1985 ANNUAL CONFERENCE AND TRADE SHOW

OCTOBER 20-23, 1985
FLAGSHIP INN
ARLINGTON, TEXAS

* TRADE SHOW
* PRESIDENT'S RECEPTION
* AWARDS BANQUET
* WORKSHOPS

MAIN SPEAKER: LADY BIRD JOHNSON

Two Tours: DALLAS PARKS DEPARTMENT
            FORT WORTH PARKS DEPARTMENT

For more information contact PGMS Office, 3701 Old Court Road, Suite 15, Pikesville, MD 21208, (301) 653-2742.
A New Tool

Cloning and genetic recombination to tailor new cultivars to specific purposes.

by Douglas Chapman

Biotechnology, a tool for speeding up the process of evolutionary development, will have a significant impact on landscape horticulture. Biotechnology is the understanding and manipulation of biological systems to propagate new clones by genetic recombination or through selection.

One technique of propagation, specifically propagation of trees by cuttage, stimulates the introduction of regionally-oriented cultivars from superior trees, using current technology.

**TABLE 1. Trees Propogated by Softwood Cuttage**

<table>
<thead>
<tr>
<th>Species</th>
<th>Optimal Rooting Time</th>
<th>Literature Cited</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Magnolia kobus</em></td>
<td>June</td>
<td></td>
</tr>
<tr>
<td><em>M. X soulangiana</em></td>
<td>June</td>
<td></td>
</tr>
<tr>
<td><em>Malus</em></td>
<td>mid June - mid July</td>
<td></td>
</tr>
<tr>
<td><em>Wyma</em> (7)</td>
<td>mid June</td>
<td></td>
</tr>
<tr>
<td><em>Hupehensis</em></td>
<td>mid May - June</td>
<td></td>
</tr>
<tr>
<td><em>Mary Potter</em></td>
<td>mid June - July</td>
<td></td>
</tr>
<tr>
<td><em>Profusion</em></td>
<td>mid June - mid July</td>
<td></td>
</tr>
<tr>
<td><em>Red Jewel</em></td>
<td>mid June - mid July</td>
<td></td>
</tr>
<tr>
<td><em>Sargent</em></td>
<td>late June</td>
<td></td>
</tr>
<tr>
<td><em>Selkirk</em> (4)</td>
<td>May - June</td>
<td></td>
</tr>
<tr>
<td><em>Snowdrift</em></td>
<td>mid June - July</td>
<td></td>
</tr>
<tr>
<td><em>Ostrya virginiana</em></td>
<td>early June</td>
<td></td>
</tr>
<tr>
<td><em>Quorous palustris</em></td>
<td>mid - late July</td>
<td></td>
</tr>
</tbody>
</table>

In selecting regional cultivars, a frequent concern is provenance, a photo-periodic response affecting vegetative growth, carbohydrate storage, abscission, dormancy, and overall winter hardiness. Further, when selecting cultivars, factors such as disease resistance, environmental tolerance, and/or unique phenotypic expression (habit, flower color, and/or fruit color) may be important. These new cultivars can result in designed or tailored trees for use in parks, street, home, or commercial landscapes.

Propagation of trees by softwood cuttage (see Table 1) has been proven successful for certain species or cultivars.

From the aforementioned list of trees that can be clonally propagated by cuttage from current season’s wood, it becomes apparent that many crab apple cultivars, a significant number of maples and several native trees, (American hophornbeam and pin oak, for example) can be produced using this technique.

This propagation approach, which is successful 65 to 100 percent of the time, should lead to the stimulation of selection, development, introduction, and use of new cultivars. With many plants being propagated by cuttage (that is using parts of the plant and regenerating the missing portion), regional cultivars should be available in increasing numbers.

The advantages of propagation by cuttage include reduced suckering and elimination of incompatibility. Yet it allows the introduction of superior native trees that are tolerant to disease, low-oxygen soils, and chlorides.

This should lead to the increased availability of clones from native trees such as Ostrya, linden, pin oak, dogwood, and magnolia.

Further, hedge maple, Japanese maple, and sugar maples, exhibiting tolerance of low oxygen-high water tables, can be selected and introduced. Plants which are normally difficult to propagate, such as paperbark maple (Acer griseum), can be propagated by cuttage relatively easily and should stimulate their additional use.

