

Lancaster Farming

OPINION

As The Earthworm Turns

The tests currently used to detect old DDT and other organic pollutants in the soil may overestimate the risk to living organisms, according to Cornell University researchers who say the real issue for government regulators at toxic cleanup sites should be "biological availability" of aging toxins.

A report to be published in the Dec. 15 issue of the American Chemical Society journal "Environmental Science & Technology" finds new tests for this so-called "bioavailability" — the amounts of toxins available to harm organisms — to be a more realistic reflection of the potential harm of organic pollutants to humans, animals, plants and ecosystems.

And the new tests of bioavailability meet "standards" set by a living inhabitant of the soil, the common earthworm.

"Recent research has cast doubt on the validity of current analytical methods for assessing the risk from organic pollutants in soils," said Martin Alexander, Cornell's Liberty Hyde Bailey Professor of Soil Science and co-author, along with research associates at Cornell, of the journal report. "Current methods determine the total concentration of compounds, not the amounts that are actually available to do harm. If we are not measuring the bioavailability, we are overestimating — sometimes appreciably — the risk to biological organisms."

The Cornell study focused on soils that were contaminated over the years with DDT and its derivatives DDE and DDD, using two different procedures to determine bioavailability: solid-phase extraction with C18 membrane disks and liquid-phase extraction with aqueous solutions containing tetrahydrofuran.

To gauge the effects of chemical aging on bioavailability, the researchers used soil that was treated with DDT 50 years ago in U.S. Department of Agriculture test plots in Maryland, soil contaminated with DDT about 30 years ago at a U.S. Navy weapons-testing site in Virginia, and uncontaminated New York state soils, which the researchers deliberately treated with DDT, DDE and DDD.

Age can be an important factor in bioavailability, Alexander explains, because the compounds might be sequestered in the soil and are less likely to be absorbed by living organisms. The usual way of determining chemical contamination, vigorous extraction methods, detected more DDT, DDE and DDD in the soil samples — as was expected — compared to the bioavailability.

Using bioavailability measurements, Alexander said, "should permit better assessment of risk and allow more meaningful decision-making at sites that require remediation."



**Now Is
The Time**
By John Schwartz
Lancaster County
Agricultural Agent

To Be Safe With Round Bales

Many farmers are buying hay this winter and have found round bales and big square bales to be a good buy, according to Jeff Stoltzfus, Eastern Lancaster County School District Adult Farmer Advisor. However these big bales bring some extra hazards.

Make sure bales are stored in a secure manner. You do not want a run away heifer or some playful children start a bale rolling down a hill. Small children can easily be crushed if a bale moves. This can be a particular hazard if the bales are stacked. Large square bales can also be dangerous.

A Chester County farmer was killed last spring when a stack of large square bales fell over and crushed him. The hay had been baled a little loose and the bottom bale could not support the weight of the upper two bales.

To Move Large Bales Safely

If you are handling large bales with a front end loader, be careful not to raise the bales too high. Several people have been killed when bales have rolled back on to the tractor driver, reports Jeff Stoltzfus, Eastern Lancaster County School District Adult Farmer Advisor.

Make sure the tractor is big enough to handle the bale safely. Having a bale weighing over 1,000 pounds on the front of a tractor will change the center of gravity on a tractor and make it easier to tip the tractor over.

Make sure children are not playing in the area when you are moving bales. Round bales block much of your forward vision making it easy to run over animals or children who move into the area when you are not looking.

Consider the New York farmer who was moving a large round bale down a road. The bale blocked his view, so he decided to drive along the side of the road, just to be safe. However, the bale

kept the farmer from seeing the police car that had stopped to ticket a speeder. To everyone's surprise, the farmer drove up over the police car. Avoid surprises. Be safe.

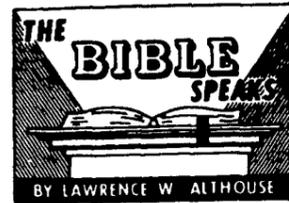
To Clean Tools

Cleaning up tools and equipment is an important practice that should not be ignored, according to Robert Anderson, Lancaster County Extension Agronomy Agent. Proper cleanup of tools now will

leave them in top shape and ready when you want to use them again.

Clean, oil and repair all hand tools. Sharpen all blades and remove rust. Equipment should be cleaned of all plant material and dirt. Replace worn spark plugs and oil all necessary parts. Store all tools in their proper place indoors instead of outside where they will rust over the winter.

Feather Prof's Footnote:
"Think change - Adopt and thrive or fall behind."



THE PERENNIAL CHOICE

November 28, 1999

Background Scripture:

Joshua 24

Devotional Reading:

Psalms 24:14-24

In 1887 at El-Amarna, an Egyptian peasant woman stumbled across a store of 300 clay tablets that she sold for the equivalent of a dollar. Eventually, another 240 tablets were discovered there in what had been the capital city of Pharaoh Akhenaton. The tablets were a spectacular archaeological find: A large collection of letters between Pharaohs Amenophis II and Akhenaton and the governors they appointed to rule in Palestine.

