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Cover: Hugh Hammond Bennett, "father of soil conservation" and founder of SCSA, addresses Kentucky farmers (p. 6).

The Soil Conservation Society of America is dedicated to promoting the science and art of good land use, with emphasis on conservation of soil, water, air, and related natural resources, including all forms of beneficial plant and animal life. To this end, SCSA seeks through the *Journal of Soil and Water Conservation* and other programs to educate people so that mankind can use and enjoy these natural resources forever.

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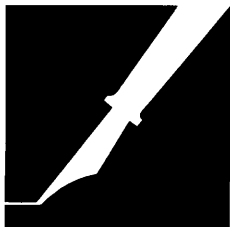
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PEN POINTS

"Saving" soil?

Two recent examples have reinforced my growing concern over the inaccuracy of statements being made regarding the amount of soil "saved" as a result of conservation measures.

Numerous articles, publications, and speakers have cited figures derived by application of the universal soil loss equation (USLE) to either estimate or substantiate the magnitude of soil saved as a direct result of soil conservation programs. All too frequently these figures are being inappropriately used or improperly interpreted to imply more than should be implied. What is especially disturbing is that some of the statements have come from sources within USDA [U.S. Department of Agriculture], which certainly has the technical expertise to interpret and use the figures correctly.

For example, in the comptroller general's report to Congress entitled *Agriculture's Soil Conservation Programs Miss Full Potential in the Fight Against Soil Erosion*, dated 11/28/83, the GAO [General Accounting Office] staff makes the following statement: "USDA has estimated that on nonfederal lands, about 6.5 billion tons of soil are *displaced* annually by erosion—roughly equivalent to 43 million acres losing an inch of soil a year" (emphasis mine).

Another example is found in the National Association of Conservation District's "Tuesday Letter" of 12/13/83. In an article entitled "Block Announced 1984 Conservation Program" the following quote is attributed to Secretary Block: "USDA records indicate, that in 1983 alone, targeting resulted in 29 million additional tons of soil *saved*" (emphasis mine).

In both of these examples, there is a definite inference that soil displaced, or soil saved, is in a one-to-one relationship with soil lost from a field. The lay reader or listener is led to conclude that in the first example 6.5 billion tons of soil leave nonfederal lands and presumably deposit somewhere else. Certainly this is inferred by the analogy of *losing* an inch of soil a year *from* 43 million acres. In other words, 6.5 billion tons of soil went from here to there.

In the second example, the reader is again led to conclude that targeting pro-

grams kept 29 million tons of soil from leaving fields and depositing elsewhere. Such a conclusion seems logical since one would assume that the author used the term soil saved, as opposed to soil lost, meaning soil that was kept from leaving the field.

Both of the statements cited are typical of others I have read or heard, and both are inaccurate and misleading. The USLE expresses an estimate of soil movement in a field, but certainly is not to be interpreted as an indicator of how much of that soil, if any, actually leaves a field in a given year. Both of these statements surprisingly are attributed to USDA, the recognized authority on use of the USLE. Certainly, USDA technical people know the limitations of the USLE and where and when it can be used appropriately. It seems to me that USDA has an obligation to clarify the applicability of USLE data and to challenge any misuse of that data, especially when that misuse is occurring within its own ranks.

Soil conservation efforts are finally receiving the priority and public attention they deserve. For the first time legislators are clamoring for a rationale to support more funding. Lobby groups are coming to the support of conservation agencies to help increase staff and resources, and the public is finally beginning to listen to what we have to say.

All of these groups are looking to us, the professional conservationists, for information and data. In most instances, they are believing what we tell them and then using it to help us gain the staff and funds we need to get the job done. Granted, we desperately need to find a way to quantify our accomplishments in a way that is meaningful and understandable to the laymen, to the legislator, and to the average citizen. Sometimes it is very hard to quantify some of our more intangible accomplishments. Perhaps some of us in our zeal to tell our story are guilty of taking liberties with our credibility, by stretching the applicability of the USLE for instance, in hopes of telling a "better sounding story."

But I think it will be a tragedy if, after all our hard-won support, we suddenly find ourselves in the embarrassing position of having to explain why we, the experts, did not know the limitations

of the USLE, or even worse, why, if we did know, did we choose to ignore them. All of us in SCSA, SCS, soil conservation districts, and the professional conservation community in general have a responsibility to challenge the inappropriate use of soil technology. After all, our goal is to advance the science and art of good land use, not to set it back 100 years.

I'd like to see SCSA speak out on this issue. If there are public spokesmen and officials who lack sufficient understanding of this issue, we should try to inform them. If a position paper is needed, we should prepare one. If some data or claims need to be challenged publically, let's challenge them. At the very least, we should go on record as having recognized a problem and having tried to do something about it.

