

## New ARS Technique Aids Herbicide Evaluation

Agricultural Research Service plant physiologist W. A. Gentner has developed a new technique enabling scientists to evaluate mere specks of herbicides, according to the U. S. Dept. of Agriculture.

Previously as much as 10 grams of an herbicide were required to do a similar evaluation. This could be problematic, as some experimental herbicide samples are expensive and often available only in small amounts.

With Gentner's simple device, scientists can determine exactly a plant's tolerance to a chemical. This knowledge will make possible more precise application of herbicides by drawing a sharper line between a plant's tolerance of and ill effects from an herbicide.

Glass wool that serves as a filter is placed in a test tube with a ¼-in. hole in its bottom. The tube is then filled to about 1½ ins. from the top with quartz sand, into which is planted the seed to be tested. The tube, fitted with a rubber collar, is suspended in an Erlenmeyer flask containing a nutrient solution and concentration of the herbi-

cide to be evaluated. Once a day the tube is dipped into the solution.

Gentner points out that while his apparatus gives precise data on the effect that the structure of an herbicide molecule has on the plant's activity, it does not give the complete story. Many techniques, including field studies, are necessary to completely evaluate the effects of herbicides.

Gentner's work is part of an ARS research program to improve pesticide effectiveness and avoid potential residue hazards.

## Cornell University Publishes DED Leaflet

A new tree pest leaflet from Cornell University is now available. It is entitled "Municipal Decisions in Dutch Elm Disease Control," and is authored by Drs. W. A. Sinclair, W. T. Johnson and J. A. Weidhaas. Dr. Weidhaas is now an extension specialist at Virginia Polytechnic Institute, Blacksburg, Va.

The new publication gives background facts on problems which face communities seeking to establish DED control programs. The authors list the al-

ternatives of a community beset with the disease. They discuss requirements for municipal control programs along with public information and funding. They also list some reasons why programs fail.

Copies of the new publication are available from New York State College of Agriculture, Cornell University, Ithaca, N.Y. Ask for Cornell Tree-Pest Leaflet A-4.

## Urban Environment Causes Problems for Plant Growth

Cultivating plants in urban communities may become extremely difficult with time, cautions F. O. Lanphear, Purdue University research horticulturist.

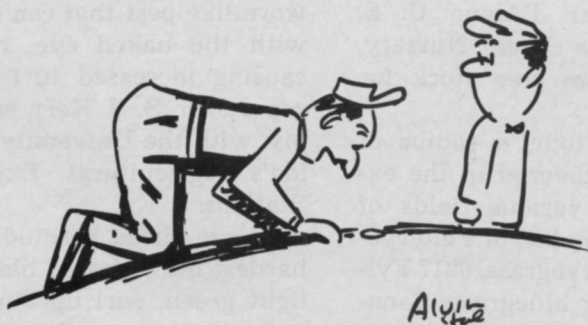
Effects from increased air pollution, salt used on highways as deicing agents and lack of sufficient area for proper root development can hamper the growth of plants trying to survive in urban environments, he says.

Some plants (such as the Austrian pine), once thought to be adaptable to city conditions, are now found to be susceptible to increased air pollution. Lanphear cites the case of a Chicago-area grower of orchids who estimates that air pollution costs him \$150,000 annually due to crop injury.

Many other species, however, continue to appear tolerant (such as sweet gum, hackberry, American elm, ginkgo, pin oak, Norway maple and ash).

Lanphear feels these injurious conditions should be remedied, as plants are capable of benefiting urban communities in many ways.

As urban temperatures generally range 10°-15° higher than those of the countryside, he notes that the use of green space (composed of various forms of vegetation) may help modify



SURE IT'S DOLLAR GRASS,  
I?'S GOT "IA GOD WE TRUST"  
ON IT!"