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Circle No. 117 on Reader Inquiry Card

HOT

Goal: 1 million Liberty elms by the year 2000

HARRISVILLE, **N.H.**—A relatively new type of disease-resistant American elm is replacing those lost to Dutch elm disease on golf courses and landscapes.

Goal set by the Elm Research Institute is 1 million American Liberty elms (*Ulmus americana libertas*) in U.S. landscapes by the year 2000.

The effort has begun in such diverse climates as Unity, Maine; Birmingham, Ala.; Pueblo, Col.; Jackson, Minn.; Deerfield Beach, Fla.; and Cimarron, N.M. The tree is hardy in zones 2 through 9, and is tolerant to pollution and other urban conditions.

The Liberty elm is a thoroughly native American elm, not a hybrid. It's a direct descendent of selected American elm parents that proved their ability to fend off disease when inoculated with DED fungus. Parent trees are still thriving at 35 years of age.

The Liberty elm has the ability to compartmentalize, thereby creating extremely narrow capillaries, so if the DED fungus is introduced, it is prevented from moving through the tree and cutting off nutrient supplies.

The trees are propagated through cuttings rather than seed to preserve the disease-resistant characteristic.

At the same time, the Liberty series offers landscape managers diversity with six different cultivars.

Golf course applications—When American elms reigned, there were 3000 of them at the Country Club of Detroit in Grosse Pointe Farms, Mich. Now 100 are left, and those are protected with injections of ERI's fungicide.

Carey Mitchelson, the golf course superintendent, obtained 12 American Liberty elms six years ago. When they reached the required size, they were planted on the course, for donations of only \$100 each. The elms

are now 25 feet tall and have the classic shape of the American elm.

"When those trees grew to such a height so rapidly," says Mitchelson, "and we sold all the trees to the membership so quickly, that's when we decided we should do this on a larger scale."

The golf course took out a \$300 membership, which entitled it to the 125 young elms. A Boy Scout troop helps care for them in a nursery on the course. Mitchelson's own son Justin, a scout, will organize the transplanting of 25 elms into the community of Grosse Pointe.

"The trees are doing really well," says Mitchelson. "We're very happy with them."

Landscape applications—Before Jim Turner became the owner of North Monroe (La.) Landscape Service, he was the landscape manager at North Monroe Hospital. There, he designed the landscape with 28 tree species, including American

INSIDE



like this one are catching on fast for landscape managers who want to replace American elms killed by Dutch elm disease.

Liberty elms

Liberty elms.

In an unusual freeze in 1989, when temperatures were below 10 degrees for 10 days, the Liberty elms came through. Only one has been lost, and that to a bulldozer during construction.

Patricia Crow, landscape designer with Balmori Associates in New Haven, Conn., says elms are "a very important tree in the landscape and have been historically one of the best street trees ever, until the Dutch elm disease struck. They're really unparalleled in terms of their scale and their form and the quality of light they give.

"They have neither too dense a shade or too thin," Crow notes. "It's just a wonderful light shade with a lot of movement in it, because of the way the branches move. They're not stiff; they're flexible. Even the younger ones begin to have that quality of *continued on page 48*

1993 turfseed harvest 'fair', page 43

GIE show set for Baltimore, page 43

Water saved with gypsum,

page 46

Books, videos and more books, page 47

Final word on turfseed harvest: **'FAIR'**

PACIFIC NORTHWEST — This year's seed harvest has been questionable for weeks, thanks to temperamental weather, but we finally have a clear supply picture.

The harvest of 1993 reaped modest yields. Weather conditions see-sawed back and forth, from relentless rain to oppressive heat. During one hot spell, the entire crop was considered to be in jeopardy.

From Post Falls, Ida.: Glenn Jacklin of Jacklin Seed Co. says proprietary bluegrasses averaged 15 percent off the average yield. Commons are 15 to 20 percent below average, with 400 lbs./acre volume vs. 600-650 lbs./acre in a good year.

Although the supply is slightly below adequate, Jacklin says there is seed to sell.

