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Leaves flowing down a mountain stream.
Soil Conservation Service
Photo by Tim McCabe.



RECYCLED PAPER

The mission of the Soil and Water Conservation Society is to advocate the conservation of soil, water, and related natural resources. As a multidisciplinary organization, SWCS synthesizes the results of research, experience, and custom in developing a knowledge base that is communicated worldwide. Through education and example, SWCS promotes a stewardship ethic that recognizes the interdependence of people and natural resources.

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P E N P O I N T S

Water and the environment

While water is the life blood of the environment, it is only one part of our ecosystem. In the Pacific Northwest we are undergoing severe water shortages, and there has been a tendency to confuse water use with water conservation. Within a water and sewer system, less water use is water conservation. Using low flow toilets and shower heads saves water that would normally be wasted and reduces sewer costs. Outside this enclosed system, however, the larger environmental impact water use has on our air, soil, and water must be considered. True water conservation deals with our total environment.

Recently, in the Seattle area, the Water Pollution Control Department has announced the availability of up to 750,000 gallons of reclaimed water per day. This water can be used for irrigation, street cleaning, flushing, etc. While this water resource can grow to 200 million gallons per day by 1996, its usefulness lies primarily for industrial purposes along the metropolitan discharge line. To truck this water for landscape use would not only be cost prohibitive, but would result in additional air pollution from truck exhaust.

Many water districts in the Seattle area have been recommending the use of native drought tolerant plantings, a contradiction in the coastal northwest. The unique warm, wet winters create an unsuitable environment for many plants considered drought tolerant. In addition to increased native plantings, no-growth areas, such as woodchips and gravel are recommended.

While these areas do not use water like turf, they contribute to surface water runoff problems. The resulting environmental impact contributes to increased flood potential and

lack of aquifer recharge. The additional benefits of contributing oxygen and air purification provided by turf are eliminated. Present surface water management practices include grass lined swales as a method of surface water purification. Grass areas help remove many heavy metals and other pollutants from street drainage and rain water. The resulting runoff enters our streams and lakes cleaner, with positive benefits to our ecosystem.

What is needed is not a knee jerk response to a water crisis, but in-depth research into a total water conservation plan. We must all learn to use this gift wisely.

*Phil Fortunato
Kent, WA*

The big debate of sustainable ag

About eight years ago I listened to professors and extension specialists give a presentation to farmers in Wisconsin about a practice they called sustainable agriculture. They covered such items as crop rotations, less commercial fertilizers, using livestock manures more effectively, less chemical use, protecting against water pollutants, using minimum tillage, cost effective labor inputs, protecting soils, and do all other "good farm management things" with your local agents helping you plan your farm program.

Then these professionals lamented that not enough research information was available to help in a definitive way to guide and protect them for reliability in their advocacy of this new way of farming.

I asked them if they had dug into any published research from the 1930s and 1940s and how farmers operated then. They appeared startled when I offered that farmers back then were operating much as these professionals were advocating

today.

Why not dig out this good research information, coordinate it and fit it into some of the needs of sustainable agriculture today? This way of farming is not new in its basics, but only in how it is packaged.

At this time I forecasted that the difficult task would be in turning farmers around from their big farms and large equipment; in other words going back to the way farming was.

Sustainable agriculture is discussed in many farming magazines and journals, including this one. It appears obvious that now after some years of scattered leadership efforts by professionals in agriculture, sustainable agriculture is in a state of questionable accomplishments with a major lack of understanding of what it really is.

What will be next? Will any recognition come about sustainable agriculture as not being something new, but a way of farming for those who have respect for their land and a profitability suitable to their wants, needs, and management abilities?

This is a worthwhile way to farm that needs to be structured to have a compatible ride on larger field equipment and computerization.

*Melville H. Cohee
Oregon, WI*

Increasing pea yields

We have been doing on-the-farm testing of the effects of wheat straw and the diseases in the straw on dry pea yields. We have completed the tests with the help of the USDA STEEP program, the county Extension Service, Washington State University, and the University of Idaho. The following report verifies what I have learned during my 70 years of

farming:

Test site #1—Straw burned yield of 1,067.22 lbs per acre.

Straw disked in yield of 290.39 lbs per acre.

Difference in yield of 776.83 pounds.

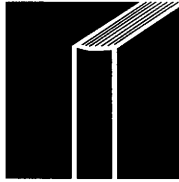
Test site #2—Straw burned yield of 624.35 lbs per acre. Straw burned and disked yield of 442.85 lbs.

Difference of 181.5 pounds per acre.

Yield was 65 percent better where straw was disked and burned.

