

DDT, Only Presently Known Control, Is Banned

Deadly Elm Tree Disease Is Found in Pa. for First Time

A devastating disease of elm trees has been found for the first time in Pennsylvania.

Known as elm phloem necrosis, the disease is caused by a mycoplasma, an organism smaller than a bacterium, but somewhat larger than most viruses. It is spread from tree to tree by the elm leafhopper.

The mycoplasma is injected into the leaves as the insect feeds, then moves down into the roots and kills the inner bark and cambium in the roots and base of the tree. Many trees die the year of infection, but those infected late in the summer may survive and die the following year.

Infected trees tend to die all at once, rather than branch by branch, as elms suffering from the well-known Dutch elm disease. The foliage droops, curls, and wilts, and takes on a rather uniform yellow color. At this stage the inner bark at the base of the tree and in the roots turns the color of butterscotch.

If small pieces of this butterscotch-colored bark are placed in a closed jar for a few minutes, an odor of wintergreen can be detected. The color and odor of the inner bark of dying trees are specific symptoms.

As the infected trees continue to decline, the leaves turn brown and may remain hanging on the tree. At this stage the inner bark becomes dark brown. Field examination is the only way to determine if an elm has phloem necrosis; there are no means of laboratory diagnosis.

Elm phloem necrosis was first discovered in Pennsylvania near Jersey Shore, Lycoming County, by a group of Northeastern forest pathologists on a field trip.

Lester Nichols and William Merrill of the Department of

Plant Pathology at Pennsylvania State University later found the infection center at Jersey Shore contained an estimated 1,000 dead or dying elms in an area about three miles long and about one-half mile wide, centered along the new Route 220 bypass.

The disease has long been prevalent throughout the South and Midwest, from northern Georgia to Arkansas, north to central Iowa and Ohio, and from central Kansas and Ne-

braska east to southwestern West Virginia.

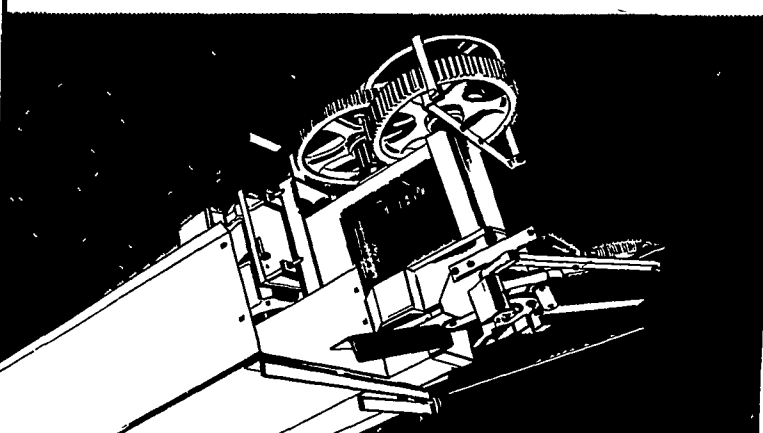
In subsequent surveys no phloem necrosis-infected elms were found in the following counties: Centre, Huntingdon, Blair, Somerset, Westmoreland, Fayette, Washington, Beaver, Lawrence, Mercer, Crawford, Erie, Warren, McKean, Cameron, Potter, Clinton, Bradford, Northumberland, and Union. Other counties have not been surveyed. The origin of the isolated infection center in

central Pennsylvania cannot be explained. The leafhoppers could have been brought in by any one of several means, not only from the west, but also from the north, according to Merrill and Nichols of Penn State. Dr. Wayne Sinclair, Department of Plant Pathology, Cornell University, recently found elm phloem necrosis to be widespread and epidemic in

the Finger Lakes Region of central New York.

The disease used to be controlled primarily by the application of DDT sprays to kill the leafhoppers. Since DDT is now banned, there is no research-proven control measure. Sanitation by destruction of diseased and drying elms is as important as it is for Dutch elm disease.

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Keep Broiler Output Stable, USDA Advises

In the first quarter of 1972, to keep broiler supplies near the same per capita level as a year earlier, broiler producers should produce only two per cent more broilers than they did in the same period of 1971, according to the U.S. Department of Agriculture.

USDA's Consumer and Marketing Service makes this recommendation in its "Broiler Marketing Guide for the First Quarter, 1972." Broiler marketing guides are issued quarterly to help the industry plan production to meet the needs of consumers and avoid an under- or over-supply and consequent extremes in prices.

USDA also recommends that the number of pullet chicks placed for the broiler hatchery flock be held at the same level as a year earlier. If further improvements in laying flock efficiency are obtained from the use of Marek's disease vaccine, producers should reduce the number of pullet chicks started accordingly.

Copies of "Broiler Marketing Guide for First Quarter 1972," PMG-22 which contains detailed information on the recommendations, will be available soon from the Information Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D. C. 20250.

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