

## How to avoid paying for more than you need. Or getting less than you want.



A tractor that's too big for the job is an unnecessary waste of capital.

While one that's too small ends up wasting time and costing money.

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## Esthetics

ceived to convey a harmonious and visually satisfying combination of the physical qualities.

The connector system involves trees that extend throughout the city, connecting many diverse elements. The connector system is potentially the unifying element of an urban scene that is awkwardly fragmented into separate uses and zones. Esthetic qualities of trees provide one of the most powerful agents for unifying and joining the city.

The criteria for tree selection will be based upon the character of the street — residential, arterial, strip-commercial and pedestrian-shopping.

Trees on a residential street should mask utilities without interference, separate pedestrians from automobiles and soften and blend varying architectural styles into a harmonious whole.

For arterial streets, in general, selection of trees should consider speeds of the observers. The importance of form is obvious. Whether the crown should be open or dense depends on how much visual penetration is desired beyond the street corridor. Trees do not have to be regularly spaced at 30 to 40 feet to be effective. In fact, utilities, curb cuts and other physical elements usually prevent such rhythmic repetition.

Nevertheless, the introduction of trees wherever space is available creates visually pleasing effects along a monotonous street. Such trees should be sharp in silhouette feature, strong in texture, line, and possibly color, so as to add variety and interest.

Varying the street-tree pattern by alternating trees in a projection-and-recession pattern eliminates the effects of a straight-line green facade imposed on straight-line architectural facades. This provides an intricacy and pattern that is stimu-

lating and enjoyable. Form and habit of growth are primary considerations.

Trees for minor streets should be used in much the same way as for arterial streets. However, on narrow streets, trees may be limited to one side, alternating sides by blocks. For narrow streets and small buildings, relatively small trees are preferred.

Trees of high interest in details would be appropriate on a pedestrian shopping street. At the same time they should function to separate cars from pedestrians, provide human scale in the midst of oversized buildings, serve as focal points, vistas and places to sit, and harmonize variable styles of architecture or a diverse and unorganized scene. □

*William R. Nelson, Jr. is a professor and extension landscape architect in the Departments of Horticulture and Landscape Architecture at the University of Illinois, Urbana, Illinois.*

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NG-54004A



## Disease Stresses *Continued from page 21*

ban situations simply because no one wants to destroy an ornamental plant until it is practically dead. If, however, more thought were given to planting, crabapples and hawthorns would be located at greater distances from susceptible junipers and a reduction in the amount of infection on all hosts would be realized. The judicious use of rust-resis-

tant varieties of crabapples and junipers would help to eliminate the problem.

Chemotherapy is a control method that may be used as an eradicator or a protectant. Various procedures have been used in testing chemicals that inhibit development of a pathogenic agent within a tree. Those procedures that have

shown the greatest promise for internal therapy involve either soil injection or direct injection of chemicals into the vascular system. Although entomologists have recommended several systemic chemicals to control insect pests, plant pathologists have only a few compounds that may be effective chemotherapeutants. There have been many disappointments in the research work with chemotherapeutants, particularly in the systemic control of vascular diseases such as Dutch elm disease, oak wilt, and Verticillium wilt. Research plant pathologists currently working on chemotherapy are still optimistic that compounds such as the solubilized forms of benomyl and TBZ (thiabendazole) may prove to be effective chemotherapeutants, particularly for Dutch elm disease control.

### Protection

Fungicide and bactericide sprays often must be used to prevent ornamental loss of leaves and fruit. Complete control of a leaf disease by protective fungicides is seldom achieved, especially during those years when disease incidence is severe. Improper timing of spray application, use of the wrong fungicide, and excessive rain often result in failure to control many tree diseases effectively. Even with the limitations of time and knowledge, spray control should be used if the climatic conditions may be optimum for severe infection and heavy defoliation early in the growing season. I discourage the use of more than two applications of a protective spray, because the limited amount of added protection usually does not justify the added cost of labor and chemical.

### Tree Selection and Future Maintenance

Urban tree selection has changed considerably during the past 30 to 50 years. Elm, pin oak, London plane, American sycamore, and Norway maple were formerly the most common species selected. All were relatively easy to transplant and grow and, therefore represent

*Continued on page 46*

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W. A. Cleary listened to your needs. . . and acted. We've combined a contact fungicide (Dyrene) and a systemic fungicide (3336) into one product. We call it SPECTRO, the broad spectrum fungicide. It's a contact and a systemic fungicide in one bag. . . one application. . . one synergistic product to control Leaf Spot, Dollar Spot, Copper Spot and Brown Patch. Spectro, an immediately effective broad spectrum, controls with extra residual protection. A dual product that answers the problem associated with a single application of systemic or contact fungicides.



