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A variety of views

The January-February [1988] issue of the JSWC is one of the best! You should be commended for presenting a variety of points of view with respect to one of the most difficult policy problems confronting the nation.

Norman Wengert
Colorado State University
Fort Collins, Colorado

I have been tantalized by many unclear references to a “Food Security Act” and to a “Conservation Reserve Program.” So I thank you for your one-page “Viewpoint” on page 8 of the January-February [1988] issue.

Even though you suggest that conservation district officials have taken on this new role only “to some extent,” from your whole discussion I gather that the districts and SCS [Soil Conservation Service] have been offered manna from heaven to give their joint efforts the kind of broader definition, clearer and broader goals, and better financing their friends have been longing for for years.

Philip M. Glick
Chevy Chase, Maryland

The Conservation Reserve Program was correctly and honestly portrayed at its inception as intended to cause the exclusion (at least temporarily) of certain highly erodible land areas from the nation’s agricultural cropland base. This was to set these lands aside as a “reserve,” in a resting and restoration status for possible use in the future if and when needed, and also would eventually allow that limited conservation program resources be devoted to management and protection of our much larger acreages of better quality croplands that would yield a better return on such program resource investments. Water quality improvements were anticipated as a secondary, adjunctive benefit from the CRP.

But this eminently worthwhile program has been threatened from its outset from two sources: those who would, by administrative fiat, convert its purpose to primarily a water pollution abatement objective and those who would spread the program’s application as thin as rice paper in order to involve, at least superficially, the greatest possible number of electoral precincts and electors.

I cannot understand, much less accept, the premise that appears to permeate Steve Lovejoy’s recent commentary (“The Unfilled Promise of the 1985 Food Security Act,” January-February 1988, p. 85), namely, that actions undertaken for the purpose of protecting and restoring the productive quality of agricultural soils needed to meet future food and fiber needs lay outside the realm of “addressing environmental concerns.” An adequate and assured supply of highly productive food-producing soil is in my opinion insuperable as an essential and vital component of a high quality environment. A proper appreciation for the contribution that food makes to the totality of environmental quality for humanity will preclude the elevation of clean water to the absolute pinnacle of environmental concerns while relegating productive soils to a lesser status or pretending that soil quality is somehow not part of our “environment.”

The soundness and efficacy of the CRP should be judged primarily on the basis of two closely related considerations: the number of acres of land suitable for the agitations associated with annual grain production that have been placed under protective contracts and perennial vegetative cover and the quantity of soil loss reductions effected, as estimated on the basis of documented changes in management on the affected land parcels. Related water quality benefits will be icing on the cake.

Leonard C. Johnson
Troy, Idaho

Thought it was great

I read Tim McKay’s JSWC article [January-February 1987, pp. 408-409] on teacher education with much interest.

Thought it was great! More chapters need to be doing this type of thing!

The JSWC keeps getting better!
Bob McLeese
Underhill, Vermont

Amen to thoughts on T-values

The May-June 1987 issue of the JSWC has an interesting article about soil loss tolerance (“Soil Loss Tolerance: Fact or Myth?”, pp. 155-160).

First I want to congratulate Dr. Johnson and say that I have the same point of view. For many years I have been reading and hearing at international conferences about the USLE [universal soil loss equation]. Many scientists and agronomists agree with the terrible fact that it is permissible to lose soil on farms around the world. As a conservationist, I disagree completely with this principle. Soil must at least keep its natural capability even under high grain yield. For that reason, I support no tillage as the only way to produce food and fiber crops without soil destruction. In fact, with no-tillage we have realized good results in soil construction with proper crop residue management. On average, we increase soil depth 2 millimeters with proper crop residue management. Today, we
show 25 millimeters of new topsoil in 25 years.

Again, I congratulate Dr. Johnson for his message to scientific people. It is a pity to see how students are taught in universities around the world that it is permissible to lose soil, also to say that farmers can lose any amount of soil. It is not possible to support any farming of land in the long term with this wrong principle.

