



President's Message

ROMANCING THE SOIL

My wife and three daughters know that if there was a worldwide competition for a "Cornball of the Year Award" I would for certain finish in the top 10. And all of the corny suggestions of my past notwithstanding, they think I've outdone myself with the title of these paragraphs. I'll admit to borrowing and amending the title of the popular movie, but no more than that. Love is romance, and if one loves the soil like I do, then the title fits, perfectly.

A youth spent on a farm in the rolling hills of southwestern Wisconsin instilled a love of the soil in me. I'll forever feel lucky to have spent my childhood in this unglaciated area of the state. Although farming on hillsides is difficult, it was made easier and more productive by the Soil Conservation Service and the UW Soil Science department when they introduced contour farming and strip cropping some fifty years ago. These practices not only preserved precious soil, they added immensely to the beauty of the countryside. And they drew a lot of deserved attention to the soil and its importance. This is where my romance with the soil began.

Each spring rekindles fond memories of the soil, memories made by helping prepare fields for planting. Plowing is a primitive art, one that began when man first planted a crop instead of depending on a wild harvest for his food. It is the beginning of the chain of most of all that goes on in this world. The soil is where, I think, all nations ultimately seem

to draw their power. There is something very special about being at the beginning of this chain. Springtime is when strong feelings about the soil are passed on, subtly, as son watches father walking plowed fields, pausing for a closer look and occasionally reaching for a handful to see if it has the right feel. All of these things left a lasting impression and a love of the soil that I will never lose. It is, it has been, and it always will be a pleasure to be a husbandman and a romantic of the soil.

Truly great literature and poetry deal with profound themes and my favorite poet, Robert Frost, felt strongly enough about the soil to compose a poem entitled "Build Soil." His poem points this way:

*"What is more accursed
Than an impoverished soil,
pale and metallic?
What cries more to our kind
for sympathy?"*

Horace and Vergil held the same view of the soil. President and farmer Thomas Jefferson once wrote, "Tillers of the Soil are the Chosen of the Lord." I'm surrounded by the thoughts of other soil romanticists, and they are powerful company indeed.

Soils are beautiful and colorful and fragrant and alive. Soil has a subtle fragrance and an "earthy" aroma. It is the aroma of millions of years gone by, of all living things past. The color of soils are those the artist can describe only as "earth tones," soft and subdued. The soil is teeming with the life of earthworms and animals, bacteria, protozoa and many other microscopic organisms.

Although the study of the soil is a true science requiring the use of highly specialized, detailed, precise and technical words, it also includes a language that is descriptive and romantic in sound. Few sciences can lay claim to such pleasant words as friable, tilth, fertile and loam — words that simply roll from your tongue.

Strong sentiments about the soil were nurtured and developed and matured by the Soils Department during the six years I studied at Wisconsin's Land Grant College in Madison. Justin Smith Morrill introduced legislation during Lincoln's term as president creating a land grant institution in each state — a piece of legislation as useful

as almost any ever introduced, in my view. I've felt so strongly about it that I visited Senator Morrill's homestead in Vermont last year, just to have a better feel for the man who created these landmark institutions across America. Nowhere in the country, since the beginning of these colleges that deal with American agriculture, has a Soils Department done more than Wisconsin's. It was, in fact, the first Soil Science Department in our country, established in 1905. Any discipline that leaves its mark does so with its people, not buildings or laboratories or equipment. So it was with the professorial staff during my generation. By accomplishment, personality and example, this marvelous group gave grads and undergrads alike a sense of the miracle and wonders of the science of soil. I know hundreds of students left those classrooms with the same love of soil that I have.

There's not a person alive who wouldn't forever remember an evening at Dr. S.A. Wilde's home, a world renown expert in Forest Soils. He came to America early in the century as a refugee from Russia, forced to leave his homeland at the time of the revolution. Educated in Russia and Europe, he was an accomplished musician on the cello, violin and piano. He spoke several languages, was widely read and authored standard texts found in Soil Science. He was more than a scientist; he truly was a Renaissance and cosmopolitan man. And beyond that, he loved both the soil and young students of the soil. That staff included Leo Walsh, who at one time during my stay in the department was president of the **International Society of Soil Scientists** and chairman of the department. Subsequent to that time he has advanced to the position of Dean of the entire College of Agricultural and Life Sciences. Dr. Champ Tanner seemed never to leave the building and has devoted his life to the study of water use by plants and soil-plant-water relationships. His investigations led to his election to the National Academy of Science and he currently chairs the Department. Few people have walked this earth who possessed more exuberance for

the study of the soil and geology than Dr. Francis Hole. His influence on students is legend, and he is the man who finally persuaded the legislature to declare the Antigo Silt Loam the "State Soil," the first state to do so.

