

Nurserymen Promote Trees At California Exposition



Feature of Arbor Day at the California Exposition was the planting of a 10-foot ginkgo tree. Cal Expo was presented the tree by the Superior Chapter of the California Landscape Contractors Association. Nancy Rivett, a University of California at Davis co-ed who is Sacramento's reigning Tree Queen, took part in the planting. Others present for the ceremony were, left to right: George Cioli, president, Sacramento Valley Chapter, California Landscape Contractors Association; Donald B. Marty, president, Superior Chapter, California Association of Nurserymen; and Louis Roth, Cal Expo Director of Design and Construction. The tree was planted at the base of the American River levee near the main north-south pedestrian walkway. The ginkgo was selected for its beauty and history.

Sex Attractant Found For Western Pine Beetle

Researchers have found an artificial sex attractant of the Western pine beetle. Now they hope to develop a way to use it.

The discovery was made by Dr. David L. Wood, University of California, and Dr. R. N. Silverstein, Stanford Research Institute.

The Western pine beetle is a big killer of mature ponderosa pine sawtimber in the West.

The tiny beetle (about 4 millimeters long) damages the tree by boring through the bark to the cambium layer which carries the tree's life-sustaining sap. It then builds tunnels, into which it lays eggs, and introduces fungi. The fungi develop, stop the flow of sap, and the egg dies.

Needed Chemical Deicers Damage Highway Vegetation

A relatively uncharted area of scientific research felt the probes of scientists and highway engineers from seven states at a University of Connecticut symposium on pollutants in the roadside environment.

The exchange of ideas centered around three major problems, as set forth by William C. Greene, formerly with the Connecticut highway department and now landscape architect with the Bureau of Public Roads in Washington, D. C.: highways must be kept free of ice and snow for safe driving; highway engineers must know the most effective chemical deicers to use and the minimum rates to apply; and scientists need to determine the long-term effects of applying chemical deicers on water supplies, soils, plants and agricultural production.

As the symposium ended, most agreed that more research was needed on the deicing problem and side effects of pollution.

Research in New Hampshire, Virginia and Florida suggests widely varying susceptibility of different plants. Sugar maple, white pines and hemlocks seem most severely affected. But oaks and Norway maples are more tolerant.

Of the grasses, slender wheat grass, Kentucky 31 fescue, reed canary grass and Troy Kentucky bluegrass are most tolerant. In addition, black locust, honey locust, Russian olive and ponderosa pine are among the less susceptible smaller trees. White birch, redbud, privet and honeysuckle are among the more tolerant shrubs.

Damage to roadside plants seems to be insignificant if plantings are kept 30 feet or more back from the road. Some engineers would appear to favor, in the interests of safety, removal of all trees closely bordering roads. But at odds with this view are the conservationists, who

state that the beauty of New England roadsides is one of the area's tourist attractions.

According to Edwin D. Carpenter, University of Connecticut, the salts currently used—sodium chloride, calcium chloride, or mixtures of the two—are the most effective and economical obtainable for deicing roads. The deicing chemicals are used, in Connecticut at least, at rates of 800 to 1000 pounds per mile of two-lane highway.

However, applications may be much higher in the more northern and mountainous areas. Applications of up to 30,000 pounds of salt per year per 2-lane mile have been reported.

Although a conclusive case has not been established against the salts as the killers of roadside plants, the circumstantial evidence mounts. Dr. Avery E. Rich, of the University of New Hampshire, reported that nearly 14,000 dead trees were removed from 3700 miles of his state's roads in one year. Subsequent and continuing investigations indicate that a high proportion of those trees were killed by salts. Trees showing symptoms of salt poisoning appear to be slowly dying, often with reddish-colored leaf fringes and too-early fall coloration of the leaves.

Another factor of roadside pollution comes from engines of autos, trucks and buses. These engines put out ozone, sulfur dioxides, florides and nitrates—but the really dangerous products come from further breakdown of the first-stage chemicals by reaction with light.

Dr. F. A. Wood, of Pennsylvania State University, pointed to the multiplying output of hydrocarbons when he predicted that there would be 250 million autos in the United States by the year 2000. Autos are considered the most important source of hydrocarbons in the atmosphere. Fuel consumption will nearly triple from 1966 to 2000 A.D., with proportionate increases in pollutants.

Use a Royer Shredder to prepare today's soil mixes and you'll reduce tomorrow's maintenance

If your next job requires the very best soil mix, batch-after-batch consistency and high-speed production, start the job with a Royer Shredder. It'll keep you ahead of schedule with thoroughly mixed, aerated, trash-free soils that are easy to work with. Royerated Soils—that will permit you to schedule more jobs, meet tougher deadlines, realize more profit from every cubic yard, and *guarantee* better results!

A Royer is more than a shredder. It's a soil processing plant—on wheels—with a patented cleated-belt mechanism that delivers four-step soil processing: shredding and lump-breaking—the ultimate in mixing

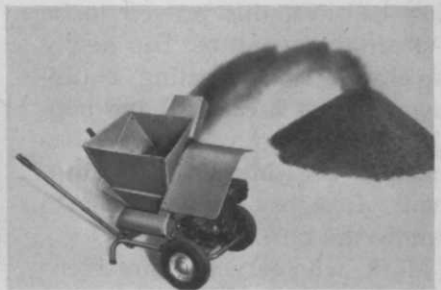
and blending—thorough aeration—and even built-in removal of sticks, stones and other trash from the final mix.

Royer Shredders are available in 40 models, with capacities ranging from 5 cubic yards an hour up to 100. We'll be pleased to send you descriptive literature. Or, better yet, arrange an obligation-free demonstration from one of Royer's 75 world-wide dealers. When you write, ask about Royer POWERScreens, too—for the preparation of uniformly fine, homogeneous topdressing.

As we said, you'll profit more when you start with a Royer. And you can for less than \$300.



Royer's big capacity Paul Bunyan trails to the job—is highly maneuverable.



Compact shovel-fed models are highly portable—can produce as much as 12 cu. yds./hr.



Superintendent 120 and POWERScreen ideally suited for preparation of topdressing and minor construction and repair jobs.

ROYER

ROYER FOUNDRY & MACHINE CO. • 186 PRINGLE STREET • KINGSTON, PA. 18704