Dr. Johnson's work, by the way, is being translated to Spanish.

Carlos Crovetto
Concepcion, Chile

**What risk alachlor?**

In an article entitled “Tomorrow’s Water Manager” [JSWC, September-October 1987, pp. 312-315], Christine Olsenius, vice-president of the Freshwater Foundation, states: “The issue to revoke the registration of alachlor [in Massachusetts] was not a scientific one.” In fact, on January 13, 1988, the Pesticide Board in Massachusetts overturned the decision to revoke the registration of alachlor.

The subcommittee's vote to revoke alachlor's registration in Massachusetts was based, in large part, on a flawed groundwater monitoring study and misinterpretation of analytical data. An intensive, field-leaching study of alachlor was performed by the Massachusetts Pesticide Analysis Laboratory in 1987 and demonstrated alachlor did not leach to shallow groundwater under agronomic conditions typical to Massachusetts. The facts are clear: Alachlor poses minimal risk to people and the environment and provides substantial benefits to farmers and the public.

Independent, objective review of the risks and benefits of alachlor by the United States Environmental Protection Agency, the Canadian Alachlor Review Board, and an administrative law judge in Massachusetts and many other nations, including the United Kingdom, France, and Italy, have all affirmed alachlor does not present an unreasonable risk to people or the environment when used as directed.

As scientists and regulators, we cannot allow poorly designed, overly interpreted studies to guide public policy.

Reports of contamination of groundwater may represent only increased monitoring efforts and much lower detection limits. Contamination of groundwater is a serious issue which should concern everyone, but it is important to estimate true risks and identify practical solutions. Without question, prudent responses for the protection of public health must be based on unbiased assessment of scientific data.

Andrew J. Klein
Monsanto Agricultural Company
St. Louis, Missouri

**Hectares vs. tareas**

The subject article [JSWC, September-October 1987, pp. 367-369; JSWC, November-December, 1987, pp. 300] states that, “A tarea is equal to 629 square meters or 1 tarea = 0.062 hectare or 1 hectare = 16 tareas.” I believe that 1 hectare = 16 tareas may be correct. If it is correct, then a tarea equals 625 square meters, not 629.

The New Britannica-Webster dictionary contains a tabulation of the metric system, which shows a hectare (ha) is 10,000 square meters and is approximately equivalent to 2.471 acres.

16 tareas = 1 ha = 10,000 m² from which: 1 tarea = 10,000/16 = 625.000 m² rather than 629.

Furthermore, if 16 tareas = 1 hectare then: 1 tarea = 1 ha/16 = 0.0625 hectare rather than 0.28 hectare shown in Table 1 or that 1 hectare = 3.52 tareas shown in Table 2 both on pages 368 of the September-October 1987 issue of the JSWC.

I suspect an error in translation to English or a typographic error.

George A. Lawrence
Logan, Utah
The Politics of Environmental Mediation.

Since its inception in the early 1970s, environmental mediation has been pushed by certain interests in the environmental community as a better means than litigation for resolving disputes over resource development projects. In environmental mediation, the parties involved in a dispute try to negotiate a settlement, often with the help of a professional mediator. This book provides a critical look at environmental mediation from a political perspective.

The first two chapters build up a case for environmental mediation by assessing the problems associated with traditional methods of dispute resolution, such as litigation and legislation, then by exploring the major virtues of mediation. Proponents of environmental mediation contend that mediated settlements are faster, less expensive, more democratic, and nonadversarial.

In the next four chapters, Amy refuses the acclaimed advantages of environmental mediation and analyzes its imbedded political problems. Some of these claims for example, mediation is cheaper and faster than litigation, are based on overblown views of and misconceptions about this relatively new approach rather than backed by evidence. The author asserts that mediation is not equitable because all affected parties do not have access to the process. Opportunities exist for weaker, inexperienced negotiators to yield concessions to or be co-opted by those more familiar with the tricks and strategies of negotiation. Like policymaking, environmental mediation is a political process, characterized by imbalanced political and economic power among negotiators.

