

## Fertilizer Needs Discovered by Leaf Analysis, Researchers Say

Best possible rates, methods, and frequency of fertilizer application on woody plants may be discovered by detailed leaf analysis, horticulturists at the Ohio Agricultural Experiment Station, Wooster, believe.

"Necessary information for proper application includes growth rate, age of plant, desired ornamental effect, and quality of the plant," researchers point out, "and soil tests or other means which overlook this information can not be conclusive."

Wooster scientists are convinced that foliar analysis will provide a truer picture of a plant's nutrient status, and that this information, when correlated with growth and quality measurements, will provide more accurate guides for proper fertilizer practices.

Shade trees and acid soil plants are under study in the present phase of the program, now being carried out in Columbus, Ohio, and at commercial nurseries, as well as at the experiment station in Wooster. Leaf samples are being analyzed by photometric and chemical techniques to discover the most effective differential fertilizer treatments.

## Rhode Island U. Develops Fungi-Nemato-Herbicide

A water-soluble combination fungicide, nematocide, and selective herbicide is the latest development to come from research labs of the University of Rhode Island's Department of Plant Pathology-Entomology.

A report from the Agricultural Experiment Station by department chairman Dr. Frank L. Howard, and research assistant Peter B. Adams, states that workers at the station have developed and field tested stabilized methyl arsine oxide. This compound is said to be different from presently available products in that it will pass through highly organic soil and will not be diluted or inactivated, and thus keeps its fungicidal killing properties, the report explains.

Some turf fungus diseases

which commonly occur together require two separate fungicides, because one fungus may be in a resting or spore stage and be more resistant to treatment.

Methyl arsine oxide has shown in tests to be effective against both active and resting stages of *Pythium* and *Rhizoctonia* disease organisms. Field trials in 1962 gave 100% control of brown patch, *R. solani*.

1963 trials showed effectiveness against the *Helminthosporium-Coryularia* complex, a serious disease on turf. At that time, researchers also discovered that methyl arsine oxide selectively controlled crabgrass.

Methyl arsine oxide is also toxic to nematodes, but becomes more active if the compound is modified to hexyl arsine oxide.

Although the product is not yet federally registered for sale or use, Vineland Chemical Company, Vineland, N. J., plans additional testing for registration. They expect registration for use on nonfood crops such as turf, ornamentals, shrubs, and flowers. The compound is an arsenical and toxic to humans; it will not be used on food crops.

## USDA Registers Betasan

Stauffer Chemical's Betasan, a preemergence herbicide for control of crabgrass and other lawn weeds, has received registration approval under U.S. Department of Agriculture and Public Health Service regulations, the manufacturer announced recently.

Field-tested across the United States and sold commercially for two years in California, Betasan has been shown to have a wider margin of safety to established turfgrasses than many other commercially available products, Stauffer contends.

An application of Betasan during late winter or early spring prior to germination of the weeds is said to give season-long control. Betasan is also noted for its ability to control annual bluegrass, the company says.

Stauffer says the product is safe to use on all types of established lawn grasses, as well as dichondra. For details, write the firm at 380 Madison Avenue, New York 17, N.Y.

## Trimnings

**Dandy Danner.** Hats off to Charlie Danner, Superintendent of the Capital City Country Club in Atlanta, Georgia! It was Charlie, we learned recently, who singled out *Weeds and Turf* for special praise during one of the turf conferences earlier this year. Now we learn from one of his friends that "Charlie is known throughout the South as the very best southern bent grower. He did an excellent job of producing bent greens where most professionals said it was impossible. He appears on several of the southern conference programs annually."

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**Rayner Shines.** Cities across the land are in the midst of their elm preservation programs, hoping to protect their Dutch elm trees from disease. A city program which recently received notable local attention was administered by Gordon Z. Rayner, city forester for Milwaukee, Wis. Forester Rayner supervised the inoculation of nearly 45,000 elms with the new systemic insecticide, Bidrin. A feature article in the *Milwaukee Journal* gave all the details, and pictured arborist John E. Szydlowski applying the pesticide. In his protective garb, John looks like a man from outer space in the *Journal* photograph, but it's good to see this graphic example of safe practices on the job.

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**Hostetter Hoopla!** A landscape architect who's not confining himself at home these days is James F. Hostetter of Tucson, Arizona. This Arizonan (by adoption) was scheduled to address women attending the University of New Mexico Homemakers College on effective landscaping for the housewife last month. Jim received his degree in Landscape Architecture from Ohio State University, and now specializes in landscape design as well as running Hostetter's Nursery in Tucson. As if this didn't consume enough of his time, the versatile vegetation specialist writes a weekly column, "Yard 'N' Garden Tips" for the *Arizona Daily Star*. We're glad to learn of this fellow journalist's apparently limitless energies!

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**Southwick moves up.** Promotion of Dr. Franklin W. Southwick, formerly research professor of pomology at the University of Massachusetts, to head of that school's Department of Horticulture was announced recently. It's a singular honor for the renowned scientist, since it was just about 25 years ago when he himself graduated (with his BS) from the Mass pomology curriculum.

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**New Deal.** Speaking of new figures in our universities, Dr. Elwyn E. Deal has just been added to the Agronomy Department staff at the University of Maryland. Dr. Deal will conduct research and extension work in turf management, according to Dr. James R. Miller, department head at the College Park school. Dr. Deal is a specialist in the management of roadside turf, and as a result will no doubt have much to offer the W&T readers engaged in this type of activity.