Jacklin is more concerned about next year's crop, in light of what has been poor field burns. "Moisture late in the season has caused field burns to be delayed by at least three weeks," says Jacklin. As of September 3, 90 percent of the proprietary bluegrasses had yet to be burned. Common bluegrass fields are burning on time.

Fields are burned after every harvest to purify the land for the next sowing.

From the Willamette Valley: Dave Nelson of the Oregon Fine Fescue Commission describes fine fescue yields as "off significantly from previous years, at least 20 percent below average."

Rust disease affected yields slightly, but the weather was the prime culprit, as too much rain delayed pollination. Then, when seed was ready, the stalks laid low to the ground and were hard to gather.

Bluegrass harvests were described by Nelson as "fairly decent" in Central and Northeastern Oregon.

Seed quality and weight per acre are excellent, however, reports Nelson.

Other varieties:

• Bentgrass yields: good and on time.

 Tall fescue: below average, but there's plenty of carryover from 1992.
Perennial rye: harvest fair to average.

-Terry McIver

Products, programs fill up Expo show

BALTIMORE—The 1993 Green Industry Expo, scheduled for Nov. 14-18 in Baltimore, Md., features a slate of informative seminars for green industry professionals who want to grow their business.

Exhibit space is sold out, which means attendees will also have plenty of equipment and other products to try and buy.

The annual exposition is co-sponsored by the Professional Lawn Care Association (PLCAA), Professional Grounds Management Society (PGMS) and the Associated Landscape Contractors of America (ALCA).

Highlights of the PLCAA program include:

• improving employee performance by linking job accomplishments with wages

• proper pricing strategies, with Charles Van der Kooi;

• managing cash flow

• profiting from lawn renovations.

The PGMS program includes more than a dozen seminars on aeration, tree care, composting, integrated pest managecontinued on page 48



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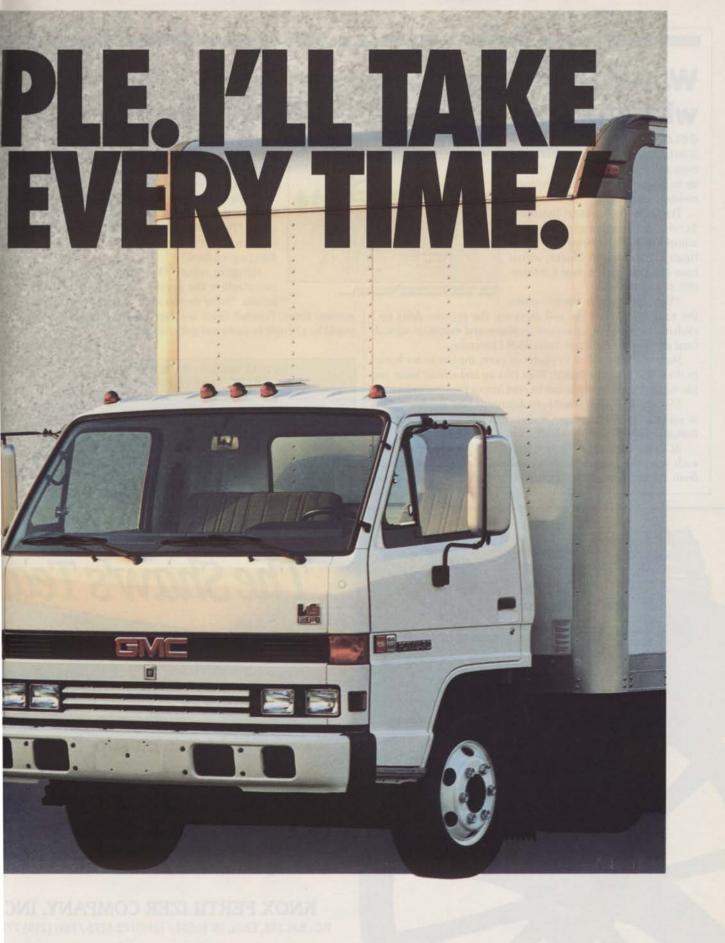
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Water saved with gypsum

COLLEGE STATION, Texas— Substantial savings in maintenance costs and water use are being chalked up to gypsum blocks used to measure moisture content.

