



PREFACE

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In October 2006, the Soil and Water Conservation Society (SWCS) sponsored an international workshop organized around the theme “Managing Agricultural Landscapes for Environmental Quality, Strengthening the Science Base.” The point of that workshop was to discuss how conservation researchers, policymakers, and practitioners might strengthen the science that undergirds conservation action and account for the resulting environmental benefits on agricultural land at landscape and watershed scales. Four subthemes provided the framework for those discussions:

1. What should we measure, and how, to account for environmental effects at landscape and watershed scales?
2. Methods for environmental management research at landscape and watershed scales.
3. The science of targeting within landscapes and watersheds to improve conservation effectiveness.
4. Realistic expectations about the timing between conservation implementation and environmental effects—lessons learned from long-term research (or what scale of change is possible over that period of time).

Following the workshop and publication of a book containing the commissioned papers presented at that meeting, a number of workshop participants recommended that SWCS

plan a second workshop that might take the discussion of working at landscape or watershed scales on agricultural land to another level—essentially from science to practice. A second workshop—“Managing Agricultural Landscapes for Environmental Quality II, Achieving More Effective Conservation”—was subsequently organized and held April 28–30, 2010, in Denver, Colorado.

The agenda for that second workshop was patterned largely after the first. Members of the organizing committee once again identified four recurring subthemes:

1. Assessing landscapes: Vulnerabilities and values.
2. Targeting risky behaviors on vulnerable landscapes.
3. Institutional challenges to managing environmental quality on agricultural landscapes.
4. Measuring conservation effectiveness across agricultural landscapes.

A lead paper was then commissioned by SWCS for each of these subthemes, along with two “perspective” papers for each. The purpose of the latter papers was to add value to the discussion surrounding each subtheme. As in the 2006 workshop, the lead papers were to be prepared by a multidisciplinary team of authors.

This book contains those commissioned papers, save for one prospective paper not

submitted. In addition, two keynote papers are included, one presented at the outset of the workshop and the other at the end. A final synthesis chapter in this book was written later by Pete Nowak, University of Wisconsin, who served as program chair for the workshop.

The workshop agenda also featured numerous oral and poster papers presented in a series of concurrent sessions. Abstracts of all those papers are accessible on the “conferences” portion of the SWCS website: www.swcs.org.

As in the 2006 conference, the agenda for the Denver meeting included evening roundtable discussions that focused on each of the four workshop subthemes. Those roundtables were intended to give workshop speakers and participants an opportunity to raise questions and expand upon the discussions that occurred during the daytime sessions. The sessions also were an opportunity for speakers and participants to offer their views on priorities for more successful conservation action. Jim Gulliford relates some of the more important ideas coming out of the roundtable discussions in his “foreword” to this book.

As always, any number of individuals and institutions merit thanks for their contributions to the Denver workshop. Several governmental agencies financially supported the workshop and publication of this book. They included the U.S. Department of Agriculture’s Agricultural Research Service and Natural Resources Conservation Service, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, and Agriculture and Agri-Food Canada. A number of individuals from these and other agencies, academic institutions, and nonprofit organizations served on the workshop organizing committee. The names of those individuals appear in the “contributors” section near the end of this book.

Agricultural conservation objectives have changed dramatically over the past five or six decades. In earlier decades, those efforts focused almost solely on soil erosion and the

on-farm protection of agricultural productivity. In more recent decades, the nation’s taxpayers who financially support agricultural producers as a means of assuring a safe, adequate food supply have come to expect those producers to deliver a broader mix of environmental products and services in return for that ongoing support. Included among those products and services are improved air and water quality, better and more extensive fish and wildlife habitat, and the sequestration of carbon as a means of mitigating global climate change.

Unfortunately, the production of most if not all of those goods and services requires a much different approach to working with producers. A field-by-field or farm-by-farm approach, which sufficed when the conservation focus was largely on soil erosion control, no longer is sufficient. Successful production of most environmental goods and services necessitates working across multiple production units—agricultural landscapes—and that has enormous implications, first, for what research is conducted and how; second, for what conservation institutions are most appropriate, including how financial incentives for conservation are structured and dispensed and what mix of voluntary versus regulatory programs might prove most effective; and finally, for how conservation technical assistance is delivered to producers and what new skill sets that requires on the part of the conservation professionals involved.

As the contributors to this book suggest, significant progress seemingly is being made in conservation-oriented research, including the social sciences. As other contributors suggest, however, important questions remain about whether the necessary institutional reform will occur, and soon enough, to achieve the level of conservation effectiveness necessary to meet the nation’s environmental management goals on agricultural land.