

Selected Annotated References

Albrecht, W.A. and C. Walters. 1975. The Albrecht Papers. Kansas City, MO: Acres. A compilation of the published and unpublished research of a University of Missouri soil scientist who examined nutrient cycling and natural methods to maintain or improve crop nutrition through rotations and livestock grazing.

Baker, B.P., C.M. Benbrook, E. Groth, and K.L. Benbrook. 2002. Pesticide residues in conventional, IPMgrown and organic foods: Insights from three U.S. data sets. *Food Additives and Contaminants* 19(5):427-446.

Data on residues in fruits & vegetables labeled as 'organic,' foods making other ecolabel claims such as 'Integrated Pest Management,' and foods with no market claims regarding practices were compared using data from government and independent testing organizations. Organically grown foods consistently had fewer residues than the other categories. Comparison of specific residues on specific crops found residue concentrations in organic samples were consistently lower than in the other two categories, across all three data sets.

Beers, Elizabeth H. Jay F. Brunner, Michael J. Willett and Geraldine M. Warner, eds. 1993. Orchard Pest Management: A Resource Book for the Pacific Northwest. Yakima, WA: Good Fruit Grower. Covers all insect pests of orchards in the Pacific Northwest. Each entry includes common name, scientific name, introduction, hosts, life stages, life history, damage, monitoring, biological control, and management. Illustrated with color photos for most pests and diagrams of life cycle. Contains a section on the key natural enemies, and degree day tables. Probably the best single source of information on insect pests of deciduous tree fruits.

Benson, Laura and Robert Zirkel. 1995. Organic Dairy Farming. Gays Mills, WI: Community Conservation Consultants

This is one of the few publications that details organic dairy production, one that is long on practical experience. The majority is devoted to herd health considerations. Written before adoption of the NOP, it may not be current on some of the regulatory and certification issues.

Bezdicek, D.F., J.F. Power, D.R. Keeney, and M.J. Wright. 1984. Organic farming: current technology and its role in a sustainable agriculture. Madison, WI: American Society of Agronomy Special Publication #46.

The American Society of Agronomy sponsored the first ever symposium on organic farming at a professional society meeting in 1981 as a follow up to the USDA Organic Farming report of 1980. The symposium papers were compiled in this publication, and featured leading researchers from land-grant universities and the USDA-ARS.

Boeringa, R.,ed. 1980. Alternative Methods of Agriculture. New York: Elsevier. From a Dutch report published in 1976: Describes various approaches to ecological agriculture, with a review of techniques, food quality, impact on the environment, yields, and research recommendations.

Bowman, G., ed. 1997. Steel in the Field: A Farmers Guide to Weed Management Tools. 1997. G. Bowman (ed.). Burlington, VT: Sustainable Agriculture Network.

A practical handbook that describes mechanical weed management. Based on interviews of of farmers, agricultural engineers, and university researchers. Describes in detail available equipment and its effective and profitable use while complying with erosion-prevention plans, residue conservation, and moisture loss.

Buck, Matthew and Jennifer Allen, eds. 2000. Sustainable Agriculture . . . Continuing to Grow. Proceedings of the Farming and Ranching for Profit, Stewardship & Community Conference, March 7-9, 2000. Portland, OR: Sustainable Northwest.

Western SARE sponsored a major regional conference to highlight a decade of research and education on sustainable agriculture in the western states from the perspectives of leading growers and researchers, many from organic agriculture. The book captures the diversity of agriculture in the Western US and provides insights regarding key sustainability principles and practices that apply to organic farms.

- Burns, T. and C. Campbell, eds. 1979. *Practical Alternatives to Chemicals in Agriculture*. Saskatchewan: University of Regina.
- Caldwell, B., E. Brown Rosen, E. Sideman, A. Shelton, and C. Smart. 2005. *Resource Guide for Organic Insect and Disease Management*. Ithaca, NY: New York State Agricultural Experiment Station. A guide for organic farmers, farmers in transition to organic production, extension professionals, and farm advisors seeking accurate information on effective organic methods to control insects and diseases in vegetable crops.