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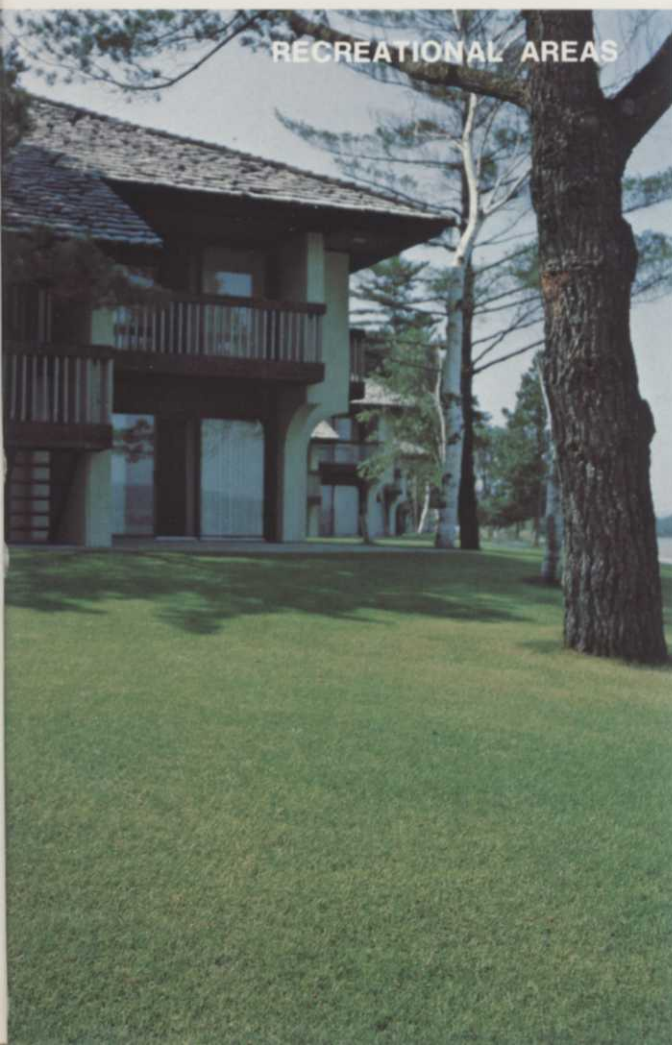




**GREENS**



**FAIRWAYS**



**RECREATIONAL AREAS**



**INDUSTRIAL PARKS**

**Uss Vertagreen  
turf care**

**A product for all reasons**



# All you need to know about plant nutrients...and more.

The USS Vertagreen product line is designed by USS Agronomists to meet every need and contingency, whether on the golf course, in a recreational setting or in the industrial park. The key to a successful turf program is the correct use of these vital primary, secondary and micro-nutrients...each an important function. Consider the contribution each one can make to your turf program when properly formulated as USS Vertagreen—the quality leader of the industry.

## Primary

### N

#### NITROGEN

gives a dark green color, vigorous blade and root systems and feeds soil micro-organisms. All growing things must have nitrogen to survive.

### P

#### PHOSPHORUS

stimulates early root formation, gives a rapid start, hastens maturity, improves winter-hardiness and provides disease resistance.

### K

#### POTASSIUM

"Winterizer," increases vigor and disease resistance, stiffens leaves and forms starches. *Potassium sulfate* (potash) is used in USS Vertagreen turf grades because it has a lower salt index and is far less likely to burn.

## Secondary

### Ca

#### CALCIUM

promotes early root hair formation and growth, corrects soil acidity.

### Mg

#### MAGNESIUM

forms chlorophyll and sugar, carries phosphorus and corrects soil acidity.

### S

#### SULFUR

maintains dark green color, encourages growth and corrects soil alkalinity.

#### UREA-FORMALDEHYDE

An important source of nitrogen, Urea Formaldehyde (UF) is found in all USS Vertagreen products. 50% of the nitrogen in Vertagreen Tee and Green formulations and a minimum of 25% of the nitrogen in Fairway Grades is in UF form, assuring a steady release of nitrogen for several years.

## Micro-Nutrients

### Zn ZINC

is necessary for normal chlorophyll production and growth.

### Cu

#### COPPER

is essential for chlorophyll formation and as an activator of important enzymes.