Some pro-mediation groups see environmental controversies as problems of communication and misunderstanding, and as conflicting interests. Amy suggests that such underlying assumptions about mediation distort the real nature of environmental issues and confuse those involved in a dispute about the most appropriate approach to the resolution.

In the book's seventh and final chapter, a limited role for mediation is predicted in settling environmental controversies. At the same time, Amy points to a number of forces working to promote environmental mediation.

Although the book is an asset for environmentalists, the author fails to provide adequate and specific examples of mediated settlements to support his contentions. A representative sample of case studies on mediated settlements to investigate the identified political problems could have been useful in supporting his claims. There are also suggestions that environmentalists consider appropriate strategies in the face of built-in biases in mediation, but the book lacks a chapter synthesizing such strategies.

Regardless, Amy deserves credit for unveiling the inherent political problems of mediation and raising the conscious level of those primarily exposed to abundant pro-mediation literature.—MOHAMMAD CHOWDHURY, Department of Urban and Regional Planning, University of Wisconsin, Madison.


Old Testament scholars will recognize a quotation from Exodus 20:25 in the book's title. After Moses delivered the Ten Commandments he was directed to build an altar of unhewn stone "for if thou lift up thy tool upon it, thou hast polluted it." Wes Jackson takes this to mean that we are to be more mindful of the Creation, more mindful of the original materials of the universe than of the artist. The artist must remain subordinate to the larger Creation. If humankind were to take this posture its chances of disrupting nature's patterns, upon which it is dependent, are greatly reduced. The title is a perspicuous choice.

This volume's 18 essays by Kansas's most articulate environmentalist and a national sustainable-agriculture leader lament depletion and corruption of the American rural landscape.

It reiterates his impassioned sensitivity to soil erosion, environmental pollution, the unmitigated dependence of our agricultural economy on fossil fuel and water, the destruction of rural communities, and theft of our natural resources from future generations expressed in his 1980 book New Roots for Agriculture.

Altars of Unhewn Stone proposes to substitute destructive annual crops, such as wheat, with a mixture of healing perennial crops. Jackson pointed out that the current monoculture of annuals disturb the soil, deplete fossil energy, and pollute with agricultural chemicals. But a polyculture of perennial crops would provide species and genetic diversity, avoid insect and disease epidemics, run on sunlight, sponsor its own fertility, and accumulate rather than deplete its fundamental capital—the soil.

Unlike Sir Albert Howard, who used the forest as an analogue in thinking and experimenting with different approaches to food production, Jackson selected the prairie.

Because high-yielding crops are annuals, or treated as such, crucial questions must be answered. Can perennialism and high yields go together? If so, can a polyculture or mixture of perennials outyield a monoculture of perennials? Can such an ecosystem sponsor its own fertility? Is it realistic to think such complexity can be managed to avoid the problem of pests? Since raising these questions in 1980, The Land Institute has uninterruptedly researched the issues.

Born on a farm near Topeka, Kansas, Jackson has a Masters degree in botany from the University of Kansas and a Ph.D. in genetics from North Carolina State University. After teaching high school and at Kansas Wesleyan and California State University at Sacramento, he founded The Land Institute in 1976. Jackson co-directs the institute with his wife, Dana.

Society is currently structured to accommodate the capitalist economy, Jackson says. If society was serious about helping the farmer, they would treat agriculture as inherently biological and cultural, not industrial. We would see more crop rotations, more strip cropping. We would see animals on the farm, their manure fertilizing the fields, rather than in large feedlots. We would see more rural schools, rural churches, and rural baseball. We need a new economic order that respects biological and cultural diversity. We need economic models of sustainability based in an environment that has been kept free of chemicals that did not evolve with our tissues.

