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Cover: Canadians have become increasingly concerned about the condition of their agricultural land resources, on the Saskatchewan prairie, shown here, and elsewhere (see page 204). SSC-Photocentre/McNeil.

Robert Healy no longer can be classified simply as a land economist, as he is in the introduction to his new book. He is a member of the first rank of land policy analysts and planners in the nation. I plan to adopt this book as required reading in a graduate-level course on land use planning. The reason is not because I teach in the South but because the book confirms and illustrates with style the range and complexity of forces that enter into land policy and planning.

Healy's transition from economist to resource analyst and planner is due in part to the limitations of the economic discipline and his reluctance to be imprisoned methodologically. It is also due to the increasing complexities of relationships within the world economy. How does the international exchange rate affect the demand for soybeans? How does this affect the price of land in South Carolina? Is this price likely to induce a shift of grazing land to crop production? Is the increased crop production likely to affect water quality, urban development, or job distribution?

The author's ambitious aim is to "simultaneously consider all of the major economic uses of land—crops, wood production, grazing and human settlement—as well as the many environmental values provided by land in its natural and developed states." The book chooses to focus on the 13 southern states for a number of reasons, partly because the region has a strong regional identity and partly because it has an unusual degree of flexibility in land uses. Consequently, competition for land is a major uncertainty in the South's future. Additionally, the South has interesting physical attributes, including a long growing season and ample though constricting water supplies. The South also has severe problems with pests and a history of underpricing the full costs of resource exploitation.

Healy's book shows southerners much about their own states and the region too. It provides useful information and analysis for timber company executives, state legislators, farmers, extension agents, and, especially, urban and environmental planners. Planners are supposed to be able to forecast and steer policy choices in land, based on an understanding of forces at work and reasonable public objectives. Too often planners do not understand the complexity or the range of the market forces with which they must contend. It is both disconcerting and reassuring to have a knowledgeable analyst tell us that the market outcomes in future land uses are essentially unpredictable because "more than one force outside the system is changing at any given time, and the whole system is constantly adjusting to past perturbations. The best analogy, perhaps, is to a handful of pebbles thrown into a wind-whipped pool."

The chapter on unpriced values really gives environmental quality a role in the competition for land. This chapter illustrates some of the current practices and tendencies that threaten the quality of the natural environment, the sustainability of the southern economy, and its human settlement pattern. The final chapter encourages "foresight and insurance" strategies, for example, public initiatives to save agricultural land, consideration of significant changes in water law, and practices that might increase timber yield while giving higher priority to national forests as recreational resources.

This book is unusual in its use of extensive statistical data combined with information gathered during site visits, personal conversations with many southerners, and the author's own knowledge. He concludes that there will be ample land for most projected uses in the South, but "It does appear, however, that for many of its resources—its topsoil, its water, its wildlife habitats, its science and historic resource—the South has moved far down the path of depleting once abundant supplies. The impacts from the competition for land by the various economic uses may bring southerners to a sudden, perhaps belated, realization that many values can remain unpriced or unregulated only at the expense of eventual diminution far below the levels of abundance that the South has historically enjoyed."

—RICHARD C. COLLINS, Division of Urban and Environmental Planning, University of Virginia, Charlottesville.

Soil Erosion and Crop Productivity. Edited by R. F. Follett and B. A. Stewart. 533 pp., illus., index, 1985. American Society of Agronomy, 677 South Segoe Road, Madison, Wisconsin 53711. $36.00; ASA members, $30.00. The table of contents of this book reads like a "Who's Who" in soil and water conservation. Notable federal and state personnel and farmers were among the featured speakers at a national conference from which this book was derived. It is well written and edited. As a proceedings, it covers a wealth of topics: from erosion control throughout the world to models on erosion production, to regional effects, to conservation tillage and erosion control structures, to economics and policymaking.

As a proceedings, it is difficult to summarize any one theme throughout the book, so let me touch briefly on the highlights of each chapter.

Chapter 1 is a call to action and gives the perspectus..."to encourage cooperation among many scientific disciplines to achieve our goals in research and education" on soil and water conservation.

In chapter 2 Gordon Wolman stresses the need for better global assessment. But, he concludes, "such assessments are unlikely to alter the recurring findings that the impact of soil erosion on potential crop productivity is highly variable from place to place, presently and potentially devastating to human beings in some area of the world."

Chapter 3 is a good history of soil erosion in the United States. "Although erosion has made an impact on both current and future agricultural production in the United States, there is still disagreement over its extent, its effect on soil productivity and the environment, and its socioeconomic impacts."

Chapter 4 appraises U.S. soil resources, identifying the percent of cropland in the United States in each land capability class, the area of nonfederal land in various uses, and the extent of areas with erosion greater than the various T values.

In chapter 5, J. R. Williams and K. G. Renard do a good job of explaining the Erosion-Productivity Impact Calculator (EPIC) model. However, three errors were noted: α04 should be α05, page 70; equation 22, page 73, seems wrong; and AE equation (60), page 81, is assumed to be average annual wind energy. Chapter 6 follows with a discussion of economic linear programming models in relation to

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erosion and crop productivity. Data from models, such as EPIC, "can greatly enhance the information extracted from linear programming for policy analysis," conclude Paul Dyke and Earl Heady.

Chapter 7, by Peter Nowak, John Timmons, John Carlson, and Randy Miles examines the social and economic perspectives on the relation of soil loss tolerance (T-values) to soil erosion and crop productivity. Two things are apparent: (1) T-values cause administrators of natural resource agencies "to choose between the scientific results and political support at the local level." (2) Land users "are being told to change their agricultural practices on the basis of an abstract concept, the T-value," which to them has little or no meaning. The authors recommend expansion of the T-value concept.

In chapter 8, Charles McLaughlin, an Iowa farmer, states that it is farmers' responsibility to control erosion, and that farmers can with the present information, "I believe he (mankind) can improve his responsibility to control erosion, and that farmers will shift from broadcast to banding near the seed." Chapter 23 treats the problem of technology transfer. Reducing soil productivity losses may directly benefit the potential adopter of soil conservation technology through higher yields, lower cost, higher livestock production, and perhaps even benefits of a general public and future users of the resources, conclude the authors.

In chapter 26, Pierre Crosron, Paul Dyke, John Miranowski, and David Walker set down a framework for analyzing the productivity costs of soil erosion. "Erosion imposes cost both on-site (losses in productivity) and off-site (sedimentation of reservoirs, damages to water quality, etc.). This chapter treats only on-site cost. The fact that intervention is necessary to stop soil erosion and the question of how and when to intervene are discussed.

Chapters 27 and 28, by Sandra Batie and Peter Myers, respectively, look at future soil conservation policy in the United States and the U.S. Department of Agriculture. Myers remarks, "Many political and financial constraints hamper the adoption of new conservation programs. Federal agencies can supply new data and new techniques, and even financial and technical assistance, but the final action is up to the farmer. It's not the money as much as it is the attitude, and approach and the commitment. That's what really counts."

All in all, the 533-page book is a comprehensive treatment of the soil erosion soil productivity issue, an area of much current interest and debate. As such, it should be on the shelves of all soil and water conservationists. —Coy W. Doty, Chairman, Erosion and Sedimentation Task Force, SCSA, Florence, South Carolina.

General

The Preservation of Species. Edited by Bryan G. Norton. 305 pp., refs., bib-


The Global Possible. Edited by Robert Repetto. 538 pp., illus., tbs., app., index, 1985. Yale University Press, New Haven, Conn. 06520.