### Fe IRON

promotes chlorophyll production and comes in two forms:  
**Fritted**—glass-like materials giving slow but continuous release;  
**Chelated**—chemically activated to prevent iron from binding with phosphate. Fritted iron is ideal for acid soil conditions, while chelated iron is more suitable for alkaline soils. A combination of these two sources in USS Vertagreen will supply the plant needs for iron over a wide pH range.

### Mn

#### MANGANESE

speeds maturation, promotes soil oxidation, aids in photosynthesis and nitrogen metabolism.

### B

#### BORON

is needed for calcium utilization and normal cell division.





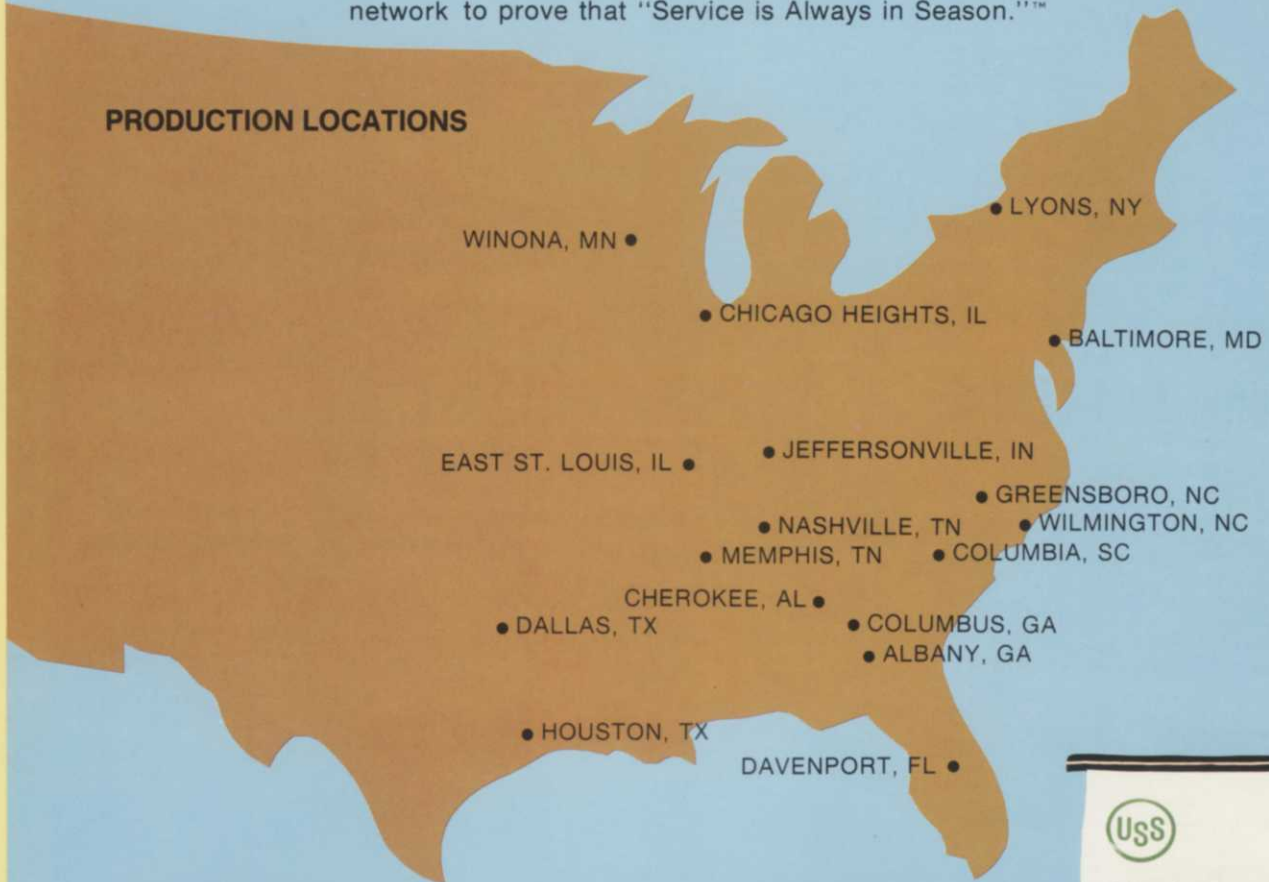
# Agri-Chemicals

Division of United States Steel

## The trademark to believe in.

USS Agri-Chemicals and United States Steel have been manufacturing and marketing high quality products for the fertilizer industry since the turn of the century. We have the production capacity and distribution network to prove that "Service is Always in Season."<sup>™</sup>

### PRODUCTION LOCATIONS



#### Nitrogen

products come from USS plants at Clairton, Pennsylvania; Cherokee, Alabama; Crystal City, Missouri; and Geneva, Utah.