Campbell, C.A., R.P. Zentner, H. H. Janzen and K.E. Bowren. 1990. Crop Rotation Studies on the Canadian Prairies. Ottawa, ON: Canadian Government Publishing Centre.
Agriculture Canada has carried out a number of long-term cropping systems experiments in the Canadian prairies, mostly dealing with dryland production. These studies have focused on the effects of crop rotation on productivity, soil conditions, pests, economics, and energy use. They provide invaluable insight for the development of organic dryland production systems that will be sustainable in the long-term.

Cavigelli, M.A., S.R. Deming, L.K. Probyn, and R.R. Harwood, eds. 1998. Michigan Field Crop Ecology: managing biological processes for productivity and environmental quality. East Lansing: Michigan State University Extension.

This publication is a well-crafted, beautiful, and technically and agronomically sound overview of biological agricultural systems management. While the information was primarily generated from research on agronomic cropping systems in Michigan, the principles are relevant to cropping systems in many regions. The information is meaningful to both farmers and agricultural professionals.

 Clark, S., K. Klonsky, P. Livingston, and S. Temple. 1999. Crop-Yield and Economic Comparisons of Organic, Low-Input, and Conventional Farming Systems in California's Sacramento Valley. American Journal of Alternative Agriculture 14:109-121.
 Results of a long-term farming systems trial with three treatments, including an organic system.

Coleman, Eliot. 1975. Biological Agriculture in Europe. Harborside, ME: Small Farm Research Association.

- Cook, R. James and K.F. Baker. 1983. The Nature and Practice of Biological Control of Plant Pathogens. St. Paul, MN: APS
- Cook, R. James and Roger J. Veseth. 1991. Wheat Health Management. St. Paul, MN: APS Press. Probably the best single reference on the biophysical demands of wheat production, this handbook is easy to read and technically complete. It proposes the 4 A's of wheat production – Absolute (genetic potential), Attainable (environment constraints), Affordable (economic constraints), and Actual (net after pests, diseases, etc.). In designing biologically based production systems such as organic farming, this book provides the key foundations for success.



Cramer, Craig. 1986. *The Farmer's Fertilizer Handbook*. Emmaus, PA: Regenerative Agriculture Association.

Handbook presents information to evaluate soil fertility and determine amounts of nutrients to add. Contains useful information on nutrient credits from manures and legumes, and tips on how to reduce fertilizer costs by smarter management.

Crop Protection Branch, Alberta Agriculture, eds. 1989. Guide to Crop Protection in Alberta, Part 2, Nonchemical Control of Weeds, Insects, Diseases for Maximum Economic Yield. Edmonton: Alberta Agriculture AGDEX 606-2.

Publication is organized primarily by pest, with information on life cycle, reproduction, hosts, competition, and non-chemical control mechanisms. It applies to crops grown on the Canadian Prairies, similar to those grown in the Northern Plains of the U.S.

Curl, C.L., R.A. Fenske, and K. Elgethun. 2003. Organophosphorus Pesticide Exposure of Urban and Suburban Preschool Children with Organic and Conventional Diets. *Environmental Health Perspectives* 111(3): 377-382.

Drinkwater, L.E., P. Wagoner, and M. Sarrantonio. 1998. Legume-Based Cropping Systems Have Reduced Carbon and Nitrogen Losses. *Nature* 396: 262-265.
Agricultural systems and natural ecosystems differ in how carbon and nitrogen are cycled. This study reports the net balances of carbon and nitrogen from a 15-year study in which three distinct maize/soybean agroecosystems are compared. Quantitative differences in net primary productivity and nitrogen balance ecosystems do not account for observed changes in soil carbon and nitrogen. Use of low carbon-to-nitrogen organic residues to maintain soil fertility, combined with greater temporal diversity in cropping sequences, is suggested to significantly increase retention of soil carbon and nitrogen budgets, sustained production, and environmental quality.