A repeated pattern in these 540 letters is the obsequious swearing of allegiance to the governors to the pharaohs. In letter 236 by Governor Abdu-Heba we find this flowery obeisance: "Your servant renews his oath of loyalty to Pharaoh by bowing seven times seven times..." This oath established a kind of covenant between the Pharaoh and his officials.

The term covenant seems to be growing in popularity with the churches today. We speak of the rite of baptism as a covenant, as well as marriage and any sort of binding agreement. In Old Testament times the covenant signified a "coming together" and "bonding." The English word covenant is descended from the Old French word covenant, a literal "coming together." It is related to the French noun covenir meaning "to agree."

Beginning With Abraham

In the last few months we have traced this concept from the first expression of it from God to Abraham, from Abraham through Isaac, Jacob, and Joseph to Moses, Joshua and the twelve tribes of Israel. This term speaks to us of God's promises regarding the future of Israel and the Promised Land, as well as of Israel's promises to obey God's commandments.

Essentially, the covenant is both a relationship and an agreement. The Old Covenant made through Moses established God as the Lord of Israel and the Israelites as his children selected for a particular mission. In the New Testament we encounter a New Covenant (Testament) sealed by the sacrifice of Jesus's death. It is at the Last Supper that Jesus first utters this term: "This cup is the new covenant in my blood" (Mk. 14:24.) The cup signified his blood that sealed the new agree-

ment between God and his people, the new relationship existing between them.

We tend to think of covenants as once-and-done. But the essence of the Christian's life is the continual renewal of our covenant with God. The scene in Joshua 24 is but one of the many times when Israel was challenged to renew the covenant with the Lord. Seldom has it been expressed so clearly and concisely: "Now therefore fear the Lord, and serve him in sincerity and faithfulness; put away the gods which your fathers served beyond the River, and in Egypt, and serve the Lord" (Joshua 24:14).

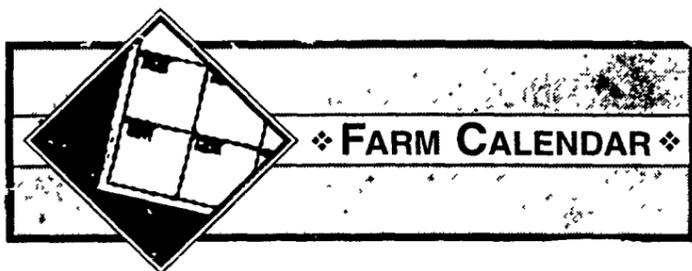
Whom You Will Serve

Joshua knows that people are often swept along a wave of enthusiasm and agree to promises which they do not fulfill. So he says, "And if you be unwilling to serve the Lord, choose this day whom you will serve..." (4:15). I once had a parishoner who refused each year to make a financial commitment to the church. He said the Old Testament teaches that it is better not to make a commitment than to make one you will not keep. I don't think that is what Joshua was offering his hearers. He was calling for an honest and open choice. It is up to you, he was saying, "but as for me and my house, we will serve the Lord."

The people, however, react with great enthusiasm, assuring him: "Far be it from us that we should forsake the Lord, to serve other gods; for it is the Lord who brought us and our fathers up from the land of Egypt, out of the house of bondage..." (24:16, 17) Joshua responds with the words that could have been misconstrued: "You cannot serve the Lord; for he is a holy God; he is a jealous God; he will not forgive your transgressions or your sins..." (24:19) Joshua is saying that he doubts the people of Israel can keep the covenant and, if they do not keep it, they will be the worse for it.

Fickle as the people of Israel had proven themselves, on this occasion they were of one mind. The sternness of Joshua's challenge seemed to make them all that more determined. "You are witnesses against yourselves that you have chosen the Lord, to serve him," said Joshua. The people replied: "We are witnesses!"

And so are we all.



❖ FARM CALENDAR ❖

Saturday, November 27
Susquehanna County Holstein Association annual meeting, United Methodist Church, Montrose, noon.

Buckeye All Breeds Ewe Sale, Kenton, Ohio.

Sunday, November 28

Monday, November 29

Tuesday, November 30

Wednesday, December 1
Md. and Va. Milk Producers Cooperative District Meeting, Fulton Grange Hall, Wakefield, Pa., noon.

Thursday, December 2
Future of Our Food and Farms, Radisson Philadelphia Airport, thru Dec. 3.

Friday, December 3
York County Holstein Association Annual Meeting, Shrewsbury Fire Hall, Shrewsbury, 7 p.m.
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❖ FARM FORUM ❖

Editor,

I am very discouraged, as a dairy farmer to feel the price crunch again. In your market report last week, milk price futures dropped to a new all-time low.

I get the feeling we are going to see new all-time lows at the

farm and never see an increase.

The market report on (TV) said "you better be careful what you wish for."

Wish, what is a wish?

We have been dictated to so long that, wish is all we can do.

The oil cartels have the cor-

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