

## The Stately Elm Returns

Stately elm trees that once adorned America's streets, parks and lawns in large numbers from the Great Plains to the Atlantic coast may be on their way to making a comeback. A hybrid, named "urban elm" will be available in limited supply in about three years. It is resistant to Dutch elm disease which has spread throughout the American elm's natural range since the 1930s.

Scientists from the Shade Trees and Ornamental Plants Laboratory, Delaware, Ohio, developed urban elm from a cross between an elm from the Netherlands and a Siberian elm. The new tree is expected to grow to moderate size making it more suitable for urban planting than the American elm, according to plant pathologist Dr. Charles L. Wilson. Wilson told WEEDS, TREES & TURF that like the American elm, the new hybrid grows fast in various soil types, has dark green foliage, and is tolerant to drought, pollution, soil compaction and restricted root space.

In the fall, urban elm offers the promise of a striking appearance, because in locations where it is adapted, the tree retains its foliage and dark green color longer than other trees. The new hybrid has a profuse upright branching habit and its dense foliage produces a compact crown.

The team began developing urban elm in 1956, crossing parent

trees to obtain seedlings that proved capable of withstanding inoculations of the fungus, *Ceratocystis ulmi*, which causes Dutch elm disease. Then came years of propagation and seasonal susceptibility trials in which plants grown from cuttings were inoculated with strains of fungi at various times of the year. For the past two years wholesale nurserymen have been testing the tree further for adaptability to various climatic conditions. An agreement has prescribed that the nurserymen propagate the elms in sufficient numbers to insure they will be available to other nurserymen before commercial trade begins. Plant scientists at the Delaware laboratory are developing more hybrid elms that may be released within a few years. About six different elm selections including two American elms have moderate to high resistance to Dutch elm disease, according to plant pathologist Dr. Lawrence R. Schreiber.

Plant geneticist Dr. Alden M. Townsend claims physical characteristics vary substantially among elms in the breeding program. Some could be made into shrubs. Others may grow from seed to heights of 15 feet within three years. A Chinese elm, with a deep red coloration, and a columnar shape elm have been developed. This tree might be used to replace Lombardi poplar which is susceptible to cankers.

### Buying, Selling Standards Suggested for Nurseries

A joint committee of selected representatives from the Wholesale Nursery Growers of America, National Landscape Association and Garden Centers of America has recently adopted operating standards of practice between buyers and sellers of nursery stock.

The standards, judged by the committee to be fair and ethical agreements between two parties, were developed to encourage greater cooperation between all phases of the nursery industry and to aid in achieving common industry goals.

The committee is presenting the

standards to the industry as a suggestion. They are not intended to be binding upon any firm of persons, nor to constitute an agreement on the part of any member firm to adhere to the suggested standards.

For buyers:

- All buyers should specify the date order is expected to be delivered or picked up, with the understanding of a week's tolerance, including circumstances of unusual weather conditions or crop failure.

Then the seller should notify the buyer immediately upon becoming aware of his inability to comply with the above, at which time the two parties should determine substitutions or other alternate causes of action.

- The buyers of plant materials will be responsible for notifying seller of discrepancies in the order. This notification should be made within 10 days of receipt of the order and failure to do so will constitute acceptance of order as received.

- Length of time for payment of order will be determined by parties involved.

For sellers:

- All stock sent to the buyer shall be true to name as ordered to the best of seller's knowledge; except that a buyer may be notified of necessary substitutions upon seller's acceptance of order a month prior to shipping date requested.

- All stock shipped, or delivered, shall be of the size, grade, quality and quantity specified in the order unless buyers are advised of the unavailability of the exact item or items ordered and agree to accept a different size, grade or quality with proper price adjustments, when notified at time of ordering or a month before shipping date.

Exceptions are unforeseen circumstances and/or acts of God within the 30-day notification period. Minimum ball size will be that set forth in the most current issue of the American Standards for Nursery Stock.