 Drinkwater, L.E., Letourneau, D.K., Workneh, F., Van-Bruggen, A.H., and C. Shennan. 1995.
 Fundamental Differences between Conventional and Organic Tomato Agroecosystems in California. *Ecological Applications* 5: 1098-1112.

Edwards, Linda. 1998. Organic Tree Fruit Management. Keremeos: Certified Organic Associations of British Columbia.

Written by an organic grower and former field consultant/researcher; contains practical information on management aspects of organic orchards, with numerous references and color photos. Relevant to growing conditions in the semi-arid irrigated regions of the Northwest.

Farrell, Kenneth R. et al. 1992. Beyond Pesticides, Biological Approaches to Pest Management in California. Oakland: University of California Agriculture & Natural Resources. The University of California commissioned a Study Group to examine the history of pest management in the State's agriculture, both chemical and biological, and the potential to move towards greater reliance on biological control. Examines various pests, emerging tactics for biological control, and the constraints to their expanded use. Well-referenced and represents one of the more bold policy statements on pest management.

Flack, S. 2004. Organic Dairy Production. Barre, MA: Northeast Organic Farmers Association Interstate Council. Handbook for managing organic dairy cattle.

Flint, Mary Lou, et al. 1999. Natural Enemies Handbook: The Illustrated Guide to Biological Pest Control. University of California IPM Program.
An illustrated guide to beneficial insects and other organisms that parasitize or prey upon various pests of the farm and garden.

Francis, C. 1990. Sustainable Agriculture in Temperate Zones. New York: Wiley.



Glover, J., H. Hinman, J. Reganold, P. Andrews. 2002. A Cost of Production Analysis of Conventional vs. Integrated vs. Organic Apple Production Systems. Pullman: Washington State University Agricultural Research Center Publication XB1041.

Seven years of economic data from a side-by-side comparison of conventional, organic, and integrated apple production are compiled in this research bulletin, starting with orchard establishment. The trial was located on a farm in the Yakima Valley in Washington State and was managed cooperatively among the researchers, growers, and consultants. The data allow a rare comparison of organic production to other management at this level of detail.

- Granatstein, David and Elizabeth Kirby. 2002. *Current Trends in Organic Tree Fruit Production*. Wenatchee, WA: Center for Sustaining Agriculture and Natural Resources.
- Grubinger, V.P. 1999. Sustainable Vegetable Production from Start-Up to Market. Ithaca: NAES. Practical information on vegetable production: selecting a farm site; planning and record keeping; marketing options; and systems for starting, planting, protecting, and harvesting crops.
- Hanley, P.,ed. 1980. *Earthcare: ecological agriculture in Saskatchewan*. Saskatchewan: Earthcare Information Centre.
- Heaton, Shane. 2002. Organic Farming, Food Quality and Human Health: A Review of the Evidence.
 Bristol, UK: Soil Association.
 Results of over 90 comparative studies were found to consistently favor of organic foods.
- Hilander, S.K., ed. 1989. Proceedings of Alternative Energy Resources Organization (AERO) 1988 Soil-Building Cropping Systems Conference. Helena, MT: AERO.
 Proceedings from a conference to explore what dryland farmers could do to improve their soil and their farm production with the use of more complex rotations, legumes, green manures, and other practices directly applicable to organic farming.
- Hilander, S.K., ed. 1991. Proceedings of AERO's Livestock Health and Nutrition Alternatives: A Western States Conference (6-8 Dec. 1990, Bozeman, MT). Helena: Alternative Energy Resources Organization (AERO).

Presentations from livestock producers, researchers, and veterinarians that provide various viewpoints on "natural" animal health care, most of which apply to organic production.