Robert W. Ziehm
Howard Conservation District
Ellicott City, Maryland

Oops!

Thank you for the complimentary copies of the September-October 1983 issue of the *JSWC* in which my article "Harvest Trees—Reap Water" [pp. 390-392] appears.

After reading the article as it appears in the *JSWC*, I discovered a typographical error. In the first paragraph on page 392 [column 1], "1.3 tons per acre" should read "0.13 ton per acre." A numerical error of an order of magnitude should be brought to the attention of readers.

James O. Evans
Forest Service
U.S. Department of Agriculture
Washington, D.C.

PIK in a poke!

Much has been written about the lack of conservation measures on PIK [Payment-in-Kind] set-aside acres. USDA [U.S. Department of Agriculture] recently made public the results of a random survey. This survey reported 11 percent of the farmers did not comply. A windshield survey would indicate that in our area 11 percent did comply and 89 percent did not. This lack of compli-

ance is certainly not due to the absence of the threat of penalties. The operator and owner faced loss of eligibility for the program and repayment of cash benefits if they did not comply.

Anyone who inquired at the Agricultural Stabilization and Conservation Service office found that he or she needed to comply and that there was little room for innovation. Once an individual made inquiry, he came under scrutiny and had better well comply. Most of those who inquired and did comply were small operators. Larger operators seem to have a certain immunity to the rules and tend to do whatever they want in farm programs as long as they can get away with it. Most of their irregularities are common knowledge to neighbors, but go unnoticed by those responsible for the programs.

This experience should help people to be aware of the cultural constraints on enforcement of agricultural programs. Federal programs that would include cross-compliance to enforce soil and water conservation would have to be policed by a federally based force operating above the local social structure. It would seem that if we cannot hope for uniform enforcement of even simple factors, such as acreage allotments, we would have little hope of enforcing conservation cross-compliance. Yes, the conservation aspects of the PIK program failed, but this, as I see it, was a good trial run of the proposed greater undertaking. It is easy to discuss and write about concepts such as cross-compliance without facing the reality of the cultural aspects. One might even pass complex laws that could have an effect if they were enforceable. Laws of this type have proven to be least effective on individuals who have little respect for responsible action and have been a burden for the individual who needs no regulation.

Soil conservation is one of the ethics in our value system, just as is honesty. The moral responsibility of society must be examined. The story is often told of applying a new coat of paint to a rotten post. Soil conservation is only one small corner of a currently very weak post. We need to help set a new post, not paint the old one.

Wayne F. Fisher
Broken Bow, Nebraska

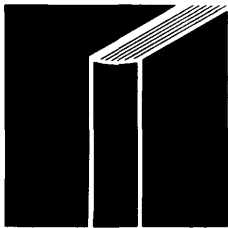
Why not water conservation?

"Harvest Trees, Reap Water" by Evans and Patric [*JSWC* September-October 1983, pp. 390-392] was erudite and informative. However, I must disagree with their statement that "Cheyenne urgently needs more water." Surely a city in urgent need of water, and pumping it from over 100 miles, would institute some stringent conservation measures. At this time, I am unaware of any serious water conservation regulations adopted by Cheyenne. Eventually, this city (gaining only 83 percent population in 30 years and with no major industries) will be procuring water from west of the Continental Divide. Considering the tremendous costs of this water transport, why not consider recycling the sewage—at least for watering lawns?

On the brighter side of this issue, Sonny O'Neil (supervisor, Medicine Bow National Forest) informs me that instead of the ugly Frazier strip cuttings, the clearings on the Coon Creek watershed will be irregular or natural appearing.

William S. Brenneman
Jelm, Wyoming

"Pen Points" is a forum for comment on published material or land and water management issues in general. Readers are invited to express their views in a letter to the editor. Letters are judged on clarity of expression and pertinence. They should be as brief as possible. Long letters may be shortened.—Editor



BOOKS, ETC.

Soil Erosion: Crisis in America's Croplands? By Sandra S. Batie. 136 pp., illus., refs., tpls., app., index, 1983. The Conservation Foundation, Washington, D.C. 20036.

Millions of acres of U.S. cropland are eroding far too rapidly, giving rise to widespread concern about future food production capability and other environmental issues. People understand that this situation cannot continue.

Erosion control technology is sophisticated, widely understood, and used. Billions of dollars have been spent on soil erosion control through an extensive, intricately organized set of units, agencies, programs and projects of government with massive private landowner cooperation.

So why does the nation continue to struggle with a serious soil erosion problem? Why has this straightforward, un-mysterious, natural physical process not been brought under control?

