BOOK REVIEWS


This twelve chapter volume is a welcome addition to the academic literature that gives objective consideration to the present capacity and future potential of organic agriculture to contribute to global sustainability. The authors approach organic production as a discrete and measurable system that, despite the variation implicit in its site-specific nature, can be characterized by common strengths and limitations. Refreshingly, the authors use the distinguishing characteristics of organic agriculture to seek out synergies with conventional practices rather than treat the two systems as incompatible. While thoroughly orthodox in its acceptance of globalization as the optimal trade paradigm, this book is sensitive to the economic and natural resource constraints faced by underdeveloped societies and the deadly consequences of food insecurity. The authors present a stark yet realistic portrayal of the economic and environmental challenges of feeding a world that gains seventy-five million people annually. Thankfully, they are non-doctrinaire in recommending production practices and trade policies designed to balance the dual objectives of growth and conservation.

The great strength of this work and the basis for its relevance across academic disciplines is its even-handed appraisal of contemporary global agricultural production and trade practices. The majority of the book’s chapters address their subject matter in a global context, and the authors neither salut nor malign the high-input, high-yield management systems found in the developed world and successful Green Revolution adopters. Rather, they candidly assess the achievements, consequences, and limitations of these systems by detailing progress in global food security while acknowledging that many, especially in sub-Saharan Africa, have not benefited. The authors are also willing to point out the detrimental environmental impacts of high-yield agriculture, and they are prescient in identifying the resource limitations—especially with energy, water, and farmland—that will constrain dependence on such systems in the near future. After reaching this point—having cited the achievements of high-yield agriculture, identified its shortcomings, and acknowledged the imperative need to make improvements—the authors set about establishing a constructive role for organic production in the pursuit of global sustainability.

While yield comparisons are important, the authors avoid simplifying the trade-off between organic and conventional systems as solely a rise or decline in productivity. The book identifies numerous circumstances that can create incentives for producers to transition to organic production. For example, limited resource producers who cannot afford Green Revolution technologies may benefit from the cost avoidance of reduced input expenditures in organic systems. Additionally, the environmental stewardship documented by certification adds market value to organic products, and this value could be enhanced by expanding standards to incorporate social justice principles. Both scenarios reflect significant opportunities in the global agricultural economy for which organic production could be adventurous. When evaluating yield comparisons, the authors cite a 15 to 35% reduction in organic systems compared to optimal conventional ones, with a potentially greater gap when crop failures and green manure rotations are factored in. However, the authors state that significant potential exists through site-specific research to increase yields in both the relatively higher input organic systems of the developed world and their less intensive counterparts in developing societies. Significantly, the authors conclude that conversion to organic production could potentially enhance food security in resource-limited communities, and that the conversion of high input conventional systems would result in minimal increases in global food prices.

A subset of chapters in this book will be of particular interest to readers with disciplinary and regional specializations. These chapters address organic veterinary practice, nutrient cycling between urban and rural communities, and the potential for organic practices to restore the fertility-depleted soils of sub-Saharan Africa. The chapter on veterinary practice is particularly insightful in its analysis of the decision making process that organic practitioners go through to blend the attributes of natural and managed systems. While natural systems are valued in organic production for their efficient cycling of resources and resultant stability, it is accepted that producers must at times introduce practices and inputs designed to facilitate specific production objectives. These interventions, such as treating livestock with synthetic vaccines, technically exceed the closed boundaries of a natural system but are allowed in organic production when deemed both compatible and essential. For example, an organic livestock producer begins by selecting resistant breeds and low stock densities to alleviate the incidence of disease within the herd. If disease levels still jeopardize the animals’ health, vaccination or other forms of synthetic intervention become necessary. Rather than depicting organic producers as purists, the authors more appropriately present them as synthesizers who start with the ideal of a natural systems model and incorporate the most complimentary and least invasive forms of human intervention needed to sustain their operations.

In its totality, this collection is a thoughtful and well-documented consideration of the emerging relationship between organic production systems and global food systems. The authors are sensitive to the different circumstances in developed and developing societies, but convincingly portray organic agriculture as a coherent and recognizable system. I was surprised not to find any consideration given to the potential impact that the exploding market for biofuels will have on global agricultural commerce, but the material is otherwise quite current and comprehensive. With its limited constraints to adoption and demonstrable production and marketing benefits, organic agriculture will likely play an increasingly significant role in discussions of global sustainability and food security.

Mark A. Williams
Department of Horticulture
University of Kentucky
Lexington, KY 40546
(mawillia@uky.edu)
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