Finally, many crab apples, such as "Mary Potter," "Profusion," "Red Jewel," "Snowdrift," "White Angel," and Sargentii, are a few proven cultivars or species that are disease resistant and can be propagated by cuttage. Propagation by cuttage should become one more biotechnological technique which should stimulate the introduction of superior shade or flowering trees.
AERATES
9,000 Sq. Ft.
in just 15 minutes!

Engineered and built for continuous use by lawn service companies, this durable, low-maintenance machine is easy to maneuver, economical to operate and efficient to use. Saves time, labor and money.

Introducing The LESCO Aerator-30

For deeper penetration into the soil, designed so only two spoons are driven into the ground at any one time. Includes 30 half-inch-diameter spoons, five per 10-inch-diameter disc on 5½-inch centers.

For superior balance, easy transport and convenient loading and unloading, includes two steel castor wheels with pneumatic tires.

For long life and reliable operation, equipped with a five-horsepower Briggs & Stratton I/C^® recoil-start engine.

For operator protection and safety, features extended shielding on back of machine. Pneumatic tires provide smooth operation.

The new LESCO Aerator-30 is available with open or closed spoons. Your cost is just $795.00

Call LESCO today — toll free. (800) 321-5325 (800) 362-7413 NATIONWIDE IN OHIO

Circle No. 175 on Reader Inquiry Card
1986 Buyer's Guide

The industry's largest ever!

INSIDE:

EQUIPMENT ............ 65
EQUIPMENT COMPANIES ............ 102
CHEMICALS ............ 120
CHEMICAL COMPANIES ............ 130
SEED VARIETIES
BY COMPANY ............ 140
1. Equipment

Aerators, Aquatic
Barebo Inc
Clean-Flo Laboratories Inc
Kembro Inc

Aerators, Soil
Brinly-Hardy Co
Roscoe Brown Corp
Earl Crane Inc
Dedoes Industries Inc
Feldmann Engineering & Mfg Co
Furest Brothers Inc
Hahn Inc
Holland Equipment Ltd
Howard Rotovator Co
Industrial Leasing Corp
Jacobson Div Teetron Inc
F D Kees Mfg Co
Leco Inc
Olatho Mfg Inc
OMC Lincoln/Cushman-Ryan
Ryan Turf/OMC Lincoln
Salsco Welding & Fabrication Inc
Sensation Power Equipment
Solo Inc
Steiner Corp
Terracare Products Co
Trac N Combo
Wheel Horse Products Inc
Young Industries

Aerial Lifts
Altec industries Inc
Arbortech/A Scott Fetzer Co
Hi-Ranger Inc
HOLAN/Dorsey Trailers Inc
Promark Products Inc
Reach-All Mfg & Engineering Co
TECO Inc

Agitators
Broyhill Co
Friend Mfg Corp
Jaeco Pump Co
Kembro Inc
Thorco/Master Sprayers
Tuflex Mfg Co

Anchors, Earth
A B Chance Co
Foresight Industries Inc
Fox Valley Marking Systems Inc
Karl Kuenmerling Inc
Trees Inc
V I T Products

Aquatic Weed Eating Fish
Sea-Ranch

Aquatic Weed Harvesters
Aquamarine Div of Erectoweld
Hockney Under Water Weed Cutters
Kembro Inc
Mud Cat Div National Car Rental System

Augers
Ames Co
Bingham Equipment Co
Roscoe Brown Corp
Charles Machine Works Inc
Feldmann Engineering & Mfg Co
Ground Hog Inc
Hoffco Inc
International Reforestation Suppliers Inc
Karl Kuenmerling Inc
McMillen Div
Melroe Co Div Clark Equipment
Milwaukee Electric Tool Corp
Pitman Div
Reach-All Mfg & Engineering Co
Safety Test & Equipment Co
Don Savage Co
Seymour Mfg Co
P E Skaling Soilmoisture Equipment Corp
Stihl Inc
Tanaka (USA) Co Ltd
Wheel Horse Products Inc
Workeysaver Inc

Backfillers
Roscoe Brown Corp
Bush Hog
J I Case Drott Div
Industrial Leasing Corp

