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#### **OAK WILT**

The Minnesota Department of Agriculture has recently published two excellent publications relating to Oak Wilt control and prevention: "Oak Wilt Control and Prevention on Construction Sites" and "Root Graft Barriers for Oak Wilt Control."

Both of these articles are available at no cost by contacting: Minnesota Department of Agriculture, Oak Wilt Control Program, Plant Industry Division, 90 West Plato Blvd., St. Paul, MN 55107; Telephone: (612) 296-3349.

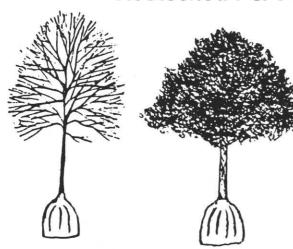
THe following summary and flow chart are adapted from the fact sheet "Oak Wilt Control and Prevention on Construction Sites."

#### SUMMARY

Oak Wilt is the most serious shade tree disease in Minnesota. A Department of Natural Resources (DNR) survey of oak wilt shows the nearly all infections are associated with construction. If your development sites are currently free of oak wilt, prevention is easy and involves only minor modifications in construction practices. Once oak wilt is established in an area, control is necessary. Obviously, there are costs involved with this work. But the alternative costs of doing nothing (decline in property

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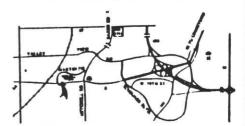






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# ALL-HYDRAULIC CONTROL OF CUTTING UNITS

All cutting units are hydraulically controlled with one foot pedal. O-ring face seals on hydraulic fittings.
Large 7 gallon hydraulic oil capacity with integral oil cooler.

# BALANCED WEIGHT DISTRIBUTION

Low pull-point on cutting units and ground-hugging design eliminate unsightly "washboarding". Equal weight distribution minimizes wheel tracking.

#### INTERCHANGEABLE CUTTING UNITS

Fully interchangeable cutting units are quick and easy to change. No tools required. Quick disconnect gear motors drive reels through self-adjusting belt.

#### FOLDS FOR EASY TRANSPORT

Wide-cutting Fairway 5000 folds to narrow transport width in seconds. Hydraulic control tucks cutting units, reduces overall width to only 71" (with grass catchers stored).



#### WIDE 9-1/2" DRIVE TIRES

Three  $9\frac{1}{2}$ " wide traction tread drive tires. Equal weight distribution between wheels minimizes tracking and improves traction.

## SPECIALIZED FOR FAIRWAY MOWING

Designed especially for top-quality fairway mowing. Use of five narrow cutting units, floating independently, allows machine to produce superb cut on undulating turf. Special fairway cutting unit blades are 27% thicker than greens reel blades, for extra durability.





#### THREE-WHEEL DRIVE PLUSTM

Three-Wheel Drive PLUS (patent pending) makes the Fairway 5000 a great hill-climber. Auto-select traction drive system, including Three Wheel Drive PLUS and automatic differential lock, improves traction and minimizes turf marking.



#### LIGHTWEIGHT MOWING

Lightweight machine offers smooth, easy handling and reduces turf compaction. Low profile and auto-select traction drive provide excellent climbing power and stability.



#### FOUR TYPES OF CUTTING UNITS

Highly versatile machine accepts four types of cutting units—all interchangeable without using tools. Types available include fairway (7-blade), greens (9-blade), tee unit, and Verticut.

#### **OPERATOR COMFORT FEATURES**

All gauges and controls conveniently located. Easy on and off from both sides of machine. Adjustable tilt steering wheel with hydraulic power steering. Deluxe suspension seat with high back, arm rests, and easy 3" fore and aft adjustment.



#### ROUTINE MAINTENANCE MADE EASIER

Operator platform lifts to expose center cutting unit, backlapping valve, fuses, and hour meter. Single latch lock. Easy access to service points. Zerk fittings throughout. Common parts make stocking of spares simpler. For example, all three wheel motors are identical, as are all three wheels and all five cutting units.



### 23 HP LIQUID-COOLED DIESEL ENGINE

Dependable diesel power provided by 23 hp liquid-cooled Mitsubishi engine. Flexible motor mounts dampen vibration by isolating engine from chassis. Large 8-gallon fuel tank extends time between refueling.





VERTICUT INSTALLS IN MINUTES

Large 8" diameter Verticut units snap in place in minutes. 35 spring steel blades per unit, offset for better turf coverage.