Dr. Batie addresses this paradox in her discourse on the social, economic, and political issues that permeate and complicate soil conservation programs. She does a good job of identifying key policy issues, describing their scope and dimensions, and exploring their meanings and interrelationships. For people who have little or no technical knowledge about soil erosion and its control, this book can provide useful insights into the paradox.

For example, it is not generally known that U.S. presidents tried persistently for three decades to shift federal cost-sharing funds into enduring environmental protection measures, only to be thwarted repeatedly by special political interests in the Congress. By revealing such complexities of public policy, Dr. Batie performs useful service. But appreciation of the erosion threat to our soil resources is not enhanced by the quoted words of a professional conservation worker speaking of "a farmer sitting on 80 feet of topsoil," as if such a thing actually exists.

For the professional worker in the science and art of soil erosion control, this book's numerous inaccuracies in technical matters tend to negate its value as a means to clearer understanding of soil conservation policy issues. Space limitations permit citing only a few examples:

► The contribution of N and P derived from applied chemical fertilizers to the total pollution load from cropland is badly misrepresented.

► The standard state and soil conservation district model law was not enacted as a federal statute, but only offered by the USDA as a guide for state legislative action.

► An appendix purporting to describe soil erosion prediction equations should have been omitted. It only serves to detract from the book's overall credibility.

A disappointing item in this book is the thoughtless parroting of a tiresome canard, namely that human despoliation of the earth's resources can, to a significant degree, be attributed to the Judeo-Christian heritage, which presumably "stresses human dominion over the earth" (the implication being that "dominion" is necessarily destructive), "but has no commandment for husbanding resources."

In order to understand the Judeo-Christian heritage as it relates to the resources of the earth, it is necessary to read and understand more than the Genesis 2:28 admonition to "*Be fruitful, and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moves upon the earth.*" Nothing in this portion of the Judeo-Christian scriptures, nor in any other portion, grants any license to exploit wastefully or to desecrate or destroy or pollute. On the contrary, the message for man is that the resources of the earth are to be the object of his respectful stewardship precisely because they are the gift of our provident Creator. Perhaps the cropland setaside program specified by God in Leviticus 25:2-12, would work at least as well as any scheme yet devised by USDA and cost less to administer.

These scriptures also reveal the true nature of the unregenerate human condition, which manifests itself clearly in the all-pervading attitude of self-serving greed, the true root cause of mankind's abuse of the planet. Poet T. S. Eliot spoke well and truly: "A wrong attitude toward nature implies, somewhere, a wrong attitude toward God, and the consequence is an inevitable doom."

In summary, to her credit Dr. Batie refrains from taking her readers on yet another "impending doom" trip, without belittling the real and valid concerns that a great many people have about current land use trends and soil loss rates. She succeeds rather well in analyzing the relevant policy issues in terms that should be helpful to the lay public.—LEONARD C. JOHNSON,

Department of Soil Science, University of Wisconsin, Madison, 53706.

Idaho Soils Atlas. By Raymond J. Barker, Robert E. McDole, and Glen H. Logan. 148 pp., illus., 1983. University Press of Idaho, Moscow, 83843.

The colored soil profile and landscape photographs on the front cover set the pattern for this book, which includes prints of 54 soils as well as granite bedrock. The family classification is given for each. Series have been established for all but 11 soils. A map shows sites of soils photographed and described in the frontispiece. The pictures taken by Raymond J. Barker are excellent, and each soil profile was prepared carefully.

The *Idaho Soil Atlas* does not include a general soil map. It deals only with soil taxonomic units (kinds of soil) and not with soil mapping units (areas of different kinds of soils).

According to the authors, "the atlas was prepared as an aid to further the knowledge of soils." "Its object," they say, "is to present all of the prominent soil characteristics or properties that exist in the state and to show how these characteristics affect use and management." Properties include physical as well as chemical ones. Horizon and landscape photographs are included for each soil type.

Information is included on soil-forming processes involved in the development of each type, as well as comments on agricultural use and characteristic native vegetation. The discussion of genetic factors of soil formation is short but good. The mountains contribute to many kinds of parent materials. Volcanic ash of many ages is a bit unusual, and the light weight of volcanic ash sets it apart from most parent materials. The mountains also cause many contrasting climates, with precipitation in the state ranging from 8 to more than 60 inches.

For each soil there are two facing pages. The left page depicts the colored soil profile and includes a brief description by horizon and the landscape picture. The top of the right one includes family classification, soil depth, drainage class, parent material, average annual precipitation, average annual air temperature, average frost-free season, elevation, topographic habitat type, common native vegetation, occurrence in Idaho, and land use—all brief. In

the middle of the page is indication of prominent characteristics of the soil; the bottom half of the right page includes a general discussion of its development, comparison to other soils, land uses, production, and management in relation to soil characteristics.