Back Hoes
American Trencher Inc
Bingham Equipment Co
J I Case
J I Case Drott Div
Caterpillar Tractor Co
Howard S Crane Inc
Deere & Co
Double L Mfg Co
Dynamic Industries Inc
Ford Tractor Operations
Industrial Leasing Corp
Kubota Tractor Corp
Long Mfg NC Inc
Massey-Ferguson
Master Craft Industrial Equipment Corp
Melroe Co Div Clark Equipment
Midmark
Sperry New Holland
Spyder Sales & Service Inc

Batteries, Turf Vehicles
Goodall Div Bunton Co
Gould
Ross Products
Solarwest Electric Inc

Battery Chargers
Ford Tractor Operations
Milwaukee Electric Tool Corp
Ross Products FCP1
Solarwest Electric Inc

Beach Cleaners
Atwater Strong Div
Glenmac Inc
Hockney Under Water Weed Cutters

Benches
Algoma Net Co
American Playground Device Co
Architectural Precast Inc
Clean City Squares Inc
Columbia Cascade Timber Co
Kay Park Rec Corp
Landscape Structures Inc
Miracle Recreation Equipment Co
Playworld Systems
Rotocast Plastic Products Inc
Standard Golf Co
Trojan Playground Equipment Mfg Co

Blades, Mower, etc
Bomford & Evershed Ltd
Buck Haven
Bunton Co
Bush Hog
Deere & Co
Goodall Div Bunton Co
Lawnboy Prod Group
Lesco Inc
MoTrim Inc
MTD Products Inc
Orbex Inc
Power Lawnmower Parts Inc
Ransomes Inc
Simplicity Mfg Inc
Tiger Corp
Toro Co/Commercial Prods Div
Vrisimo Mfg Co
Wheel Horse Products Inc
Yanmar Tractor (USA) Inc

Blades, Dozer/Scraper
American Trencher Inc
Ariens Co
Bingham Equipment Co
Bomford & Evershed Ltd
Bush Hog
J I Case
Deere & Co
Grasshopper Co
Haban Mfg Co

SEPTEMBER 1985/WEEDS TREES & TURF 65
Industrial Leasing Corp
Jacobsen Div Textron Inc
Kubota Tractor Corp
Massey-Ferguson
Sperry New Holland
United Farm Tools Inc
Wheel Horse Products Inc
Woods Div Husston Corp
Workeysaver Inc
Yanmar Tractor (USA) Inc
York Modern Corp

Bleachers
Kay Park Rec Corp
Miracle Recreation Equipment Co
Playworld Systems

Blowers
Atwater Strong Div
Billy Goat Industries Inc
Deere & Co
Echo Inc
Giant Vac Mfg Inc
Goodall Div Bunton Co
HMC/The Green Machine
Hoffco Inc
Homelite Div Textron Inc
Jacobsen Div Textron Inc
Lawboy Prod Group
McCulloch Corp
MTD Products Inc
Olathie Mfg Inc
Parker Sweeper Co
Poulan/Weed Eater
Ransomes Inc
Shindaiwa Inc
Solo Inc
Stihl Inc
Sweepster Jenkins Equipment Co
Tanaka (USA) Co Ltd
Turp Vac Corp
Vandermolen Corp
Vrisimo Mfg Co
Weldco (WA) Inc
Westheffer Co
Wheel Horse Products Inc
Yard Vac Prods Inc
Yazoo Mfg Co

Brush Cutters, Right-of-Way
Beaird-Poulau/Weed Eater Div
Roscoe Brown Corp
Bush Hog
HMC/The Green Machine
Royer Foundry & Machine Co
Tiger Corp
Timberjack Inc
Turner International Eng Ltd
United Farm Tools Inc
Vernco Corp of America
Woods Div Husston Corp

Bucket Lifts
Arbortech/A Scott Fetzer Co
Guest Industries Inc
Hi-Ranger Inc
Pitman Div
Promark Products Inc
Reach-All Mfg & Engineering Co
Spyder Sales & Service Inc
Timberjack Inc
Winkler Hydraulics

