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Photo by Anita Kear, USDA-ARS.



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RAISE YOUR VOICE

YOUR FORUM TO REACT TO PUBLISHED ARTICLES, TO EXCHANGE IDEAS, AND DESCRIBE INNOVATIVE APPROACHES TO CONSERVATION INCLUDING LEGISLATION

PRECISION CONSERVATION AN OXYMORON

A letter in reference to the special section found in the November-December 2005 issue of the Journal of Soil and Water Conservation: "Precision conservation" is an oxymoron in an important sense. At the very heart of the concept of conservation of natural resources there must be a humility about our understanding of the biotic environment, including the roles of soils and water. Precision has no relevance to humility. Absent such a humility there seems little need for the very idea of conservation: if the future costs of, say, polluting groundwater are known with certainty, then the agriculturist need only expand the factors considered in an optimization exercise. This indeed would make possible a true "precision agriculture," understood as the capability to define a set of practices related to plant and animal increase that maximizes benefits. But biological and social ecology is fundamentally open-ended; our predictive abilities will always be very modest, so a conservation ethic is essential.

Our enthusiasm for greater spatial precision on the land made possible by satellites and computers should be tempered by both this inherent ecological

uncertainty, and the struggle of forging shared understandings of responsible behavior. Software and servos cannot make up for the fact that we seem to lack the political will to impose norms on perpetrators of known "hot spots" and to more widely implement long-known practices. We must constantly remind ourselves that conservation is more than a subcategory of agricultural technology; in the words of Aldo Leopold,

"There must be some force behind conservation more universal than profit, less awkward than government, less ephemeral than sport, something that reaches into all time and places where men live on land, something that brackets everything, from rivers to raindrops, from whales to hummingbirds, from land estates to window boxes."

—William L. Bland, Madison, WI

must be unbiased. The primary research person for the project is not a neutral party, but the manager of the funding source for the project—a vendor for the compost industry.

The major parameter of concern was comparing a compost blanket normally installed at 15 cents per square foot, with the lowest level hydromulch, normally applied for 5 cents per square foot. The standard rate for this level is 1800 lbs. per acre, compared to 8000 pounds per acre for compost. A reasonable comparison would have been with a mechanically bonded fiber matrix hydromulch, which also installs for 15 cents per square foot. Mechanically bonded fiber matrix studies show retaining 1500 times its weight in water—I wonder how a truly comparable product would have looked in the conclusions section? Or an alternative comparison could also have been with an erosion

"The original suggestion—of doing something because we know it works and believe in it—was presented as another way of looking at massive public expenditures [I had used the B1 Bomber, which happened to have the same cost as that proposed for monitoring best management practice (BMP) effectiveness] and this could be extended to such conservation measures as BMP effectiveness and even flood control levees." —Peter E. Black

Readers are invited to express their views on land and water management.

Please make your letter less than 150 words. Letters may be edited for length and clarity.

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— Deb Happe, editor

NEED GOVERNMENT FUNDING

In response to the applied research report titled, "Evaluation of stormwater from compost and conventional erosion control practices in construction activities." found in the November-December 2005 issue of the Journal of Soil and Water Conservation: Scientific, Reproducible, and Defensible. One out of three (reproducible) isn't bad? Research is badly needed in the stormwater cosmos, but the research

control blanket, as compost is sold and advertised as an erosion control blanket.

I also understand that on construction sites, erosion and sediment controls are used together, but in a specific research project like this [and commented on within the report] the sediment control devices were totally different, which may have led to anomalies, which could have been avoided. It makes a person wonder why silt fence was included at all?

Additionally, there is a question whether fertilizer should have been added to certain segments of the research plot, and not all (none was installed with the composts). Again, this leads to too many variances within the test, which could skew the results and make the conclusions suspect.

I am a leading proponent of testing all best management practices for effectiveness, etc., but we need government funding, instead of vendor funding, for these projects.
—Thomas Carpenter, CPESC

IS ETHANOL WORTH THE ENERGY?

I was disappointed to see the “Notebook” article, *Study says ethanol isn’t worth the energy*, on page 142A of the November-December issue of the *Journal*. The article presented one side of an ongoing debate over the positive or negative effects of the use of ethanol for

fuel. I think the *Journal* should be careful about the appearance of taking a side on this issue.

I’m just a novice on this debate, but one paper I’ve seen shows that out of 15 studies done since 1988, 10 show positive energy benefits of ethanol production. One study, *Corn-Based Ethanol Does Indeed Achieve Energy Benefits*, Michael Wang and Dan Santini, Center for Transportation Research, Argonne National Laboratory, February 15, 2000, states: “In summary, with up-to-date information on corn farming and ethanol production and treating ethanol co-products fairly, we have concluded that corn-based ethanol now has a positive energy balance of about 20,000 Btu per gallon.”

There’s a PDF file dated March 28, 2005 titled, *Argonne National Laboratory Ethanol Study: Key points*, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy, at

http://www.ncga.com/public_policy/PDF/03_28_05ArgonneNatLabEthanolStudy.pdf which provides a quick overview of some of the findings of the Argonne study. For an interesting discussion of both sides go to: http://news.minnesota.publicradio.org/features/2005/03/21_steilm_ethanolenergy/ According to this article by Mark Steil, Minnesota Public Radio, March 21, 2005, “Pimentel says if all the energy used to make the fuel is considered, gasoline, too, is a net energy loser.”

One of the things we should be considering is that all energy, other than nuclear, comes from the sun, which, of course, is nuclear. Fossil fuel energy is stored solar energy, kind of like a huge battery. However, we don’t have any way of recharging this battery, so once it’s discharged it’s done. Ethanol represents a product from a battery that’s being recharged every year by solar energy that’s free.

And, fossil fuel consumes oxygen and pumps carbon into the atmosphere. On the other hand, corn grown for Ethanol production recycles carbon dioxide by putting the oxygen back in the atmosphere and making the carbon ready for fuel production again.

I don't know that the efficiency of energy sources is relevant to the Society's soil and water conservation mission, but how the use of biological materials for energy production impacts soil and water resources is definitely relevant. I'm especially concerned about the concept of using corn fodder for energy production. Just how much organic matter can we remove before we start negatively impacting soil quality?

—Daniel F. Kesselring
Marshall, MI

CONSERVATION PRACTICE EFFECTIVENESS: BOMB OR BOON?

Jim Newman is quite right with his suggestions for improving (and monitoring) conservation practice effectiveness. Nor do I think his response to my July/August letter negates mine. The original suggestion—of doing something because we know it works and believe in it—was presented as another way of looking at massive public expenditures [I had used the B1 Bomber, which happened to have the same cost as that proposed for monitoring best management practice (BMP) effectiveness] and this could be extended to such conservation measures as BMP effectiveness and even flood control levees.

Come to think of it, my original proposal was mostly tongue-in-cheek and more as a stop-and-think about a monumental expenditure for one piece of military equipment, pointing out that if we could spend that much on a bomber, we certainly could afford to monitor our nonpoint pollution cleanup. I'm glad Jim—and others—are thinking about it more constructively.

—Peter E. Black, PhD, professor emeritus
Syracuse, NY