- All stock sent to buyer will be correctly labeled or adequately identified to the best of the seller's knowledge. All labeling will be agreed on by buyer and seller at the time of purchase.

- Sellers, upon request, will provide information to buyer on plant material which requires special care to maintain saleable quality.

- Payment of shipping charges accrued through errors in orders should be determined by the parties involved. Errors as to kind, quantity and quality of plant material tagged by buyers in the field should be assumed by the buyers.

Sellers should assume responsibility for shipping and reasonable handling charges accrued as a result of errors in the shipment by the seller, which includes substitution of kind and/or quality of plant material ordered without prior notification and agreement by the buyer.

## GCSAA Set for Minneapolis

Back in 1936, superintendents belonged to what was called the National Association of Greenkeepers of America.

The annual show and conference was held in Cleveland that year — it had about 40 exhibitors and over 400 attendees including visitors. But some things have not changed much. In the magazine of the association one of the editors expressed concern that only 150 members of the association bothered to attend the conference at all.

Some other things also have not changed much. Some of the com-



1936 Cleveland Show

panies represented at that show of 40 years ago were Buckner Manufacturing Co., International Harvester Co., Jacobsen Manufacturing Co., Mallinckrodt Chemical Co., Milwaukee Sewerage Commission Standard Manufacturing Co. (now Standard Golf Co.), O. M. Scott & Sons Co., and Toro Co.

These and other companies have created an early sell-out of exhibit space for the Golf Course Superintendent's Association of America's 47th Annual International Turfgrass Conference and Show Feb. 8-13 in Minneapolis.

A total of 125 firms have made commitments on the 100,000-square-foot exhibit hall of the Minneapolis Convention Center.

Officially opening Feb. 10 by the GCSAA's executive committee, the three-day show will offer the expected 5,000 conference registrants close-up viewing of nearly \$8 million worth of maintenance equipment and services used on today's



1975 New Orleans Show

golf courses. Many firms will introduce additions to their product lines.

The show is held in conjunction with the GCSAA's week-long educational conference, which this year will offer more than 45 hours of educational programs, featuring 65 speakers.

Four preconference seminars will also be offered this year, beginning Feb. 7. The two-day courses, specifically designed for golf course superintendents, will cover landscape design, personnel management, pesticide usage and turf nutrition.

## "Bad Green Syndrome" Cause Cited

It seems every golf course has a bad green that has to have custom care. Causes of the loss of greens are complex and can seldom be ascribed to a single factor. However, the most frequent factor that predisposes a green to death is poor construction, according to University of Maryland turf specialist John R. Hall.

"The loss of a green can often be ascribed to disease, scaled or drying out, but these are only the harbingers of death that strike when the stage has been set and more often than not, the necessary conditions are created by improper golf green construction," Hall said.

Hall said the bad green always exhibits high bulk density, heat conductivity and mechanical resistance to root penetration. It is the green that retains more moisture than is necessary and has low air porosity, slow water infiltration and percolation rates. The solutions available to the golf course superintendent are: (1) reconstruct the green removing the existing topsoil; (2) attempt gradual soil modification in conjunction with management practices such as aerification and topdressing; (3) radically modify the ex-

isting soil by incorporating massive amounts of soil amendments; (4) keep nursing the bad green. "The last alternative puts the superintendent into the 'bad green syndrome,'" Hall said.

Hall said if the choice is to reconstruct the green that United States Golf Association Green Section specifications should be obtained and used. He also said Texas A & M provides a soil testing service to find out what combinations meet USGA specifications.

Gradual soil modification in conjunction with aeration and topdressing is most often the first approach to improving a bad green. This approach involves frequent aeration with large-diameter tines to as great a depth as possible. The cores must be removed from the green and then topdressing is applied and dragged into the holes. This procedure would have to be repeated several times over several years to achieve extensive soil modification.