The Texas Agricultural Extension Service here is teaming up with school districts and farmers to investigate these gypsum blocks, which have the potential to save considerable money and water.

"You plant these in the soil where

the roots are. When the soil dries up, the gypsum dries up," explains Joe Henggler, associate professor and extension agricultural engineer/irrigation at Texas A&M University.

Made of an ingredient in plaster-of-paris, the blocks are buried in the soil at different depths. They take up and release water just like the soil. Their wetness can be read from a pocket-sized meter.

The blocks make it possible to determine how much moisture is available to plants, to spot and correct uneven water distribution, and to help schedule effective but efficient irrigation.

At Crane High School where less than 15 inches of rain falls each year, the football field was watered for an hour every day from March through September. School officials then worked

Constant blocks conserve water The Texas Agricultural Extension Service is teaming up with from tho texas Agricultural Extension Service is teaming up with the provide the service is teaming up with the provide the service is teaming up with the wethese can be read with a toolet-sized meter.

TOPIC

ource: Guy Fipps, Texas Agricultural Extension Service raphic: Agricultural Communications, The Texas A&M Syste with the extension service to bury the gypsum blocks at 6, 12 and 18 inches.

Moisture readings from the gypsum blocks indicated that the football field needed to be watered only for an hour, just three times per week. The new watering policy saved more than 170,000 gallons of water and nearly \$2,000 during the hottest six weeks of the year.

"Their watering practices changed drastically," says Greg Gruben, Crane County's extension agent. "The field looks just as good, and any time you can save the school system money, you're doing a good deed."

Henggler reports that five or six companies manufacture the gypsum blocks and moisture meters. "Some devices are tied to your (irrigation

-Jim Guuette

DURSBAN

system) timer. Football fields are good targets, but I'm sure it would be a benefit to parks and golf courses."

	ACTUAL WATER USE AND COST DATA CRANE (TEXAS) HIGH SCHOOL						
	19	989	1990				
Month	Gallons	Cost	Gallons	Cost			
July	193,332	\$2.938.65	125,835	\$1,912.69			
August	96,309	\$1,362.39	25,945	\$394.36			
Sept.	115,112	\$1,749.70	82,670	\$1.256.58			
TOTAL	404,753	\$6,050.74	234,450	\$3,563.63			
			Source: Greg Gruben				

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Reader



ATHLETIC TURF VIDEO... "Floyd Perry's ABCs of Grounds Maintenance" is a training video for baseball and softball groundskeepers. The two-tape series contains tips and techniques for athletic field care. The 85-minute video includes detailed explanations, multi-camera angles and computer graphics. It is co-sponsored by Toro. To order, contact GM Video, P.O. Box 617018, Orlando, FL 32861; (800) 886-2006.

HORTICULTURE CAREERS... The American Society for Horticultural Science has a new video, "Careers in Horticulture." The 15-minute video costs \$39.95 including shipping and handling. Preview copies are not available for single copy orders.

To order, contact the American Society for Horticultural Science, 113 S. West St., Suite, 400, Alexandria, VA 22314-2824. MasterCard and VISA orders can be placed by fax to (703) 836-2024.

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ORGANIC WHOLESALERS... The National Directory of Organic Wholesalers contains names of more than 690 organic food wholesalers, farm suppliers and distributors across North America, and key buyers internationally.

To order, send \$34.95 plus \$4 first class shipping and handling to CAFF, P.O. Box 464, Davis, CA 95617. To order by phone, call (916) 756-8518.

LANDSCAPING'S VALUE... The Associated Landscape Contractors of America (ALCA) has published a *Commercial Value Brochure* to promote the value of professional landscaping in commercial settings.

ALCA believes this brochure can be a helpful marketing aid to help contractors create awareness of their services.