#### Phosphate

in all its popular forms begins with extensive USS reserves at Bartow and Ft. Meade, Florida.



#### Potash

is obtained from the finest sources in Canada and the Southwest.



#### Secondary and Micro-Nutrients

come from only the best and most reliable sources. Put them all together under the guidance of USS Agronomists, USS Turf Specialists and USS Vertagreen Turf Care Distributors and you have a turf product line that is second to none. USS Vertagreen... a product for all reasons.



16-4-8  
FOR TEES & GREENS

## Tee Green Technical Turf Food 16-4-8

### GUARANTEED ANALYSIS

PRIMARY NUTRIENTS:	
Total Nitrogen (N)	16.00%
Water Insoluble Nitrogen	5.6%
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	4.00%
Sulfate of Potash (K <sub>2</sub> O)	8.00%
50% of the Nitrogen Derived from Urea-Formaldehyde	

### SECONDARY NUTRIENTS:

Calcium (Ca)	2.00%
Magnesium (Mg)	1.20%
Sulfur (S)	8.00%

### MICRO-NUTRIENTS:

Boron (B)	0.02%
Copper (Cu)	0.05%
Total Iron (Fe)	0.28%
Iron Chelated (Fe)	0.03%
Iron Fritted (Fe)	0.25%
Manganese (Mn)	0.05%
Zinc (Zn)	0.05%

DENSITY: 60 lbs. per Cubic Foot

SCREEN SIZING: 80% Minus 10 Plus 20 Mesh U S Sieve

COLOR: Gray

REGULAR PACKAGE: 50 # Multi-Wall 4 Ply, 3 Ply Paper, 1 Ply Polyethylene

**NEW** PACKAGE: 2 Ply Polyethylene, 9 Mil Thickness



18-0-9  
FOR FAIRWAYS



19-5-9  
FOR FAIRWAYS

## Tournament Plus 48% Organic 19-5-9

### GUARANTEED ANALYSIS

PRIMARY NUTRIENTS:	
Total Nitrogen (N)	19.00%
Synthetic Organic Nitrogen 48% of Total	
Water Insoluble Nitrogen	5.5%
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	5.00%
Sulfate of Potash (K <sub>2</sub> O)	9.00%

### SECONDARY NUTRIENTS:

Calcium (Ca)	1.50%
Magnesium (Mg)	0.60%
Sulfur (S)	12.00%

### MICRO-NUTRIENTS:

Boron (B)	0.02%
Copper (Cu)	0.05%
Total Iron (Fe)	0.28%
Iron Chelated (Fe)	0.03%
Iron Fritted (Fe)	0.25%
Manganese (Mn)	0.05%
Zinc (Zn)	0.05%

DENSITY: 60 lbs. per Cubic Foot

SCREEN SIZING: 80% Minus 8 Plus 20 Mesh U S Sieve

COLOR: Gray

REGULAR PACKAGE: 50 # Multi-wall 4 Ply, 3 Ply paper, 1 Ply Polyethylene

**NEW** PACKAGE: 2 Ply Polyethylene, 9 Mil Thickness



12-4-8  
FOR FAIRWAYS



38-0-0  
FOR TURF & ORNAMENTALS

## Vertanite 38-0-0

### GUARANTEED ANALYSIS

Nitrogen (N)	38.00%
Water Insoluble Nitrogen, Not Less Than 26.6%	
Water Soluble Nitrogen, Not Less Than 11.4%	
Chlorine	0%

DENSITY: 42 lbs. per Cubic Foot

SCREEN SIZING: 95% Minus 10 Plus 20 Mesh U S Sieve

COLOR: Green

REGULAR PACKAGE: 50 # Multi-Wall 4 Ply 6 # Polyethylene Coating

**NEW** PACKAGE: 2 Ply Polyethylene, 9 Mil Thickness



17-0-8 WITH BALAN  
FOR FAIRWAYS



# Tournament 18-0-9

## GUARANTEED ANALYSIS

PRIMARY NUTRIENTS:	
Total Nitrogen (N)	18.00%
Water Insoluble Nitrogen	3.2%
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	0.00%
Sulfate of Potash (K <sub>2</sub> O)	9.00%
25% of the Nitrogen Derived from Urea-Formaldehyde	