Radical soil modification is an alternative that would involve trying to modify the existing soil structure and texture by incorporating the

amendment into the existing soil with plows and discs. This procedure obviously takes the green out of play for about four months. In situations where the existing bentgrass is good it should be removed as sod before soil modification and replaced after the amendments have been incorporated. This considerably reduces the time the green is out of play.

Several amendments are available. The type of amendment selected should depend on what corrective result is desired. If improved soil permeability is desired, sand and calcined clay have been shown to be very effective.

If increased water retention is desired, amendments such as soil, peat and calcined clay will be needed. The amounts of any of these amendments needed to achieve a given level of water permeability or water retention is difficult to determine but this service can be provided if the existing soil and amendments are sent to a laboratory, Hall said. Massive additions are generally required. If a superintendent is attempting to modify a clay soil, it is likely that 85 to 90 percent sand will be needed to achieve adequate modification.

## NEWS (from page 37)

### Pine Needle Scale Control Covered with Supracide

"Supracide 2E" has received label acceptance from the federal Environmental Protection Agency for control of pine needle scale on Scotch, Mugho and red pines in the northeast section of the United States.

Supracide is Ciba-Geigy Corp. methidathion insecticide-miticide that controls certain insects of alfalfa, cotton, tobacco, grapefruit, lemons, oranges and nursery stock.

For pine needle scale control, application should be made once a season after scale crawlers have hatched in early spring for spring-generation crawlers or in summer for second-generation summer crawlers.

The summer spray will also control pine tortoise scale.

### Whose Responsibility Is It To Enforce Course Rules?

Are common-sense rules on the golf course made to be broken? Un-

fortunately for many superintendents, this is the case.

"What's the use?" one superintendent told Gerry Finn, contributing editor of the newsletter of the Golf Course Superintendents Association of New England. "I take time and money to see that rules signs are made up and set up in certain spots on the course. So, what happens? Some member in a cart knocks one down. Another sees that it is in the way of his swing. So, he pulls it up and tosses it into the woods. That's why I don't bother with the rules signs anymore."

Many superintendents feel the same old golf car rules are being ignored. Most flagrant of these are driving too close to the green, driving over and through tees, straying off the golf car path and making spinout turns. The same goes for ball marks not being repaired in many cases. Add to this the inconsiderate member who takes target practice on par three holes and the problem becomes compounded, Finn writes. But who should enforce the rules?

One counter to those breaking golf and course rules would be a combination of the superintendent and the professional. Since the pro has the opportunity to "socialize" with members in the form of playing a round or two together, perhaps he might be better-versed in reporting violations. And the superintendent in his daily inspection tours could supplement this with reports of his own.

Another superintendent suggested, "I think that the grounds and green committee should be those responsible for enforcing the rules. It is something else for a member to be reminded of rules by the pro or superintendent. He could resent it. It must be his peers who do the enforcing."

### Japanese Beetle Parasite Found In Northeast U.S.

A new nematode parasite of the Japanese beetle has been discovered in the northeastern United States. The parasite is being studied as another possible natural method to control the insect.

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M. G. Klein, entomologist at the Agriculture Department's Japanese Beetle Research Laboratory at the Ohio Agricultural Research and Development Center says that Japanese beetle grubs parasitized with this nematode or mermithid (a cylindrical parasite worm) were collected from areas in New York and Vermont.

Identification of the nematode was made by William R. Nickle, nematologist at the Agriculture Department's Beltsville, Md., Agriculture Research Center. Nickle says this worm was previously not known to occur in North America and was thought to be native only to the Soviet Union.

Apparently, Japanese beetle larvae become infected by the mermithids in late summer. Klein told WEEDS TREES & TURF that mermithids emerged in March from larvae collected in October and held in cold storage until January. Parasites emerged in mid-May from larvae collected in April.

