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Review of *Sustainable Agriculture in Temperate Zones*, Charles A. Francis, Cornelia Butler Flora, and Larry D. King, eds.

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areas of significant water-level change that has occurred from the period of first reliable record through 1989. For Nebraskans, it should be an item of concern that areas of decline are more numerous than areas of increase.

Each subdivision map is accompanied by a standardized text discussion containing accurate data and tables. The text is highly informative, providing insight to the particular character of the subregion while allowing comparisons between regions. The standardization of text from subregion to subregion is useful when drawing comparisons. It also permits ready correlations with similar data provided in preceding years.

Accompanying each of the subregion maps is a representative collection of water-level hydrographs which trace the record of groundwater fluctuations over periods of varying duration within the subregion. The hydrographs accomplish several purposes. They clearly demonstrate annual drawdown and recovery cycles for recorder wells. Also, long term cycles that can be related to climatic variations and/or irrigation development cycles can be noted from those hydrographs of longest record.

One set of summary state maps should be of special interest to those involved in climatic studies of the Great Plains. In association with the discussion on the "Effects of Precipitation on Groundwater Levels During 1989," the authors have developed a set of monthly maps of the entire state subdivided according to National Weather Service divisions. Each month's map shows the range of average precipitation per region based on an intensity scale ranging above and below normal. The value of the maps for any given year is important. In 1989, for example, the extremely dry conditions through the Spring, late Fall and early Winter are quite evident. The significance of the maps is that they become part of the continuing record (as provided in other publications in this same series) and are available to researchers.

This publication is appropriate for a wide audience. The cartographic and graphic media provide nontechnical and strong visual information while the text provides accurate and readable content. **M. Stanley Dart**, *Department of Geography, University of Nebraska-Kearney*.

Sustainable Agriculture in Temperate Zones. Charles A. Francis, Cornelia Butler Flora, and Larry D. King, eds. New York: John Wiley and Sons, 1990. xiii + 487 pp. Graphs, tables, index, and references. \$69.95 cloth (ISBN 0-47162227-3).

The editors of *Sustainable Agriculture in Temperate Zones* have succeeded in compiling the diverse range of issues orbiting the expansive

and somewhat nebulous concept of sustainable agriculture. The book contains well-written chapters by established experts drawn primarily from the mainstream sustainable agriculture movement within US land grant universities. The strength of the book is the authors' cogent reviews of leading edge research in their respective fields of expertise. These areas include soil chemistry and biology, plant breeding, crop rotations and legumes, pest management, pasture management, conversion to sustainable systems, production economics, rural development, and agricultural policy. Added to this eclectic mix is a good dose of introspective analysis of the central philosophical and practical issues confronting the sustainable agriculture project.

As someone with an admittedly weak background in the natural sciences I found chapters in this area quite palatable, reflecting the authors' effort to communicate complex biophysical processes to the nonexpert. Although the book shares similarities with earlier edited volumes on the subject, the field is advancing so rapidly that students and practitioners of sustainable agriculture would be well advised not to pass it by.

The editors waste no time in providing their working definition of sustainable agriculture as a philosophy based on humanitarian and ecological values that guides the application of science and technology towards the creation of environmentally and socially sustainable farming systems. In trying to square this lofty view with the intensely competitive reality of Corn Belt agriculture, I appreciated one author's addendum: "Sustainability must be considered as a process towards or away from some current state" (p. 58). For when we examine closely what is happening in the fields of Iowa and elsewhere we find that sustainable agriculture is a movement on a continuum that, for many farmers, begins with the simple act of cutting back on their chemical inputs for purely economic reasons. Although this may not fit the definition of sustainable agriculture in the minds of the idealist, it represents a first step towards recapturing and reshaping the forces of nature that lie at the heart of sustainable production.

My primary criticism is the book's failure to address directly the political economy of sustainable agriculture, either in the policy, research, or production arenas. I fail to recall the word capitalism mentioned at all, much less a discussion of how the contradictions inherent to capitalist agriculture, for example, the technological treadmill and the land market, can be significantly confronted and transformed by sustainable agriculture. Very little substance is provided regarding the impact of sustainable agriculture on the profits of agribusiness corporations or its challenge to their hegemony over the research agendas of land grant institutions. In her chapter on rural communities and sustainable agriculture, C. B. Flora

observes that communities that openly accept and externalize conflict are the most successful in controlling their own destinies. Their experience may provide a valuable lesson for the sustainable agriculture movement.

David R. Lighthall, *Department of Geography, University of Iowa*.

The Medicine Men: Oglala Sioux Ceremony and Healing. Thomas H. Lewis. Lincoln: University of Nebraska Press, 1990. Notes, Bibliography, index, and illustrations. 219 pages. \$19.95 paper (ISBN 0-8032-2890-2).

Lewis' new book on Oglala ceremony and healing brings together observations and interpretations of his encounters with Lakota healers from the Pine Ridge Reservation during his stay there in the 1960s and 1970s. Lewis was readily incorporated into the community and entrusted with details of conceptions and sources of power which reflect both the relaxed political and social climate and the attitude of openness the Lakota then held about sharing knowledge of their traditions with outsiders. This is fortunate, both for Lewis and the reader, for much of the substance of what Lewis learned is fast disappearing as are the elders who possess such knowledge. The post-militancy period today discourages ethnographers from inquiring into such spiritual matters and, when they do, this hesitancy rightfully inhibits their willingness to write about and publish such data. Lewis returned to Pine Ridge in the late 1980s to recheck his data and ultimately published his observations. It is well that he did, for Lewis has provided invaluable documentation of many aspects of Lakota healing and belief, among them, *yuwipi*, bear and eagle power, the Horse Dance, Sun Dance, ghost power and the *heyoka* cult, and the more contemporary styles of religious worship, including peyotism and Christian evangelism. Lewis also devotes considerable attention to herbalism and the uses of plants in native medicine.

Lewis' book is one of great contrasts. It is comprised of many subparts, some sections having been published in thirteen other places. The desire to bring his years of exploration under one cover results in an unevenness that seriously detracts from the beautifully written analytic passages on Oglala practitioners and their philosophies. Lewis' anecdotal overviews of Pine Ridge—for example, of the school, tribal council, the courts—are so sketchy and incomplete that they do little but affirm stereotypes of the poverty and hopelessness of reservation life. The early sections of the book appear as a potpourri of Lakota ideology. Many of his observations of the commercialism of the Sun Dance—for example, the mixing in of powwows and rodeos during a Sun Dance ceremony—may