## SECONDARY NUTRIENTS:

Sulfur (S)	18.00%
------------	--------

## MICRO-NUTRIENTS:

Boron (B)	0.02%
Copper (Cu)	0.05%
Total Iron (Fe)	0.28%
Iron Chelated (Fe)	0.03%
Iron Fritter (Fe)	0.25%
Manganese (Mn)	0.05%
Zinc (Zn)	0.05%

DENSITY: 65 lbs. per Cubic Foot

SCREEN SIZING: 80% Minus 8 Plus 20 Mesh U S Sieve

COLOR: Gray

REGULAR PACKAGE: 50# Multi-Wall 4 Ply, 3 Ply Paper, 1 Ply Polyethylene

**NEW** PACKAGE: 2 Ply Polyethylene, 9 Mil Thickness



FOR FALL FAIRWAYS



## Fall Fairway Fertilizer

The *high potash* analysis will help winterize your fairways with healthy, hardy grass that is disease resistant.

Formulated with primary nutrients specifically for your area. Consult your local distributor.

# Fertilizer for Professional Turf 12-4-8

## GUARANTEED ANALYSIS:

PRIMARY NUTRIENTS:	
Total Nitrogen (N)	12.00%
Water Insoluble Nitrogen	2.10%
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	4.00%
Sulfate of Potash (K <sub>2</sub> O)	8.00%
25% of the Nitrogen Derived from Urea-Formaldehyde	

## SECONDARY NUTRIENTS:

Calcium (Ca)	6.00%
Magnesium (Mg)	1.20%
Sulfur (S)	14.00%

## MICRO-NUTRIENTS

Boron (B)	0.02%
Copper (Cu)	0.05%
Total Iron (Fe)	0.28%
Iron Chelated (Fe)	0.03%
Iron Fritted (Fe)	0.25%
Manganese (Mn)	0.05%
Zinc (Zn)	0.05%

DENSITY: 65 lbs. per Cubic Foot

SCREEN SIZING: 80% Minus 8 Plus 20 Mesh Sieve

COLOR: Gray

REGULAR PACKAGE: 50# Multi-Wall 4 Ply, 3 Ply Paper, 1 Ply Polyethylene

**NEW** PACKAGE: 2 Ply Polyethylene, 9 Mil Thickness



USS Vertagreen products (except 17-0-8) are available in popular, colorful polyethylene bags in selected markets... and that means easier handling and storage. See your local USS Vertagreen Turf Care Distributor for full particulars.

# Vertagreen for Professional Turf 17-0-8 with Balan®

## GUARANTEED ANALYSIS

PRIMARY NUTRIENTS:	
Nitrogen (N)	17.00%
Available Phosphoric Acid (P <sub>2</sub> O <sub>5</sub> )	0.00%
Sulfate of Potash (K <sub>2</sub> O)	8.00%
25% of the Nitrogen Derived from Urea-Formaldehyde	

## MICRO-NUTRIENTS:

Boron (B)	0.02%
Manganese (Mn)	0.05%
Zinc (Zn)	0.05%
Herbicide (Benefin)	0.78%*

DENSITY: 65 lbs. Per Cubic Foot

SCREEN SIZING: 80% Minus 8 Plus 20 Mesh U S Sieve

COLOR: Yellow

PACKAGE: 50# Multi-Wall 4 Ply, 3 Ply Paper, 1 Ply Polyethylene

\*78 pounds technical Benefin (Balan) per 100 pounds of 17-0-8. For 3 pounds technical Benefin apply 384 pounds of fertilizer per acre. For 2 pounds apply 256 pounds.

Balan is a registered trademark of Elanco Products Company a division of Eli Lilly and Company.

## Physical Characteristics

USS Vertagreen particles are carefully screened and sized. The small, uniform granules flow smoothly and sift down quickly so that mowing equipment will not pick them up.

## Special Grades

Special regionally formulated N-P-K grades and direct application materials such as Ammonium Nitrate, Ammonium Sulfate, Sulfate of Potash and others are available in many areas upon request. Your USS Vertagreen Turf Care Distributor is the one to see.

**A product for all reasons**



# Vertagreen turf care

**PROFESSIONAL TURF FERTILIZER AND CHEMICAL PROGRAM PREPARED**

**ESPECIALLY FOR** \_\_\_\_\_

This program will supply \_\_\_\_\_ # of N. per 1000 Sq. Ft. for greens, and \_\_\_\_\_ # of N. per 1000 Sq. Ft. for fairways and/or other professionally maintained turf areas.