Just who would Jackson choose to redirect agriculture's momentum? The U.S. Department of Agriculture, he says, has the greatest potential of any institution for defining the mission of a sustainable agriculture. Ideally, a mission-oriented agency comparable to the National Aeronautics and Space Administration would be the most effective.

Jackson says that we are in the midst of an information implosion, not the explosion that conventional wisdom holds. The world is losing as many as 1,000 species each year.
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sists of a base value of grazing on public land adjusted by indexes reflecting current year land lease rates, cost of production, and beef cattle prices.

The 1988 fee reflects an 8 cents per pound average increase from 1987 in the price per pound received from the sale of beef cattle and a 2 percent drop in the cost of livestock production. Any annual increase or decrease in the fee will be limited to no more than a 25 percent change from the previous year, but will not be lower than $1.35 per head month.

New Zealand drops soil conservation agency

Government authorities in New Zealand have decided that the National Water and Soil Conservation Authority need exist no longer. The agency's functions will be shared by the Ministry for the Environment and by the nation's catchment authorities.

That the authority is no longer needed, one government official said “is a tribute to its own success. Catchment authorities can now continue this work on the solid footing created by the authority...over the last 20 years or more.”

Other notes...

A move to undertake a special study of the U.N. Food and Agriculture Organization's role, objectives, priorities, and strategies in promoting global agricultural development was approved by delegates attending FAO's recent 24th biennial conference.

Delegates also reelected FAO Director-General Edouard Saouma to a sixth term... Bottom ash from coal-fired power plants can be applied to corn and soybean fields without detrimental effects, according to researchers at the University of Wisconsin. With applications of up to 200 tons of ash per acre on a silty clay loam soil, there was no movement of heavy metals below the plow layer and no toxic effects on crops... The pesticide relabeling program, scheduled for implementation by the U.S. Environmental Protection Agency on February 1, 1988, has been deferred until 1989 or beyond...“Agricultural Chemicals and Groundwater Protection: Suggested Directions for Consideration and Action” is a publication summarizing issues discussed at a national meeting on groundwater, sponsored by the Freshwater Foundation in October 1987. Copies are available from the Foundation, 2500 Shadywood Road, Box 90, Navarre, Minnesota 55392-0090...A majority of the acreage enrolled in the Conservation Reserve Program in Rock County, Nebraska, is owned by absentee investors and, thus, benefits from the program are accruing to those outside the local community, concludes a study of that county by the Center for Rural Affairs, located in Walther, Nebraska...The sixth annual National Soil and Water Conservation Awards program is off and running. Sponsored by the National Endowment for Soil and Water Conservation, the competition is again seeking the nation's best conservation farmers and ranchers. Nomination information is available from the Endowment, 318 Fourth Street, N.E., Washington, D.C. 20002...A program to assess the environmental impact of pesticides in Canada has been expanded by Environment Canada to identify adverse affects of pesticides currently in use...Organic farms will be inspected and certified for fresh produce, meats, or processed food products by the Texas Department of Agriculture...The Australian Centre for Water Treatment and Water Quality Research in Adelaide is the first of a series of water research stations to be opened under a $5.5 million program sponsored by the government...The Land and Water 201 soil and water conservation program received the Public Education Award from the American Farmland Trust. The program involves the U.S. Department of Agriculture, Tennessee Valley Authority, U.S. Environmental Protection Agency, and the states in the Tennessee Valley...The Manitoba Habitat Enhancement Land Use Program (HELP), a cooperative venture involving the province's Department of Natural Resources, Wildlife Habitat Canada, and Ducks Unlimited Canada, will spend $3 million over the next eight years in an attempt to stem the loss of wetland habitats...Development of an urban conservation strategy for the metro Toronto region has been suggested to provincial officials by the Conservation Council of Ontario, of which the Ontario Chapter of SWCS is a member. The goal of the strategy would be to consider and plan for environmental and natural resource needs in the rapidly growing region...The most extensive international survey ever conducted on public attitudes about the environment will be conducted for the United Nations Environmental Programme by Pollster Lou Harris. The survey will encompass 21 countries in five regions.