Buildings
W H Porter Inc Poligon-Cover-All Div
Western Wood Structures Inc

Carts, Lawn
Central Quality Ind Inc

Chain Saws
AEG Power Tool Corp
Alpina North America
Beaird-Poulau/Weed Eater Div
Deere & Co
Echo Inc
Fairmont Hydraulics
Hinds Intl Inc
HMC/The Green Machine
Homelite Div Textron Inc
Karl Kuemmerling Inc
McCulloch Corp
Poulan/Weed Eater
Shindaiwa Inc
Solo Inc
Tecfor Inc
Wheel Horse Products Inc

Chippers
Badger Chipper Co
Chipmore Mfg Co
Karl Kuemmerling Inc
Lindig Mfg Corp
Morbark Industries Inc
Olathie Mfg Inc
Promark Products Inc
Robush Engineering Co
Royer Foundry & Machine Co
Safety Test & Equipment Co
Sidefire Inc
Strong Mfg Co
TECO Inc
Timberjack Inc
Vandermolen Corp
Winkler Hydraulics
Wheel Horse Products Inc
Wood/Chuck Chipper Corp

Computer Programs
Ag-Share Computer Systems Inc
Display Data Corp
Petro-Chem Computing

Computer Services
Ag-Share Computer Systems Inc
Petro-Chem Computing

Cranes
Altec Industries Inc
Auto Crane Co
J I Case Drott Div
Industrial Leasing Corp
Master Craft Industrial Equipment Corp
Pitman Div
Reach-All Mfg & Engineering Co
Winkler Hydraulics
Worksesaver Inc

Cultivators
Allegheny International Hardware Group
Aries Co
Binghan Equipment Co
Bomford & Evershed Ltd
Brinly-Hardy Co
Bush Hog
Olympic, Apache and Bonanza team up... for the 1985 Games!

Triathalawn
Turf-Type Fescue Blend

Triathalawn turf plot, 5 weeks after planting, Hubbard, OR.

This tall fescue blend brings you the best of all 3 varieties.

Triathalawn turf-type blend is the best tall fescue seed available. Olympic has earned a reputation as hard wearing, finer leaved, drought tolerant turf variety. With the inclusion of the new generation Apache and Bonanza cultivars, Triathalawn combines the best of the old and new. Triathalawn promises to be the sports, park and home turf of tomorrow. Make Triathalawn a part of your plans today!

Triathalawn blend qualifies for Turf-Seed's Blue tag program. Ask your distributor for details.
Echo Inc
Engineering Products Co
Fuerst Brothers Inc
Gravely
HMC/The Green Machine
Howard Rotorvator Co
International Harvester Co
Massey-Ferguson
Solo Inc
Tradewinds Inc
United Farm Tools Inc
Vicon Farm Machinery Inc
Wheel Horse Products Inc

**Dethatchers**

Ariens Co
BlueBird Int'l Inc
Brinly-Hardy Co
BRower Turf Equipment Ltd
Buck Haven
J I Case
Exmark Mfg Co
E-Z Rake Inc
Fuerst Brothers Inc
Glenmac Inc
Howard Rotorvator Co
Jacobsen Div Textron Inc
F D Kees Mfg Co
Kinco Mfg
Matthews Equipment Co
Middleworth Mfg & Engineering Inc
Olathe Mfg Inc
OMC Lincoln/Cushman-Ryan
Parker Sweeper Co
Power Lawnmower Parts Inc
Ryan Turf/OMC Lincoln
Solo Inc
Turner International Eng Ltd
Venco Corp of America
Vrisimo Mfg Co
Wheel Horse Products Inc

**Dozers**

Auburn Consolidated Industries Inc
Bomford & Evershed Ltd
Roscoe Brown Corp
Caterpillar Tractor Co
Howard S Crane Inc
Deere & Co
Engineering Products Co
Industrial Leasing Corp
International Harvester Co
Little Giant Products Inc
Simplicity Mfg Inc
Wheel Horse Products Inc
 Yanmar Tractor (USA) Inc