To order, contact: ALCA, 12200 Sunrise Valley Dr., Suite 150, Reston, VA 22091; (703) 620-6363; fax: (703) 620-6365.

FINDING FOLIAGE...The Florida Nurserymen & Growers Association (FNGA) has published the 18th edition of its Foliage Locator, which features plant availability, allied products, transportation directory, membership directory and Florida regional maps.

To order for May delivery, contact: FNGA, 5401 Kirkman Rd., Ste. 650, Orlando, FL 32819; (407) 345-8137.

GUIDE TO DIAGNOSING...A guidebook from Rhone-Poulenc Ag Company offers a reference guide to help diagnose pest problems.

Lawnscape and Ornamentals: Problems and Solutions, is a quick reference guide to many of the common insects, diseases and weeds that daily confront lawnscapers and nurserymen. The 43-page booklet describes a variety of pests, their lifecycles, the damage they cause and the cultural and chemical options available to control them.

Green industry professionals can obtain a copy by contacting their local Chipco distributor or Chipco sales representative. Each recipient will be asked to complete a one-page cutomer profile which analyzes their specific pest problems.



LIBERTY ELM from page 42

movement that the older trees have."

Her company has specified American Liberty elms for two recent projects. "We're very much interested in trying to re-introduce them into the landscape in certain situations," Crow says. "Certainly for historical projects, locations in public areas, on campuses. There are so many uses for them."

For more information on American Liberty elms, call 1-800-FOR-ELMS (367-3567) or write: Elm Research Institute, Elm Street, Harrisville, NH 03450.

GIE EXPO from page 43

ment and ways smaller landscape contractors can successfully compete with larger companies in the '90s.

ALCA's presentations feature customer service, cost management, marketing, and how to successfully begin a design/build business.

Keynote speakers for Expo '93 are Ty Boyd, well-known motivational speaker and author, and John and Greg Rice, cofounders of Think Big, Inc. Boyd will focus on how to face the challenges of the '90s without compromising personal ethics. The Rice brothers will cover creative problem solving.

The PLCAA benefit auction again features a variety of products from green industry suppliers.

ALCA's "Breakfast of Champions" sessions will be held each morning of the exposition. Discussion topics include selling maintenance services; client relations; and ways to get a new business off the ground.

ALCA also features an all day, pre-conference seminar by Bob Whiting: "Hiring and Firing—Building a Strong Team."

The popular annual outdoor equipment demonstration rounds out the show on the morning of Nov. 18.

It's still not too late to register. For more information on air fares, lodging and full show schedules, call one of the following numbers:

PLCAA: (404) 977-5222; ALCA: (703) 620-6363; PGMS: (410) 584-9754.



GREEN INDUSTRY

NOVEMBER

9-12: New York Turfgrass Turf & Grounds Expo, Rochester (N.Y.) Riverside Convention Center. Contact: NYSTA, (800) 873-8873.

11-13: Landscape Maintenance Association's Equipment Show & Conference, Delta Orlando Resort. Contacts: exhibit space: Betsy Laird, (813) 731-6024; tickets: (813) 965-8604.

14-18: Green Industry Exposition, Baltimore, Md. Contacts: ALCA members call (703) 620-6363; PLCAA members call (800) 458-3466; PGMS members call (410) 667-1833.

16-17: Urban Tree Care Seminar, Howard Johnson Motel, Lafayette, Ind. Contacts: Sueann Smith, (317) 494-7225 or Harvey Holt, (317) 494-3585.

18-19: Midwest Reconstruction & Cleanup Conference, Washington, D.C. Contact: King Communications Group, (202) 638-4260.

18-20: National Arborist Association's TCI **Expo '93**, Cleveland Convention Center. Contact: (800) 733-2622.

19: National Water Features Association Trade Show, Orlando (Fla.) Twin Towers. Contact: NWFA, (407) 849-4312.

29-Dec. 1: North Central Turfgrass Expo, Pheasant Run Resort & Expo Center, St. Charles, Ill. Contact NCTE, (312) 616-0800.