# GREENS-QUALITY FAIRWAY MOWING

Top quality finish provides manicured look to fairways. Standard 7-blade cutting unit provides 73 cuts/yard at 6 mph.



Position of operator provides excellent field of vision. Both side and front cutting units visible from operator position. Assists in trimming and in perimeter cuts.

OF VISION



#### SINGLE-PEDAL HYDROSTATIC CONTROL

Forward and reverse movements are controlled by one foot pedal. Variable cutting speed selection up to 6 mph.





#### SELECT 3, 4 OR 5 CUTTING UNITS

Easily converts to 3, 4 or 5 cutting units, all hydraulically controlled. Great for narrow striping of tees, landing areas, and approaches. Selection of 3, 4 or 5 cutting units allows operator to vary wheel tracks in perimeter cutting.



FAIRWAY

ENGINE	
ENGINE:	-Mitsubishi model L3E, three cylinder, diesel fuel, liquid-cooled with 7 quart capacity radiatorBore & stroke of 2.99" x 2.76"58.1 cu. in. displacement23HP @ 3600 RPM and 40 ft. lbs. torque @ 2000 RPMCompression ratio 23:1.
	-8 pint pressurized lubrication system with oil filter.
	-Electric fuel pumpDonaldson Cyclopac air filter.
	-Standyne water separator.
DRIVE SYSTEM:	-40 amp alternator.
DRIVE STSTEM:	Hydrostatic transmission with variable displacement piston pump driving two or three wheel motors, automatically selected.
FRAME CONSTRUCTION & DESIGN:	Welded steel tubular section "A" frame. All-wheel drive, rear wheel steering.
BRAKES:	Hydrostatic braking. Mechanical parking brake.
STEERING:	Hydraulic power steering with adjustable tilt wheel.
SEAT:	Foam padded, high back, suspension seat with adjustable back rest, weight control and easy 3" fore and aft adjustment.
CONTROLS:	Engine throttle, key switch with glow position, hand brake, backlapping lever. Forward/reverse speed control pedal. Mow/lift pedal. Single lever wing unit retract.
INSTRUMENTATION:	Hour meter, coolant temperature gauge, engine oil lamp, alternator lamp.
TIRES:	18 x 9.5 — 8 four-ply traction tread.
GROUND SPEED:	Cutting: 6.0 MPH. Transport: 9.0 MPH. Reverse: 4.0 MPH.
FUEL CAPACITY:	8 gallons
HYDRAULIC CAPACITY:	7 gallons
CUTTING UNIT SPI	ECIFICATIONS
LIFT:	Hydraulic lift to all units. Cutting units automatically turn on when lowered and turn off when lifted.  Cut with three, four or five units.
CONSTRUCTION:	Five 22-3/4" wide, 5" diameter, 7-blade cutting units. Greasable, grooved front and smooth rear rollers. Heavy-duty steel knives. Full floating suspension, low pull-point.
DRIVE:	Hydraulic gear pump, belt driven from engine. Quick-disconnect gear motors on cutting units. Self-adjusting belt. O-ring face seals on hydraulic fittings. Integral oil cooler.
CONFIGURATION:	Two units out front, two units alongside operator, one unit between front wheels.
FREQUENCY OF CUT:	Independent cutting unit and ground speed. With 7-blade cutting units: 73 cuts/yard @ 6 mph.
GRASS CATCHERS:	Front-mounted, molded polyethylene.
CUTTING HEIGHT:	5/16" to 1-3/16"
OVERALL SPECIFI	CATIONS
CUTTING WIDTH:	106"
TRANSPORT WIDTH:	71" (with grass catchers stored)
WEIGHT:	1860 lbs.
OPTIONS:	Tee Units — 6-blade reel. Greens Units — 9-blade reel.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



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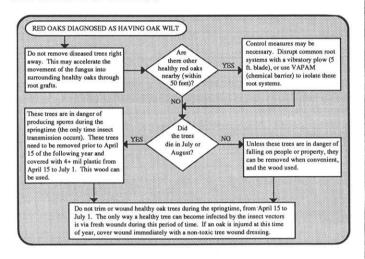
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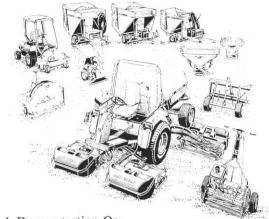
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value, tree removal, skeptical buyers, potential liability problems, etc.) may be far more expensive.