People

Duane Acker, former president of Kansas State University, has been named assistant to the administrator for food and agriculture with the Agency for International Development,
tillage, integrated pest management, fertilizer rate demonstrations, delayed nitrogen application, use of nitrogen stabilizers, micronutrients, soil additives, cover crops, double cropping, strip intercropping, and drilled soybeans.

Reports from the 11 geographic regions in the Iowa demonstration projects are available from the Iowa Natural Heritage Foundation, 505 5th Avenue, Suite 1005, Des Moines, Iowa 50309.

Western climatological data offered

A new climatological information service for public agencies and the private sector promises to alleviate many problems with data accuracy and availability in the 11 western states.

The Western Regional Climate Center's Climate Data Service Facility will offer access to automated, validated climatological data for the West on a subscription basis. Corrected data from each state will be submitted by state climatologists. To start, the facility offers information on daily precipitation, daily air temperature, daily pan evaporation, and hourly precipitation. The system has the capacity to offer other parameters to meet user requirements.

More information is available from the WRCC Climate Data Service Facility, P.O. Box 60220, Reno, Nevada 89506-0220; telephone, (702) 972-1676.

EPA proposes national groundwater strategy

The U.S. Environmental Protection Agency in March released for public comment a national strategy to protect groundwater resources from pesticide contamination.

The strategy focuses on prevention of unacceptable contamination of groundwater by pesticides. The level of unacceptable contamination will depend upon a number of factors, including the use and value of the water resource in different areas. For groundwater that is a current or potential source of drinking water, the point of reference for determining unacceptable contamination will be the Maximum Contaminant Levels (MCLs), the standards established under the Safe Drinking Water Act.

The strategy calls for relying on predictive capabilities by using groundwater models and monitoring data. As levels or frequency of detections increase, more stringent measures would be taken to manage the problem to prevent unacceptable levels of contamination.

EPA would give each state the lead role in managing pesticides within its borders. EPA would base the federal registration and use of some pesticides on the adequacy of state plans to protect groundwater. If a state decides not to take a lead role or develop an appropriate plan, EPA would then develop an alternative approach, such as statewide or countywide prohibitions or other limitations on a pesticide's use.

The proposal is expected to be controversial as the pesticide industry worries that state-by-state regulation could be an administrative headache and as environmentalists press for more stringent controls beyond current and potential sources of drinking water.

Organic farming linked to topsoil protection

Researchers have found "observable differences" in the rate of soil erosion on neighboring organic and conventionally managed farms and have linked the beginning of those differences to the period when one farm converted to use of farm chemicals.

Soil scientists John Reganold at Washington State University and Lloyd Elliot with the Agricultural Research Service, along with graduate student Yvonne Unger, found that after 40 years of cropping the organically farmed field had six more inches of topsoil than the chemically managed neighboring field. The organic field also had greater water-storage capacity and better soil structure.

Results of the study, published in the journal Nature, is the first systematic comparison of organic and conventional agriculture on two side-by-side operating farms, according to Reganold. Both farms alternate between winter wheat and spring peas. Wheat yields on the organic operation were about 60 bushels per acre, compared to 65 bushels per acre on the conventional farm.

Researchers say that yields are declining on the conventional farm where the subsoil has been exposed.

Grazing fees set on federal land

Grazing fees on land managed by the Bureau of Land Management and the Forest Service will increase 19 cents in 1988, to $1.54 per head month from $1.35.

The fee announcement in February coincided with publication of the final rule for annually determining livestock grazing fees on federal land in the 16 western states. The fee will be set in accordance with the formula prescribed in Executive Order No. 12548 of February 14, 1986. That formula con-