The staff included Dr. Dick Corey, one of the finest teachers in the entire University, not just the Department or the College. Dr. Dennis Keeney assumed a major role in the study of pollution problems of soils and sediments, and taught a terrific course that brought together the two disciplines of chemistry and soils. At one time I shared an office with Dr. Jaya Iyer, a native of India who came to this country with an M.S. and Ph.D. and promptly earned another of each in Soil Science. M.L. Jackson conducted much of his research in Soils at the atomic level of soil minerals and made ex-

tensive use of electron microscopy. Many of you now know John Harkin and the diverse and interesting background he brings to the Department and its students. And so it went with the ever friendly Art Peterson and his almost unrestrained good spirits, and with Emmett Schulte and his dry wit and sense of humor that made him a favorite of students.

But for all of these professors and their strengths and brilliance and influence among students, no one has left a greater mark on so many that passed through the Department than Dr. Jim Love. He has, over the past thirty-plus years, touched thousands of UW students as a teacher. He has been, for hundreds of Soil Science students, the surrogate father they may have needed, an advisor helping point the way through the University, and a trusted counselor

and true friend when the need was present. His door was always open to a student needing special help with course work. He never will be replaced as a teacher in that Department, and many of us are sad to think that in just one short year he is going to retire.

I cannot imagine a group as distinguished as the one I knew will ever again be assembled. But generations before have probably felt the same way, and generations to follow most likely will too. This shows the strength of the Department and the University and their attitude about quality teachers and researchers.

Every Golf Course Superintendent should not only be a student of the soil, but should join me in the ranks of the romantics. Soil is, after all, the stuff golf courses are made from.

Monroe S. Miller

Wisconsin Pathology Report *Recent innovations in elm injections for DED control*

By Dr. Gayle L. Worf



We still have some valuable American elms on many Wisconsin golf courses—not as many as we used to, but we'd still hate to lose the remaining ones. I've seen the data and listened to discussions of improved injection techniques and modified application rates. I'm impressed with their possibilities, and want to pass them along to you.

Two major changes have occurred in recent years: (1) a **modifica-**



tion in injection technique that places the chemical through root flares (just below the soil line), and (2) **use of Arbotect 20S at three times the former rate.**

These have been made possible through the research of Mr. Mark Stennes, a former graduate student at the University of Minnesota, and EPA label expansion that permits legal injection at the higher rate. Although other chemicals and low trunk-site injections are still possible, considerably improved uptake, distribution, and retention of active ingredient results from the newer system, and in turn results in much greater protection and greater survival. If you've injected elms previously—or even if you haven't—the modifications are relatively simple and easy to follow. I've offered a general summary below:

1. Timing. For preventive treatments—anytime during the growing season (June-September) after leaves reach full size. Do not inject

defoliated trees until they are re-foliated.

Therapeutic treatments can be made with good chances for success on trees that develop symptoms after July 1. Injections on trees showing earlier symptoms rarely work—the fungus is too far advanced and widespread in the tree. Also, trees infected via root grafts (including those showing epicormic branch wilting) won't respond for the same reason.

2. Equipment and chemical. Materials required are the following:

a. a corrosion-proof injection container that will hold 30 gallons or more:

b. a pressure system to deliver 5-12 psi constant pressure; (gravity units will do for this, but other systems may be better.)

c. a leak-proof "harness" consisting of high quality polyvinyl tubing of sufficient length, and with a sufficient number of tapered injection tees to surround the "root flare" base of the tree. A tree with a DBH of 30 inches will require from 45-60 injection sites. There should be 12 inches of tubing between each injection tee on the harness. Best tee size is 3/16 to 5/16 inch diameter. Introduce the chemical into the harness at two locations on opposite sides of the