*Alvene Leinweber
Colfax, WA*

Pen Points is a forum for readers to comment on material that has been published in the JSWC or on land and water management issues in general. Readers are invited to express their views in a letter to the editor. Letters are judged on their clarity and pertinence to natural resource issues. Long letters may be shortened. Send letters to Editor, JSWC, 7515 Northeast Ankeny Road, Ankeny, Iowa 50021-9764; fax (515) 289-1227.—Editor.



B O O K S , E T C .

The State of Canada's Environment. Government of Canada. 750 pp., 1991. Minister of Supply and Services, Ottawa, Ontario. \$29.95 (Canadian).

The 1987 report of the World Commission on Environment and Development, *Our Common Future*, recommended that "an annual report and an audit on changes in environmental quality and in the stock of the nation's environmental resource assets are needed to complement the traditional annual fiscal budget and economic development plans" (p. 314). *The State of Canada's Environment* for 1991 is an important and informative step in Canada's response to this recommendation and follows a similar report published in 1986.

"State of the environment" reporting should attempt to place a wide range of environmental information into perspective. It should describe environmental conditions and assess whether they are improving or deteriorating. By setting a broad context for environmental indicators and trends, such reporting also should help prioritize remedial and research activities, and guide local and national policy development towards sustainable development goals.

This book addresses these requirements by posing four questions: What are the key environmental conditions and trends in Canada? What are the links between human activities and environmental changes? What are the ecological, economic, and health implications of these changes? What are the Canadians doing to address the concerns identified?

The first two of these questions are covered with a wide range of information

on environmental change and its causes presented. Topic by topic, the reader can understand concepts, status, and trends by clear, descriptive text and illustrations.

Secondary environmental effects, as well as economic and health effects of environmental change, are less documented, possibly due to inadequate data. Some trend information is provided, although data gaps are acknowledged. Current Canadian initiatives and plans for developing environmental indicators and environmental accounting also are mentioned. Such initiatives are necessary to bring greater consistency and greater frequency to environmental reporting in Canada.

The State of Canada's Environment begins with a presentation of the "ecosphere" concept as an integrating and guiding perspective, one which encompasses both humans and the environment. The book then presents three views of Canadian ecosystems. Part II presents information on environmental sectors such as air, water, and land, as well as the human activities which impact them, including agriculture, forestry, and mining. Regional case studies of six areas under significant stress, including prairie grasslands and the Great Lakes Basin, are presented in Part III. Current issues with broad environmental implications, such as habitat destruction and climatic change, are presented in Part IV. Finally, conclusions are presented under the theme of sustainable development, bringing the various strands of information back to the perspective of the ecosphere and its integrity.

The conclusions regarding

sustainable development are presented under four headings, as proposed by the World Conservation Strategy—maintaining essential ecological processes, preserving biological and genetic diversity, ensuring the sustainable use of species and ecosystems, and protecting human health.

First, it is clear that many natural ecosystems and their processes have undergone major impacts. The report is somewhat ambivalent, however, as to whether natural ecosystems are ideal or if managed ecosystems that can serve functions such as provision of materials and assimilation of waste are, at least in some cases, preferred. With respect to pollution, the conclusions are mixed: some problems have been rectified, others remain or are being discovered.

Second, individual species and the integrity of some ecosystems are threatened in Canada. The report emphasizes the criterion of genetic diversity and, by this standard, change primarily has been negative.

Third, Canadians are high resource consumers. Demand must be significantly reduced in many cases, as our use of species and ecosystems is not sustainable. Examples include farmland loss, soil erosion, and destruction of wildlife habitat. The report would benefit at this point from a clearer definition of sustainability with respect to resource renewal rates (e.g. nonrenewable, slowly and rapidly renewable). What is sustainability with respect to these resource categories and are we achieving it?

Fourth, information about human health impacts is limited, yet sufficient to generate concern.

The 1991 report covers a broader range of topics than the 1986 *State of the Environmental Report for Canada*. However, it does not provide as much information on some issues such as environmental impacts on human health, legislative responses to environmental issues, environmental program expenditures, or public perceptions of environmental priorities included in the earlier version. In addition in reporting should be maximized to enable readers to understand important trends.

The State of Canada's Environment is a comprehensive reference document, not a book to be read from cover to cover. Readability is maintained by presenting material in blocks, with extensive use of vignettes, tables, graphs, and maps. Detailed reference and reading lists are included, which add to the value of this book as a reference or teaching aid.

The primary value of this book is its educational and reference potential. Topics such as the social and economic impacts of environmental change and policy recommendations for dealing with priority issues will need to be dealt with in other settings.—ALFRED BIRCH and CATHERINE ROSTRON, *Water Resources Commission, Edmonton, Alberta.*

General

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