The Departments of Agriculture and Natural Resources can help you determine whether oak wilt exists on your development sites. An aerial inventory of oak wilt in 45 townships north of the Twin Cities (the area hardest hit by oak wilt) was completed last year. Computer generated maps of oak wilt infections in this area (down to map size of 40 acres) are available (May, 1989). For these maps or other information on oak wilt and its' control, please contact the MDA or the DNR.



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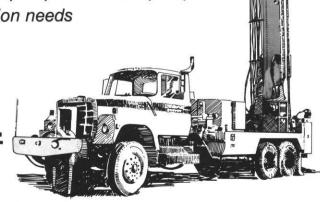
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#### **PURPLE LOOSESTRIFE**

This summer we have received a number of calls relating to the status and control of Purple Loosestrife (Lythrum salicaria). The following information is adapted from literature prepared by the Department of Natural Resources' Purple Loosestrife Program. In addition, they have published an excellent color brochure to aid in the identification of purple loosestrife. There is also color pictures of loosestrife look-alikes so that accurate identification can be made. The brochure can be obtained by writing to:

Minnesota Department of Natural Resources Purple Loosestrife Program Ecological Services Section Division of Fish and Wildlife Box 25 500 Lafayette Road St. Paul, MN 55155

or contacting your regional DNR office:

MN Dept. of Natural Resources 2115 Birchmont Beach Road NE Bemidji, MN 56601

MN Dept. of Natural Resources Box 756 Highway 15 South New Ulm, MN 56073

MN Dept. of Natural Resources P.O. Box 6247 Rochester, MN 55903 MN Dept. of Natural Resources 1201 East Highway 2 Grand Rapids, MN 55744

MN Dept. of Natural Resources Box 648 424 Front Street Brainerd, MN 56401

MN Dept. of Natural Resources 1200 Warner Road St. Paul, MN 55106 There are three species of loosestrife, or LYTHRUM, of interest to horticulturists: Purple Loosestrife, (Lythrum salicaria) and wand lythrum (Lythrum virgatum) are of European origin; winged loosestrife (Lythrum alatum) is native to MInnesota but is relatively uncommon. It is typically found in undisturbed marshes, meadows and prairies.

Growers have grown and sold both European species (L. salicaria and L. virgatum) and many hybrids and cultivars throughout North America. Garden Lythrums in North America have parentage of one, two, or in some cases all three Lythrum species. Some hybrids and cultivars of L. virgatum do produce seed. According to taxomonists, identification of Lythrum hybrids and cultivars is very difficult if not impossible.

The widespread distribution of escaped or naturalized Lythrum has produced some startling examples of nature out of balance. Purple loosestrife is a phenomenally prolific exotic when not kept in check by its natural European predators. In Minnesota, it has spread to over 800 sites, blocking drainage ditches, clogging marshes, and degrading habitat used by waterfowl, songbirds, furbearers and other animals and plants. Over 20,000 acres of wetlands are now covered with loosestrife.

In 1987, the species Lythrum salicaria was designated a noxious weed by the commissioner of agriculture. The



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- ☐ Slower release makes Par Ex products perfect for your Fall Fertilization program.
- ☐ Fewer applications are required, labor costs are cut.
- ☐ The Nitrogen release rate of IBDU is generally affected by only two factors: soil moisture and granule size.
- ☐ The salt index of IBDU is the lowest of all commonly used fertilizer materials.
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noxious weed law and 1987 legislation prohibit the sale and transport of Lythrum salicaria (purple loosestrife) in Minnesota.

In November of 1988, Commissioner of Agriculture Jim Nichols deemed purple loosestrife (Latin names Lythrum salicaria and Lythrum virgatum and any combination thereof) to be a noxious weed as defined in Minnesota Statutes 1987, section 18.171, subdivision 5. This new order supercedes the 1987 commissioner's order; therefore, the sale of ALL these plants is now prohibited.

Illegal Lythrum plants have many horticultural names:

Plants of L. virgatum parentage:

Rose Queen The Rocket Morden Pink Morden Rose Dropmore Purple Columbia Pink Plants of L. salicaria parentage:

The Beacon
Fire Candle
Bightness
Lady Sackville
Mr. Robert, Robert's
Roseum Superbum
Happy
Atropurpureum
var. Tomentosum
Purple Sprire

According to Minnesota Statutes, 1975, it is the duty of the occupant of privately owned land (or, if unoccupied, the owner) or the person in charge of public land to control or destroy noxious weeds to prevent their spread.

[18.182] Penalty for the Sale of Purple Loosestrife: A person who sells purple loosestrife, Lythrum salicaria, is guilty of a misdemeanor.