Month*	Product	#N Per 1000 Sq. Ft.	Rate/Acre	Total Requirement	Total Cost
FAIRWAYS—TOTAL ACRES _____					
OTHER TURF—TOTAL ACRES _____					
TOTALS					

Month*	Product	#N Per 1000 Sq. Ft.	Rate/1000 Sq. Ft.	# Applications	Total Requirement	Total Cost
GREENS AND TEES—TOTAL SQ. FT. _____						
TOTALS						

\*Timing of applications are approximate. They may require seasonal changes at the discretion of the superintendent.

\*We recommend \_\_\_\_\_#/application for \_\_\_\_ applications between \_\_\_\_\_ and \_\_\_\_\_ to be applied at the discretion of the superintendent, timed to complement his total greens management program.

**ADDITIONAL REQUIREMENTS**

**COST**

Fertilizer and/or Fertilizer Materials	\$	_____
_____	\$	_____
_____	\$	_____
Chemicals	\$	_____
_____	\$	_____
_____	\$	_____
_____	\$	_____

TOTAL PROGRAM COST	
Fairway Fertilizer	\$ _____
Greens & Tees	\$ _____
Other Fertilizers	\$ _____
Chemicals	\$ _____
<b>TOTAL</b>	\$ _____

**Nitrogen Application Chart**

Nitrogen in Analysis	12%	16%	18%	19%	20%	33%	38%
Amount/1000 Sq. Ft. for 1#N/1000	8#	6¼#	5½#	5¼#	5#	3#	2½#
Amount/Acre for 1#N/1000	370#	275#	240#	230#	220#	130#	110#

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## GCSAA 49th International Turfgrass CONFERENCE AND SHOW

February 12-17, 1978

San Antonio, Texas

"ECONOMY THRU IDEAS" is the theme for the premier turfgrass industry conference and show, sponsored by the Golf Course Superintendents Association of America. As the only national turfgrass conference and show, this is a once-a-year opportunity for turfgrass managers, educators and industry representatives to learn about and to share the latest ideas and developments in turfgrass management,

services and equipment. Exhibits featuring new products for the turf industry will be open February 14-16; the conference will be in session February 12-17. This is the place for you to capture dollar-saving ideas and to meet the other people from across the nation who make the turfgrass industry dynamic. See you in San Antonio in '78.

### Conference Highlights

- *preconference seminars*
- *certification examination*
- *general education sessions*
- *special interest assemblies*
- *turfgrass industry show*
- *annual meeting and election*
- *golf course tour*
- *ladies' program*
- *social events*

Brochures and registration materials for GCSAA's 49th International Turfgrass Conference and Show will be mailed to all GCSAA members October 1. Others may use the coupon below to request the materials.

Send 1978 GCSAA Conference and Show materials to:  
(Companies check here for  
exhibitor information \_\_\_\_\_)

name \_\_\_\_\_

address \_\_\_\_\_

city \_\_\_\_\_

state \_\_\_\_\_

zip \_\_\_\_\_

club/firm \_\_\_\_\_

Mail this coupon to: GCSAA Headquarters,  
1617 St. Andrews Drive, Lawrence, Kansas 66044

## Disease Stresses *Continued from page 44*

the most common tree species lining our streets in many parts of the country. Each of these species has serious disease problems that now require high maintenance costs. To reduce these costs, a more scientific selection of tree species is needed.

Very few of the smaller communities have a tree ordinance to control shade tree replacement. In many Midwestern communities, homeowners have replanted street trees and maintained them at their own expense. Unfortunately, tree selection was left to the discretion of the homeowner.

Midwestern city arborists and homeowners are perplexed by the problems of selecting maintenance-free tree species. There are, in fact, no maintenance-free tree species; but some require less maintenance than others. Many tree species are

relatively free of infectious-disease problems but are affected by insect and non-infectious-physiological disease problems.

At least 10 species have been recommended in Illinois for replacing elms lost to Dutch elm disease. It was further recommended that municipalities avoid planting high percentages of only one or two species to avoid large losses if and when a serious disease or insect epidemic occurs. Experience over the past 25 years has proved that 10 different species are not enough.

If a vascular disease, such as Verticillium wilt, were to become a serious problem in any one area of the country, it could not be eliminated by any known control measure. We will apparently have to live with the problem and hope that future resistant varieties are devel-

oped. Randomized planting of susceptible species and limiting each susceptible species to less than 5 percent of the total tree population should provide the most effective means of limiting future tree loss. □

*E. B. Himelick is a plant pathologist for the Illinois Natural History Survey, Urbana, Illinois, and is Executive Director of the International Society of Arboriculture.*

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- Prevents puddling
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# Why Modules and not Attachments?