The thread-like mermithids, about nine inches long, could be observed coiled inside the collected larvae. At the time of emergence, individual Japanese beetle grubs showed little sign of life except for feeble movement of the mouthparts. A single mermithid normally emerged from each grub, although as many as three parasites were recovered from one host. Most of the host larvae had completed their third moult when the mermithids emerged. Klein says the discovery of this parasitic worm may prove to be an important biological control of populations of Japanese beetle grubs in the northeast.

### Tree Protection Needed Before Heavy Snows Fall

Waiting until heavy snow or ice has damaged landscape plants before trying to save them is like closing the barn door after the horse is out, according to Harold Davidson, Michigan State University horticulturist.

"Preventing damage to ornamentals is likely to be much more successful than a salvage effort after the damage is done," Davidson told WEEDS, TREES & TURF. He said remove dead, diseased or weak branches from trees. These are likely

to break and fall when loaded with ice. Pay particular attention to limbs overhanging utility lines, buildings or parking areas. These branches should be removed by a trained arborist.

Much of the potential for injury can be eliminated by pruning young trees to take out sharp V-shaped crotches. A broad U-shaped or angle crotch is much stronger, he said. Propping up willows and birches and other flexible trees to

keep ice from bowing them down may do more harm than good, he said. The trees tend to bend over and break off at the support point. Injuries to trees can sometime be repaired, depending on the severity of the injury and the importance of the plant.

If ice causes a tree branch to split off but a substantial amount of wood and bark still connects the branch to the tree, quick action may save it.



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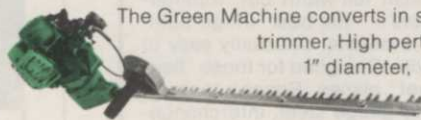


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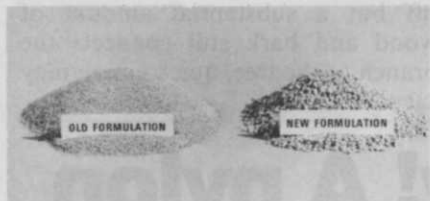
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## NEWS (from page 39)

### Balan Application Easier With New Formulation

Indiana golf course superintendents and distributors to the turf industry gathered recently at the Country Club of Indianapolis to get a first-hand look at Elanco Products Co.'s



new formulation of Balan 2.5G for turf.

The new formulation's larger, coarser granule results in several advantages to the user, officials of the Indianapolis company told WEEDS TREES & TURF. Since the larger granule moves more readily through rotary spreaders, the application is easier. At the field demonstration, it was observed it can be spread as conveniently as fertilizer with less dust and with less likelihood of drift.

The change in particle size does not affect the weed control results, company officials said. Tests indicate this new formulation effectively controls crabgrass, foxtail, goosegrass and *Poa annua* and is not affected by heavy rain or irrigation.

### New Disease Control Unit Started by Forest Service

The Forest Service, U.S. Dept. of Agriculture, has established a new national team of forest insect and disease specialists to provide Forest Service administrative regions and areas with specialized assistance in survey technology aimed at assessing impacts on forest resources caused by destructive insects and diseases.

The new Methods Application Group (MAG), headquartered at Davis, Calif., will also provide help in the application of new and improved techniques and strategies for reducing insect and disease losses.

The MAG will operate on a national scale under the direction of the agency's staff director or Forest

and Disease Management in Washington, D.C.

Forest insect and disease-caused losses of forest resources have reached their highest levels ever during the last four years, a spokesman for the Forest Service told WEEDS, TREES & TURF.

Outbreaks of the Douglas fir tussock moth, spruce budworm, southern pine and mountain pine bark beetles, gypsy moth and various diseases are making unprecedented assaults on forest resources.

The MAG will assist field units by strengthening survey efforts to reduce the time required in the detection of these outbreaks and to improve the reliability of insect and disease outbreak evaluations.

This will provide land managers with better information for control decisions.

As its first objective, the MAG will provide leadership and coordination in obtaining forest insect and disease impact information.

Research needs identified by the MAG will be promptly relayed to the appropriate research units.



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