The appendix includes a glossary, a list of plant names, and groupings of the 54 soils by soil orders, soil depths, natural soil drainage, parent material, average annual air temperature, average frost-free season,

elevation, topography, habitat type, and land use.

This unique and excellent publication will be useful to soil scientists, agricultural workers, farmers, teachers, bankers, and others with interest in the lands of Idaho.—ANDREW R. AANDAHL, 1914 South 30th, Lincoln, Nebraska 68502.

Outdoor Recreation

Low and Variable Visitor Compliance Rates at Voluntary Trail Registers. By Robert C. Lucas. 5 pp., illus., 1983. Intermountain Forest and Range Experiment Station, Ogden, Utah 84401.

Problems and Practices in Wilderness Management: A Survey of Managers. By Randel F. Washburne and David N. Cole. 56 pp., tpls., refs., apps., 1983. Intermountain Forest and Range Experiment Station, Ogden, Utah 84401.

Monitoring the Condition of Wilderness Campsites. By David N. Cole. 10 pp., illus., 1983. Intermountain Forest and Range Experiment Station, Ogden, Utah 84401.

Assessing and Monitoring Backcountry Trail Conditions. By David N. Cole. 10 pp., illus., refs., 1983. Intermountain Forest and Range Experiment Station, Ogden, Utah 84401.

Costs for Developed Recreation Sites in the Northern Region, USDA Forest Service. By Ervin G. Schuster and Kenneth C. Gibbs. 6 pp., illus., 1983. Intermountain Forest and Range Experiment Station, Ogden, Utah 84401.

Corps of Engineers' and Bureau of Reclamation's Recreation Construction Backlogs. 32 pp., 1983. U.S. General Accounting Office, Washington, D.C. 205648.

Pesticides

The New Pesticide User's Guide. By Bert L. Bohmont. illus., refs., gloss., 1983. Reston Publishing Company, Inc., Reston, Va. 22090. \$18.95, plus \$1.00

for postage and handling.

Pollution

Hazardous Waste Sites: National Priorities List. 1983. U.S. Environmental Protection Agency, Washington, D.C. 20460.

Effects of Gaseous Air Pollution in Agriculture and Horticulture. By M. H. Unsworth and D. P. Ormrod. 532 pp., illus., refs., apps., index, 1983. Butterworth Publishers, Woburn, Mass. 01801. \$99.95.

PCBs: Human and Environmental Hazards. By Frank M. D'Itri and Michael A. Kamrin. 443 pp., illus., tpls., index, 1983. Butterworth Publishers, Woburn, Mass. 01801. \$49.95.

Toxic and Hazardous Waste. Proceedings of the 15th Mid-Atlantic Industrial Waste Conference. Edited by M. D. LaGrega and L. K. Hendrian. 647 pp., index, 1983. Butterworth Publishers, Woburn, Mass. 01801. \$49.95.

Hazardous Waste in America. By Samuel S. Epstein, Lester O. Brown, and Carl Pope. 608 pp., refs., tpls., apps., index, 1983. Sierra Club Books, San Francisco, Calif. 94115. \$12.95.

Reclamation

Proceedings, High Altitude Revegetation Workshop No. 5. Edited by Robin L. Cuany and Julie Etra. 208 pp., 1983. Water Resources Research Institute, Colorado State University, Fort Collins, 80523. \$6.00.

Mining, Land Use and the Environment. II. A Review of Mine Reclamation Activities in Canada. By I. B. Marshall. 288 pp., illus., refs., tpls., apps., 1983. Environment Canada, Hull, Que. K1A 0E7.

Solid Wastes

Environment and Solid Wastes: Characterization, Treatment, and Disposal. By Chester W. Francis and Stanley I. Auerbach. 498 pp., illus., refs., tpls., index, 1983. Butterworth Publishers, Woburn, Mass. 01801. \$49.95.

Design Principles in Resource Recovery Engineering. By Norman L. Hecht. 159 pp., illus., refs., index, 1983. Butterworth Publishers, Woburn, Mass. 01801. \$19.95.

Bibliographies

Heavy Industry, Deepwater Ports, and Coastal Environments: A Bibliographical Case Study of Cherry Point, Washington. By Megan Barton. 39 pp., maps, bibliogs., 1983. CPL Bibliographies, Chicago, Ill. 60637. \$6.00.

Drought in the Great Plains: A Bibliography. Supplement. Edited by Donald A. Wilhite and Deborah A. Wood. 48 pp., refs., indexes, app., 1983. Printing and Distribution, University of Nebraska, Lincoln, 68583. Free to Nebraska residents; \$2.00 for nonresidents.