**A**

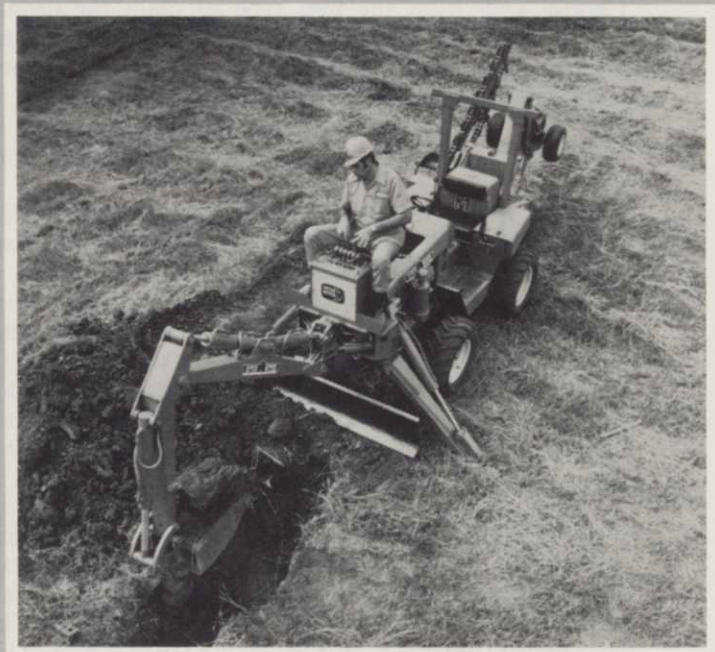
There is a big difference between hang-on equipment attachments and Ditch Witch



Modularmatics modules. An

attachment usually

is an afterthought to make a machine do something in addition to what it was designed to do. Ditch Witch's Modularmatic concept is a total underground equipment system including a basic underground vehicle with separate modules to do different jobs. All the elements of the Modularmatic system are designed specifically for one another as parts of a total system. What you get is a basic underground construction package that can do one job... or many jobs... whatever **you** need. Let your Ditch Witch dealer tell you more about our Modularmatic concept. For his name Call Toll Free (800) 654-6481. TWX 910-830-6580. Charles Machine Works, Inc., P. O. Box 66, Perry, Oklahoma 73077.



Ditch Witch R40 Modularmatic with utility backhoe and Combo modules.



**DITCH WITCH<sup>TM</sup> HAS THE ANSWER!**

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## Propagation of Ornamentals From Seed

Propagation from seed can be an easy and economical means of increasing your inventory of ornamental plantings. There are some advantages and disadvantages, according to the Florida Nurserymen and Growers Association.

Almost anyone has the necessary containers for planting and a small spot in which to grow them. The seed can be collected easily from trees and shrubs in any accessible place. Fresh seeds are easy to germinate, but variations may occur in seed-produced plants. However, many plants can be grown and only the best retained.

The disadvantages of seed propagation are: extreme variation in some species, hard seed coats that must be scarified before planting, variable growth habits, progeny not true to type and low viability.

Collecting seed should be done with great care. Choose seed from the best type of plant for propagation and check for maturity. Many seeds have an after-ripening period even though they are mature when collected from the tree. The viability of some seeds is very short and they must be planted rather quickly. A few seeds must be cold treated before germination can occur.

Some of the seeds collected may have a fleshy pulp around the seed which must be removed. It can be done by washing in water and draining before planting.

Good seed can be checked by the flotation method. Place seeds in a bucket of water. Those that float to the surface should be thrown away. Good seed will sink to the bottom of the container. If the seeds are to be stored, they should be air-dried before placing in storage containers. Remember, seeds contain a living plant and should be handled with care.

Seeds that are to be stored should be fully ripe. Immature seed will not keep as well in storage as those that are mature. Hard coated seeds store much better than those with soft seed coats. Temperature fluctuations can cause low viability, especially if the moisture is high. The temperature most desirable for seed storage is 40°F. Use airtight containers for best results.

A number of excellent trees can be grown from seed. The redbud, magnolia, Acacia and Jerusalem thorn, however, need treatment for more rapid germination. Magnolia seeds need to be stored in an ordinary refrigerator for five or six months. The seeds can be placed in a plastic bag and stored. Check once-in-awhile for proper moisture in the bag. A light sprinkling may be necessary. Hard-coated seeds like Jerusalem thorn and redbud can be soaked overnight in water. When first placed in water, it should be 190°F. Dump in the seed, let the water cool then plant the next day.