- Hoitink, H.A.J. and M.J. Boehm. 1999. Biocontrol within the Context of Soil Microbial Communities: a Substrate-Dependent Phenomenon. *Ann. Rev. of Phytopathology* 37: 427-446.
- Howard, Sir Albert. 1947. The Soil and Health. N.Y: Devin-Adair. An early examination of the depletion of the soil organic matter by techniques that rely on soluble salt fertilizers, contrasted with an examination of sustainable production carried out over centuries that rely on composted organic matter as the main soil amendment.
- Jackson, W. 1980. *New Roots for Agriculture*. San Francisco: Friends of the Earth. *An ecological approach to prairie agriculture, with an examination of the feasibility of perennial grain production*.
- King, F.H. 1911. Farmers of Forty Centuries. Emmaus, PA: Rodale. A University of Wisconsin soil scientist examined nutrient cycling and sustainable agriculture in China.
- Klonsky, Karen, et al. 2002. Statistical Review of California's Organic Agriculture 1995-1998. Davis CA: University of California Agricultural Issues Center.
- Klonsky, Karen, et al. Production Practices and Sample Costs for Organic Crops Series. Davis, CA: University of California Cooperative Extension.



Knorr, Dietrich, ed. 1983. Sustainable Food Systems. Westport, CT: AVI. Proceedings of the sixth international conference on organic agriculture sponsored by IFOAM.

Koepf, H.H. et al. 1976. Bio-Dynamic Agriculture: An Introduction. Spring Valley, NY: Anthroposophic Press.

Lampkin, Nicolas.1990. Organic Farming. Ipswich, UK: Farming Press Books.

Liebman, M. et al. 2000. *Ecological Management of Agricultural Weeds*. New York: Cambridge University Press.

Macey, Anne, ed. 2000. Organic Livestock Handbook. Ottawa: Canadian Organic Growers.

Macey, Anne, ed. 2000. Organic Field Crops Handbook. Ottawa: Canadian Organic Growers.

- Mäder, P., A. Flieβbach, D. Dubois, L. Gunst, P Fried, and U. Niggli. 2002. Soil Fertility and Biodiversity in Organic Farming. *Science* 296: 1694-1697. *Controlled research demonstrated that organically managed fields had greater diversity of both species and more organisms per unit of soil.*
- Magdoff, F. and H. Van Es. 2000. *Building Soils for Better Crops*. Burlington, VT: Sustainable Agriculture Network.

Marini-Bettolo, G.B., ed. 1977. Natural Products and the Protection of Plants. NY: Elsevier.

Matheson, Nancy, Barbara Rusmore, James R. Sims, Michael Spengler and E.L. Michalson. 1991. Cereal-Legume Cropping Systems: Nine Farm Case Studies in the Dryland Northern Plains, Canadian Prairies, and Intermountain Northwest. Helena, MT: AERO.

AERO conducted a series of case studies of dryland cereal farms across the Northwest where the growers were using more complex rotations that generally included a legume phase for soil improvement. Each case study described the general rotation along with supporting practices for pest management, moisture conservation, and marketing. The study presents the gross margin budgets (variable costs and gross income) for each farm.

- McAllister, J.C. 1983. A Practical Guide to Novel Soil Amendments. Rodale Research Center Technical Bulletin. Emmaus, PA: Rodale Press.
 Research on the efficacy of various microbiological inoculants, humic acid derivatives, and other amendments generally not explored in replicated field trials.
- National Research Council. 1989. Alternative Agriculture. Washington, DC: National Academy Press. Includes four case studies of organic farms and is believed to be the first serious examination of organic agriculture by the National Academy of Sciences. Organic farming was found to be profitable and protective of the environment. Research recommendations.
- Oelhaf, R.C. 1978. Organic Agriculture: Economic and Ecological Comparisons with Conventional Methods. Montclair, NJ: Allanheld, Osmun.
 An early study that describes the historic approaches to organic farming with an examination of the relative profitability and environmental impacts of the two different approaches, with a conclusion about the barriers to adoption of organic farming methods.
- Parnes, R. 1990. *Fertile Soil, A Grower's Guide to Organic and Inorganic Fertilizers*. AgAccess/Fertile Ground Books.

