important essay re. the future of sustainability.)

Gwendolyn Hallsmith & Bernard Lietaer, 2011. *Creating Wealth: Growing Local Economies with Local Currencies*. New Society Publishers. (A great vision of how we might create new economies that can thrive in a sustainable manner, and redesign health care.)

Andrew Winston, 2014. *The Big Pivot: Radically Practical Strategies for a Hotter, Scarcer and More Open World*. Harvard Business Review Press. (A very comprehensive analysis, addressed primarily to corporations, regarding the new world in which they will be doing business, that will require major transitions out of current business strategies, into a radically different paradigm.)

Daphne Miller, M.D., 2013. *Farmacology: What Innovative Family Farming Can Teach us About Health and Healing*. William Morrow publishers. (A delightful and perceptive read demonstrating some of the connections between food, farming and health.)

Sir Albert Howard, 1943, *An Agriculture Testament*, Oxford University Press. (One of the great, early critical assessments of the "NPK mentality" agriculture, originally proposed by Justus von Liebig.

Sir Albert Howard, 1947. *The Soil and Health; A Study of Organic Agriculture*. New 2006 edition by University of Kentucky Press. (A prescient vision which made the case that healthy soil, healthy plants, healthy animals and healthy humans were all part of one ecological system)

Liberty Hyde Bailey, 1915. *The Holy Earth*. 1980 edition by New York State College of Agriculture and Life Sciences. (This is one of many books that Bailey published and in it he recognizes the need to now acquire "a new hold"---a new internal motivation which has its "rootage in the soil" and "expresses itself in all people"---not just farmers--- a rootage that puts us "in contact with the earth and the earth's righteousness. This new hold must prevent agriculture from simply becoming "a business" and that it does "not lose its capacity for spiritual contact.")

Aldo Leopold, 1949. *A Sand County Almanac; And Sketches Here and There*. Oxford University Press. (The relevance of Leopold's incredible insights regarding our proper relationship to "the land" which is a "community to which we belong" not "a commodity belonging to us" that now requires that we develop an "ecological conscience"---an embedded spiritual motivation to care for the "health of the land---land health being the "land's capacity for self renewal.")

Thomas Berry, 1999. *The Great Work; Our Way Into the Future*. Bell Tower Press. (An especially insightful and comprehensive analysis of how we make "the transition from a period of human devastation of the Earth to a period when humans would be present to the planet in a mutually beneficial manner." How we design agriculture in the future is a major component of that transition. He also makes a great point of the fact that while we face incredible challenges in this regard, challenges are also "moments of grace" because it is crises that usually motivate us to action.)

Rudolf Steiner, 1993. *Spiritual Foundations for the Renewal of Agriculture*. (Produced in 1924, these lectures challenge the mechanistic, linear science, and agriculture practices, that were then becoming the norm. He observed, in fact, that such practices were already so common "that nobody understands the essence of manuring anymore." Steiner asserted that to be sustainable a farm had to be managed as "an organism" in other words it had to be largely self-renewing and self-regulating, and that one had to "constantly pay attention to the inner workings of nature" to achieve that end. He further asserted that "this is a cosmic issue as well as an earthly issue. Precisely from the example of agriculture, we can see how necessary it is to derive forces from the spirit, forces that are as yet quite unknown." He further asserted that this shift in our thinking was "necessary not only for the sake of somehow improving agriculture, but so that human life on Earth can continue at all." For some, today, Steiner may still seem a bit weird but his fundamental insights, that both science and agriculture were a process and that our inner predisposition, our tacit dimension, to a large extent determines how we relate to nature and how we do agriculture, is now beginning to be taken seriously by some ecologists and climate scientists. See, for example, *Spiritual Ecology: The Cry of the Earth*, and the final essay by Karen O'Brien, "The Courage to Change; Adaptation from the Inside-out" in *Successful Adaptation to Climate Change*.

Gary Paul Nabhan, 2009. *Where Our Food Comes From; Retracing Nikolay Vavilov's Quest to End Famine*. Island Press. (A very insightful analysis of how important biological and genetic diversity is to a resilient food system.)

Dan Barber, 2014. *The Third Plate*. Penguin Press. (An excellent rendition of what farmers need to do to sustain healthy soils and how such healthy soils produce excellent food, and how we all need to learn how to "eat from the whole farm" so that farmers are adequately rewarded for maintaining soil health.)

Simon Fairlie, 2010. *Meat: A Benign Extravagance*. Chelsea Green. (A remarkable, practical book detailing how the way we eat determines the health of the communities in which we live.)

Paul Roberts, 2014. *The Impulse Society: America in the Age of Instant Gratification*. Bloomsbury Press. (A phenomenal analysis of how we now live in a culture which is totally driven by "me" and "now", and

a culture that is rapidly becoming dysfunctional. An analysis that applies to our current food and agriculture system.)

Marjory Kelly, 2012. *Owning Our Future: The Emerging Ownership Revolution*, San Francisco, BK Publishers. (A delightful illustration of how we can move from a destructive “extractive” economy, to a sustainable “generative” economy.)

Christopher Rosin, P. Stock, & H. Campbell (ed.) 2012. *Food Systems Failure: The Global Food Crisis and the Future of Agriculture*. New York: Earthscan. (An excellent collection of essays, representing the general consensus of contributors to the 44th Otago Foreign Policy School in New Zealand, in 2009, regarding the food crisis of 2008. Some very insightful perspectives on what is failing in our current industrial food system.)

Stuart Firestein, 2012. *Ignorance: How It Drives Science*. New York: Oxford University Press. (A delightful and profound read explaining that it is what we don’t know that drives science, and that this is an on-going process---science is a process, not a collection of incontrovertible facts. A very important perspective that can help us address some of the difficult problems of achieving sustainability.)

William Deresiewicz, 2014. *Excellent Sheep: The Miseducation of the American Elite and the Way to a Meaningful Life*. Free Press. (A cogent analysis about what is wrong with our current educational systems and a clear description of what learning should be. It all applies to our future farmers and food entrepreneurs.)

Five Important United Nations Reports re. how to address future food challenges:

Agriculture at a Crossroads, IAASTD Synthesis Report

Agro-ecology and the Right to Food, Olivier de Schutter

Save and Grow, A New Paradigm for Agriculture

Towards the Future we Want: end hunger and make the transition to sustainable agricultural and food systems

Wake Up Before It is Too Late, a new UNCTAD report