30-Dec. 2: Southern Turfgrass Association Conference and Show, New Orleans, La. Contact: (901) 377-7194.

DECEMBER

1-3: New Jersey Turfgrass Expo, Garden State Convention & Exhibit Center. Contact: (908) 932-9271.

1-3: Rocky Mountain Turf Conference & Trade Show, Currigan Hall, Denver, Colo. Contact (303) 688-3440.

1-3: Golf Course Europe, Palais des Congres, Paris, France. Contact: Boris Franchomme, (510) 526-6922.

3: "Dealing with the Competition of the '90s," presented by the Associated Landscape Contractors of America and the Texas Association of Landscape Contractors. Contact ALCA, (800) 395-2522.

6-9: Ohio Turf Foundation Conference & Show, Columbus (Ohio) Convention Center. Contact OTF, (614) 292-2601.

7-9: New Jersey Expo '93: Trump Taj Mahal Casino Resort, Atlantic City, N.J. Contact: N.J. Turfgrass Ass'n., (908) 821-7134.

7-9: Georgia Turfgrass Conference & Show, Georgia International Convention Center, Atlanta, Ga. Contact: Georgia Turfgrass Association, (404) 975-4124.

8-9: Environmental Care Ass'n. of Idaho Convention & Trade Show, Weston Plaza, Twin Falls, Ida. Contact: Ben Miller, (208) 342-8899.

14: Rutgers Univ. Roadside and Vegetation Management Seminar, New Brunswick, N.J. Contact: Cook College, (908) 932-9271.

15: LCAP Winter Educational Meeting, Embers Inn, Carlisle, Penn. Contact: LCAP headquarters, (717) 236-2050.



Miami Metrozoo on the road to recovery

One year after Hurricane Andrew hit Miami Metrozoo, the park is almost back to full operation, but Jorge Maura and his landscape crew members still face years of work to repair extensive damage.

Thousands of trees were torn from the ground, taking buildings, irrigation pipes, bedding plants, sod and asphalt walkways with them. Trees fell across moats, leaving bridges for animals that dared to venture out. The perimeter fence came down. Dangerous wild dogs entered the park. Maintenance vehicles were tossed about as if toys; seven vehicles were destroyed.

"Even before the storm hit, I sometimes thought if I could do this over, I would do it differently, a little better," Maura remembers. "That's what we're trying to do now. We're trying to put in the right kind of shade trees, plant low-maintenance hedges and add some color."

Facing the challenge—Maura didn't have fun during the first days after the storm. There was no electricity or water when he arrived at work. Andrew had left thousands of cubic yards of assorted rubble, including 700 dead pine trees, and a storm following the hurricane toppled another 60 trees.

"Our priorities got thrown around, but everything didn't stop growing," he comments. "The grass, hedges and bushes all kicked in right away."

As a result of lost shade from the fallen trees, and crew members being called away to other projects, "weeds took off," Maura recalls. "We were able to control them with Roundup herbicide and hand power. Right now, I would say that the entire zoo is



Zoo crews are replanting thousands of trees. Palms weathered the storm well, and were easy to replant.



Hurricane Andrew destroyed the zoo's Lakeside Restaurant.

back under control, although weed control is an ongoing challenge."

Eighty volunteer members of Monsanto's Spontaneous Weed Attack Team (SWAT) helped clean up the weeds (see August 1993 issue of LM). Those volunteers saved Maura a week's work.

Replace trees, repair irrigation—More than 7,000 trees of many varieties are being replanted.

Varieties include mahogany, oaks and palms—the last of which survived the storm incredibly well and were also easy to straighten up. Maura is avoiding black olives.

"It drops leaves once a year and drops sap during summer, staining the walkways," he laments. Black olive trees are a potential hazard to zoo patrons and certain expense for Maura, because the root system cracks the asphalt walkways.

Maura is crafting the "new" zoo with flowers and color. For instance, instead of using a cherry hedge, he's adding ixora and 'Nora Grant.'