**Drainsage Tubing**

Advanced Drainage Systems Inc
Cambridge Soil Service

**Dredgers**

Mud Cat Div National Car Rental System Inc

**Drills**

AEG Power Tool Corp
Dynamic Industries Inc

**Echo Inc**

Engine Parts

American Honda Motor
Briggs & Stratton Corp
Buck Haven

Caterpillar Tractor Co

Clinton Engines Corp

Comet Industries/Div of Hoffco

Goodall Div Bunton Co

Hoffco Inc

International Harvester Co

Kohler Co

Lesco Inc

Pex Inc

Power Lawnmower Parts Inc

Winkler Hydraulics

Yanmar Tractor (USA) Inc

**Engines**

Briggs & Stratton Corp

Caterpillar Tractor Co

Clinton Engines Corp

Deere & Co

Echo Inc

Goodall Div Bunton Co

Kawasaki Motors Corp USA

Kohler Co

Kubota Tractor Corp

Pex Inc

Tecumseh Products Co

Teledyne Total Power

Toro Co/Commercial Prods Div

Twin City Engine Rebuilders Inc

Westheffer Co

Yanmar Tractor (USA) Inc

**Erosion Control Blocks**

Presto Products Inc

**Erosion Control Fabric**

Agriculture Service Corp

American Enka Co

American Excelsior Co

Arthur Enterprises Inc

Conwed Corp

Delmarva Textile Co

Eaton Brothers Corp

Enkamat Div American Enka Co

Erosion Control Systems/Gulf States Paper Corp

Fox Valley Marking Systems Inc

Hoesth Fibers Industries

International Reforestation Suppliers Inc

Phillips Fibers Inc

Presto Products Inc

Reclamare Co

Rothwell Seeds Ltd

Theeomogard Co

Jim Wallis Co

Warren's Turf Nursery Inc

**Fault Finders**

National Irrigation Specialists

Progressive Electronics Inc

**Fertilizer Injectors**

John Blue Co

Chemilizer Products Inc

Creative Sales Inc

Ross Daniels Inc

Doggett Corp

Dragon Irrigation Equipment by Wes-Co

Encap Products Co

Hardie Irrigation

Holly Filter

Hydrofoil Corp

Inject-O-Meter Mfg Co

Marco Div of Lio-Mar Mfg Co

National Chemsearch

Power Spray Technology Inc

Raindrip Inc

Smith Precision Products

Trees Inc

Westheffer Co

Hermann A Wirth

**Filters, Sand**

Hardie Irrigation

Holly Filter

Laval Corp Claude

Thorco/Master Sprayers
There is a simple way to be sure your commercial mower is designed for a long life, and is built to achieve it.

Buy Bunton

to be sure your mowers have welded one-piece steel construction, lubrication points at each moving part, pneumatic puncture resistant tires and more.

Specify 2-cycle

for an engine that often provides 4 seasons of hard commercial use without major maintenance (2 season warranty), as much torque from an 8 hp as with an 11 hp 4-cycle, the piece of mind provided by taking the critical engine lubrication function out of the hands of your operators, and a cost competitive with the most popular 4-cycle engines.

Use the System

that puts your key equipment on the same fuel/oil mixture, with Bunton trimmers, backpack blowers and mowers.

Bunton builds 'em better.

BUNTON CO.

P.O. Box 33247
Louisville, KY 40232
502/966-0550
Telex: 204-340

GSA No.: GS-07F-13196
### Foggers
- B & G Equipment Co
- Buffalo Turbine Agricultural Equip Co
- Chemilene Co
- FMC Corp
- Hardie Irrigation
- National Chemsearch
- Root-Lowell Corp
- Stihl Inc
- Thompson Mfg Co
- Trees Inc

### Forklifts
- Bingham Equipment Co
- Brouwer Turf Equipment Ltd
- Roscoe Brown Corp
- Caterpillar Lift Trucks
- Caterpillar Tractor Co
- Howard S Crane Inc
- Deere & Co
- Dynamic Industries Inc
- Edwards Equipment Co
- Industrial Leasing Corp
- International Harvester Co
- K-D Manitou Inc
- Master Craft Industrial Equipment Corp
- Melroe Co Div Clark Equipment
- Princeton Mfg Co
- Spyder Sales & Service Inc
- Work saver Inc