Try growing ornamentals from seed. It is easy, but takes a little longer to get a tree for shade. Shrubs will grow more rapidly. Propagation of plants from seed is interesting and something anyone can do.

**Capitol Nursery Supply, Inc.**  
Phoenix, Arizona 85005  
602/272-5508

**Swift Agricultural Chemicals Corp.**  
Los Angeles, California 90023  
213/264-5800

**Foster-Gardner, Inc.**  
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714/398-6151

**Foster-Gardner, Inc.**  
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714/761-2521

**Agri-Turf Supplies**  
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**Abate-A-Weed**  
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**Robinson Fertilizer Company**  
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**Wilbur-Ellis Company**  
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**Moyer Chemical Company**  
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**Agri-Chem, Inc.**  
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**Avon Cider Mill**  
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**Swift Agricultural Chemicals Corp.**  
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**McMullen Feed Store**  
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**Swift Agricultural Chemicals Corp.**  
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**Swift Agricultural Chemicals Corp.**  
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**Lawn & Turf, Inc.**  
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**Swift Agricultural Chemicals Corp.**  
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**Turf Products, Ltd.**  
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**Turf Management Supply Company**  
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**Paarburg Chemical Company**  
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**Professional Turf Specialties**  
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**Indiana Seed Company, Inc.**  
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**Deisch-Benham, Inc.**  
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**Chemi-Trol Chemical Company**  
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**Seedkem, Inc.**  
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**Leisur-Aid A Division of Aidx Corp.**  
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**Big Bear Equipment Company**  
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**Rhodes Chemical Co.**  
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**Cornell Chemical & Equipment Co., Inc.**  
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**Turf Supply Company**  
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**Swift Agricultural Chemicals Corp.**  
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**Champion Turf Equipment Inc.**  
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**Champion Turf Equipment, Inc.**  
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**Professional Turf Specialties**  
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**Big Bear Equipment, Inc.**  
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**Rhodes Chemical Company**  
Lincoln, Nebraska 68507  
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**Wagner Seed Company, Inc.**  
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516/293-2920

**Eastern Turf Equipment, Inc.**  
Fayetteville, North Carolina 28301  
919/483-0179

**Swift Agricultural Chemicals Corp.**  
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919/371-2216

**Sidney L. Dryfoos Company**  
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**Van Atta Seed & Imp. Company**  
Cincinnati, Ohio 45225  
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**C.O. Lowe Sales**  
Columbus, Ohio 43229  
614/891-9668

**Lee Road Nursery, Inc.**  
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**Larry's Garden Center, Inc.**  
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**Binding Stevens Seed Co.**  
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**Lawn & Golf Supply Co., Inc.**  
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215/933-5801

**Allen's Seed Store, Inc.**  
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401/294-2722

**Bell Oil Company**  
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803/249-2616

**Swift Agricultural Chemicals Corp.**  
Columbia, South Carolina 29250  
803/254-5189

**Central South Turf Distributor, Inc.**  
Nashville, Tennessee 37211  
615/832-7725

**Swift Agricultural Chemicals Corp.**  
Houston, Texas 77002  
712/682-6217

**Turf & Garden**  
Division of Todd Farm Equipment, Inc.  
Chesapeake, Virginia 23320  
804/543-2071

**Swift Agricultural Chemicals Corp.**  
Vancouver, Washington 98660  
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# WEEDS TREES & TURF 1977 Outstanding Achievement Awards

We are pleased to announce the winners of our 1977 awards program. The winners represent outstanding achievers in three categories and were nominated and selected by the four members of our advisory committee: Dr. Ray Freeborg, Purdue University; Dr. David Martin, Ohio State University; Dr. Fred Grau, Grasslyn, Inc.; and Dr. Henry Indyk, Rutgers University.

Dr. A. J. Turgeon, University of Illinois, has been selected as the winner in the research/educator category for his contributions to turf-grass research and education.

Mr. Wiley Miner, Princeton

Turf Farms, has been selected as the winner in the grower/producer category for his contributions to mechanization of the sod industry.

Mr. Arthur L. Hathcock has been selected as the winner in the grounds manager category for his outstanding efforts as consultant to the Washington, D.C. Metro system project.

In announcing these awards, WEEDS TREES & TURF wishes to recognize those who are not the usual award winners, but whose initiative and leadership prove them to be, without a doubt, top achievers in the Green Industry.



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