"We're changing the look of the zoo and reducing labor-intensive areas," he says. "For example, we selected hedges that droop down like a firecracker when it reaches its 3¹/2-foot height; not something we'd have to trim."

He's also adding varieties like yellow and pink trumpet trees and Hong Kong orchids, along with oaks.

Before the 500,000 square feet of grass that was lost is

replaced, Maura must first repair irrigation systems damaged by uprooted trees. Following the storm, uprooted irrigation pipe was simply left above ground if it wasn't cracked. Sprinkler heads were repaired or replaced to the point where water could still be delivered to the trees.

"We still have to repair all that tubing and put it back in the ground," Maura sighs. "We kind of forgot about aesthetics to keep the trees alive. Now we're repairing damaged pipes, and installing irrigation where we didn't have it before.

"The zoo is back to 80 percent function," Maura says, "but our department's work has changed substantially. Usually, everyone is tied up doing routine duties. Since the storm, crew members have done an excellent job of handling the extra repairs and improvements."

SHOWCASE

New wood/plastic building composite for decks, play

A new building material, composed of wood and plastic, is now reportedly in use for a variety of landscape and playground structures.

Trex is made of 50 percent waste wood obtained primarily from furniture sawdust and wooden pallets and 50 percent reclaimed polyethylene obtained from grocery bag recycling programs and shrink wrap.

Mobil Chemical Company, maker of Trex, says the new material is not treated with any preservatives. It stays smooth, does not splinter, and provides excellent traction, in wet or dry weather. High insect and moisture resistance prevents rotting.

Trex has been used in rebuilding pro-

jects at the Jersey shore, and is being considered for use along shoreline properties.

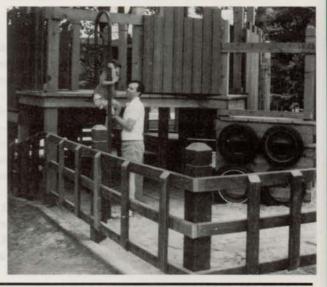
A group of townspeople in Hooksett, N.H., recently built a maintenance-free playground out of the material.

Trex comes in two colors, natural and dark brown. After exposure to air over a few months time, the natural brown turns a silvery gray color.

Trex can be worked like wood: you can saw it, nail it, drill it, rout it or lathe it.

Mike Brunner, a contractor in Speonk, Long Island, says Trex does not split, even when nailed near its edge.

Circle No. 191 on Reader Inquiry Card



Control fire ants with new sub-surface injection tool

A new fire ant control tool reportedly provides 100 percent kill of any size fire ant colony when used correctly.



The injector product by Intertech Unlimited, Las Vegas, Nev., is used in indi-

vidual mound treatments, but does not require follow-ups to treat mounds built by surviving insects.

The Intertech System kills the colony in less than 30 seconds.

The technology acquired by Intertech is a sub-surface thermal injection system, patented and EPA labeled.

The active ingredient is resmethrin, a pyrethroid. According to Intertech Unlimited, resmethrin is a wax, with zero solubility in water, and thus will not enter into any aquifer or body of water.

A one percent solution is heated to a temperature which produces molecules in the 0.5 micron range. The heating process produces an extremely active vapor that provides for an almost instant and total infusion of even the largest fire ant colony

For more information, contact Intertech Unlimited at (702) 873-5848. Circle No. 192 on Reader Inquiry Card.

Software program manages payroll, many other jobs

Armor Premier Accounting Software manages all the payroll needs for land-scape companies.

The software's payroll module handles the simplest to the most complex payroll



applications.

In smaller companies, the General Ledger's payroll feature lets managers track labor costs and prepare forms W-2 and 1099.

The company says the Premier program computes pay per client or landscapers' flat rate by job, as well as hourly over time and commissions.

Armor Premier handles direct deposits of checks. It calculates and tracks costs for workman's comp and other benefits; provides a place to file employee review information, reports, options and forms for analysis and tracking needs.

Circle No. 193 on Reader Inquiry Card