### Generators
- American Honda Motor
- Clinton Engines Corp
- Deere & Co
- Homelite Div Textron Inc
- McCulloch Corp
- Milwaukee Electric Tool Corp
- MTD Products Inc
- Safety Test & Equipment Co
- Shindaiwa Inc
- Skil Corp
- Tanaka (USA) Co Ltd
- Toro Co/Commercial Prods Div
- Trees Inc
- Wheel Horse Products Inc
- WINCO Div

### Golf Cars
- American Continental Prods Inc
- Club Car Inc
- Columbia ParCar Corp
- E-Z-Go/Textron
- Industrial Leasing Corp
- Melex USA Inc
- Nordco Electric Vehicles
- Ross Products

### Golf Course Accessories
- J A Cissel Mfg Co
- Clean City Squares Inc
- Fox Valley Marking Systems Inc
- FXG Corp
- Kenyon Mfg Inc
- King Brothers Industries
- Lesco Inc
- Orbex Inc

### Grass Pavers
- Presto Products Inc
- Turfgrass Products Corp

### Greenhouses
- Beck Mfg Co
- Covers Unlimited
- Fox Valley Marking Systems Inc

### Greenhouse Covers
- Arthur Enterprises Inc
- Covers Unlimited

### Hose & Reels
- Ames Co
- Anchor/Swan Corp
- Bowie Industries Inc
- Broyhill Co
- Chemilene Co
- Citrus Systems Inc
- Encap Products Co
- FMC Corp
- Friend Mfg Corp
- Clifford B Hannay & Son Inc
- Lesco Inc
- Marco Div of Lio-Mar Mfg Co
- Melnor Industries
- Minnesota Wanner Co
- Pex Inc
- Power Spray Technology Inc
- Smithco Inc
- Spraying Devices Inc
- Strong Ent Inc
- Swan Hose
- Thermoguard Co
- Thorco/Master Sprayers
- Toro Co/Commercial Prods Div
- Trees Inc
- Tuflex Mfg Co
- Westheffer Co
- Winkler Hydraulics

### Insect Killers, Electrical
- Chemilene Co
- Devpro Insectocutor Div
- Insect-O-Cutor Inc
- Micron Corp
- Trebor Corp
- Vandermonel Corp

### Irrigation, Drip
- Aquatic Irrigation Systems Inc
- Buckner Sprinkler/Royal Coach Sprinklers
- Dayni Controls Mfg Co
- Hydro Rain
- Lesco Inc
- Raindrip Inc
- Rain Jet
- L J Rench & Co
- Richdel Inc

### Irrigation, Injection
- John Blue Co
- Dayni Controls Mfg Co
- Dragon Irrigation Equipment by Wes-Co
- Hydrollo Corp
- Inject-O-Meter Mfg Co
- Jaeco Pump Co
- Lesco Inc
- Thompson Mfg Co
- Thorco/Master Sprayers
- Westheffer Co

### Irrigation Systems & Supplies
- AMETEK/Plymouth Prods Div
- Aquatic Irrigation Systems Inc
- Aquaturf
- Buckner Sprinkler/Royal Coach Sprinklers
- Champion Sprinkler Mfg Co
- Dayni Controls Mfg Co
- Dena Engineering Co
- Gilmour Mfg Co
- Hancor Inc
- Hardie Irrigation
- Holy Filter
- Hydrollo Corp
- Hydro Rain
- Irri-Trol Mfg Inc
- Jaeco Pump Co
- King Brothers Industries
- Laval Corp Claude
- Lesco Inc
- Long Mfg NC Inc
- Lumenite Electronic Co
- McDowell Mfg Co
- Motorola Irrigation Dept
- National Irrigation Specialists
- L R Nelson Corp
- Parker Interior Plantscape
- Pierce Irrigation
- Rain Bird Sprinkler Mfg Co
- Raindrip Inc
- Rain Jet
- Rain-O-Mat Sprinklers Inc
- L J Rench & Co
- Richdel Inc
- Thompson Mfg Co
- Toro Co/Commercial Prods Div
- Toro Co Irrigation Div
- Travelrain Power Sprinkler Co
- United Farm Tools Inc
- Weather-matic Div

### Landscape Design Kits
- American Stamp Co
- Foresight Industries Inc
- Fox Valley Mar Ring Systems Inc

---

**70 WEEDS TREES & TURF/SEPTEMBER 1985**