A practical handbook that describes organic fertility methods, with useful tables that have data on the nutrient content of various fertilizers used by organic farmers.



Pauli, F.W. 1967. Soil Fertility: a Biodynamical Approach. London: Adam Hilger Ltd.

- Pickett, Charles H. and Robert L. Bugg, eds. 1998. Enhancing Biological Control Habitat Management to Promote Natural Enemies of Agricultural Pests. Berkeley: University of California Press. Addresses an important gap in the biological control literature by providing the first comprehensive summary of recent findings on habitat manipulation to control pests. Chapters cover habitat modification in such areas as fields, orchards, or vineyards, and along or near the perimeters of fields, including hedges or other uncultivated areas. Generalist and specialist natural enemies are described in full, as are theoretical and practical issues. Experimental designs for studying enhancement include a modeling study that explores how the dispersal of natural enemies interacts with the positioning of refuges.
- Porter, P.M., D.R. Huggins, C.A. Perillo, S.R. Quiring, and R.K. Crookston. 2003. Organic and Other Management Strategies with Two- and Four-Year Crop Rotations in Minnesota. *Agronomy Journal* 95:233-244.

 Rasmussen, P.E., H.P. Collins and R.W. Smiley. 1989. Long-Term Management Effects on Soil Productivity and Crop Yield in Semi-Arid Regions of Eastern Oregon. Pendleton, OR: Oregon State University Agr. Expt. Station Bulletin 675. The long-term field experiments have continuously monitored the impacts of various tillage, residue management, and fertility treatments on organic matter, soil quality, and productivity in a semi-arid

wheat cropping system.

Reganold, J. P., J. D. Glover, P. K. Andrews, and H. R. Hinman. 2001. Sustainability of Three Apple Production Systems. *Nature* 410:926-930.

Reganold, J.P., A.S. Palmer, J.C. Lockhart, and A.N. Macgregor. 1993. Soil Quality and Financial Performance of Biodynamic and Conventional Farms in New Zealand. *Science* 260: 344-349. *Biodynamic farming practices and systems show promise in mitigating some of the detrimental effects of chemical-dependent, conventional agriculture on the environment. The physical, biological, and chemical soil properties and economic profitability of adjacent, commercial biodynamic and conventional farms (16 total) in New Zealand were compared. The biodynamic farms in the study had better soil quality than the neighboring conventional farms and were just as financially viable on a per hectare basis.*

Reganold, J. P., L. F. Elliott and Y. L. Unger. 1987. Long-Term Effects of Organic and Conventional Farming on Soil Erosion. *Nature* 330:370-372.

Rynk, Robert, ed. 1992. On-Farm Composting Handbook (NRAES-54). Ithaca, NY: Northeast Regional Agricultural Engineering Service. Probably the best single reference on composting. The handbook contains many practical diagrams and tables, formulas for creating compost recipes, description of various composting systems, ideas on site

development, and more. The Appendices contain invaluable information seldom found in one place.

- Santer, Lewis, ed. 1995. *BIOS for Almonds, A Practical Guide to Biologically Integrated Orchard Systems Management.* Davis, CA: Community Alliance with Family Farmers Foundation. *The BIOS (Biologically Integrated Orchard Systems) projects in California were very successful in eliciting grower innovation and adoption of more sustainable practices.*
- Sarrantonio, Marianne. 1991. *Methodologies for Screening Soil-Improving Legumes*. Kutztown, PA: Rodale Institute Research Center.

A practical guide to using inexpensive and simple techniques to evaluate legumes for their potential soilimproving ability. Appendices contain many useful tables.

Savory, Allan. 1988. Holistic Resource Management. Covelo, CA: Island Press.



Selected Annotated References

A systems approach to managing natural resources. Most of the applications have been to animal grazing systems, but the approach can be used to address a wide range of resources and ecosystems.

Shirley, Christopher, Greg Bowman, Craig Cramer, et al. 1998. Managing Cover Crops Profitably. Sustainable Agriculture Network. www.sare.org/handbook/mccp2/index.htm Detailed charts of cover crop characteristics and management, adaptation maps and essays on soil fertility, crop rotations, pest management and cover crop selection are followed by comprehensive chapters on 18 of the most commonly used and widely adapted cover crops for the continental United States.

 Smith, M. et. al. 1994. The Real Dirt: Farmers Tell about Organic and Low-Input Practices in the Northeast. Burlington, VT: Sustainable Agriculture Network.
 Describes management practices on successful organic farms, including soil, pest, crop, livestock, and marketing. Farmers write many chapters, and all are based on practical farmer experience.

Smolik, James D., ed. 1993. Agronomic, Economic, and Ecological Relationships in Alternative (Organic), Conventional, and Reduced-Till Farming Systems. Brookings: South Dakota State University. Summarizes a comprehensive systems research trial that includes an organic farming system on the western edge of the Corn Belt, that found organic systems to perform the best over the wide number of parameters studied, including profitability, energy use, and environmental protection.

Sooby, Jane. 2003. State of the States: Organic Farming Systems Research at Land Grant Institutions 2001-2003, 2nd ed. Santa Cruz, CA: Organic Farming Research Foundation. www.ofrf.org/publications/SoS/SOS2/OFRF.SOS2.300dpi.pdf. The Organic Farming Research Foundation polled the Land Grant Universities across the U.S. for the second time to compile aurorat information on the status of organic farming research and education

second time to compile current information on the status of organic farming research and education. Listings for each institution include production and marketing research projects, amount of certified organic research land, extension and education efforts, including various references and web sites.

Stonehouse, B., ed. 1981. Biological husbandry: a Scientific Approach. London: Butterworth.

- Swezey, Sean L., Paul Vossen, Janet Caprile and Walt Bentley. 2000. Organic Apple Production Manual.
 Oakland: University of California Agriculture & Natural Resources Pub. #3403.
 This is the first university manual on organic apple production, aimed at conditions in California. It is especially useful for harvest, post-harvest, marketing and economics.
- Taylor, N. and Zenz, L., Eds. 1999. Organic Resource Manual for Washington, Wyoming, Montana, Oregon, Idaho, Utah (SARE Project EW-96.006) Olympia: Washington State Department of Agriculture, Organic Food Program. agr.wa.gov/FoodAnimal/Organic/docs/OrganicResourceManual.pdf Provides a quick introduction and overview to the main elements of organic farming, including the regulations (pre-NOP) and production aspects. Has an excellent collection of references in the Resource Section.

University of California. *IPM Handbooks*. Oakland: University of California Agriculture & Natural Resources.

Each handbook covers Integrated Pest Management techniques for a different crop. Series includes most economically significant crops. Covers cultural and biological control techniques compatible with organic farming systems.

USDA. 1980. Report and recommendations on organic farming. Washington: USDA The first official report on organic farming published by the USDA, after studies showed the potential of organic farms to use less energy. The study team consisted of leading USDA and university scientists from across the country, who conducted case studies, surveys and interviews, reviewed the published literature, and visited organic farms in Europe and Japan. The findings suggested that organic farming was scientifically valid, economically viable, and a modern form of agriculture.



Walters, C., Jr., and C.J. Fenzau. 1979. An Acres, USA Primer. Raytown, MO: Acres USA.

Willer, H. and M. Yussefi. 2007. *The World Of Organic Agriculture: Statistics And Emerging Trends*. Bonn, Germany: International Federation of Organic Agriculture Movements and the Research Institute for Organic Agriculture, Frick Switzerland.
 Estimates of land in organic production around the world by region, country, and crops.