#### [86.78] Control of Purple Loosestrife:

Subdivision 1. Definition: For the purpose of this section, "purple loosestrife" means Lythrum salicaria.

Subdivision 2. Establishment of Control Program: The commissioner of natural resources shall coordinate a control program to curb the growth of purple loosestrife. The commissioners of agriculture and transportation must aid and cooperate with the commissioner of natural resources to establish, implement and enforce the control program.

#### [Purple Loosestrife]

\$50,000 is appropriate from the general fund to the commissioner of agriculture, to be available until June 30, 1989, for the eradication of purple



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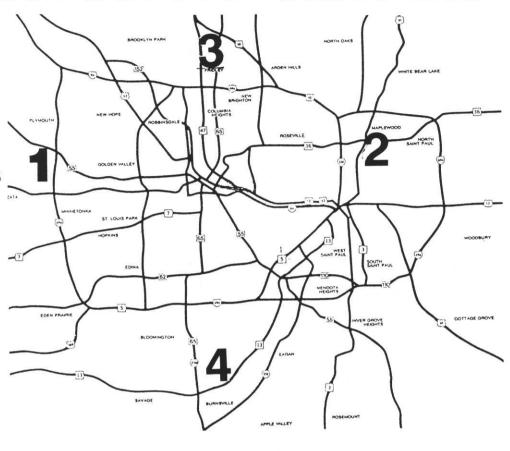
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FOOT VALVES

loosestrife (Lythrum salicaria) on farm land where the farmer is required to eradicate the purple loosestrife because of the noxious weed law.

#### [18.191] Destruction of Noxious Weeds

This section now provides that effective July 1, 1989, an owner of non-federal lands underlying public waters or wetlands is not required to control purple loosestrife below the ordinary high water level of the water or wetland. The commissioner of natural resources is responsible for the control on public waters and wetlands unless they are owned or managed by the federal government. This section also provides that DNR employees or those under contract with the DNR may cross private land to get to public waters or wetlands to control the purple loosestrife. Landowners may assume responsibility for controlling loosestrife on their protected waters if they notify the DNR in writing.



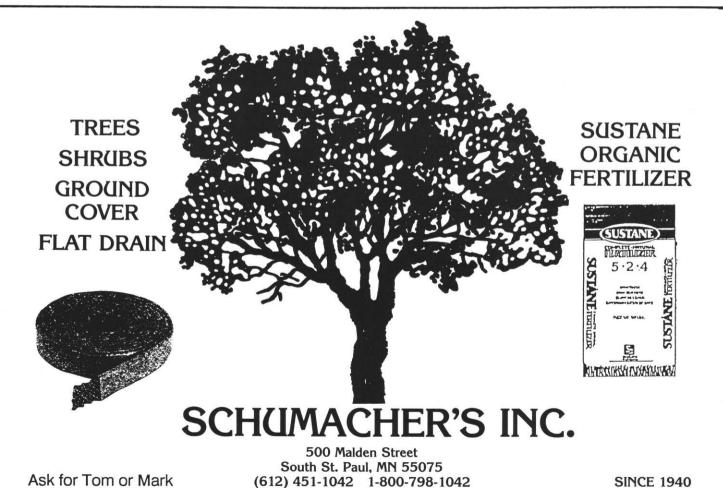


# OFF THE TOP

GREG HUBBARD, CGCS Editorial Chairman

In an earlier issue, I suggested that we all take some time off during the busy golf season to relieve work related stress and to re-acquaint ourselves with our families. For once, I finally took some of my own advice and took a little visit to the PGA Championship held this last August at Kemper Lakes near Chicago. By showing my GCSAA membership card, my wife and I were each given complimentary passes for each day of play which also included special tent privileges for food and refreshments. As evidenced by the TV telecast, we were treated to an outstanding golf course in superb condition and, of course, were eyeball to eyeball with the best golfers in the world. A thrilling finish topped off a very enjoyable visit and I returned to work a much happier soldier with my batteries fully recharged.

Besides the actual tournament, I was struck by the enor-



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mity of the whole operation. Big time golf requires big time commitment and lots of money and hard work. I marveled at the enormous expense and long hours of planning that go into hosting an event of such grandeur. From preparing the course to locating TV equipment to food handling to transportation, the volunteer staff should be congratulated on a very fine effort. Their hard work not only made the tournament possible but assured its success. I also marveled at the wealth that present day golf demands and acquires. Large corporate tents for personnel and clients, brand new cars for golf professionals and VIP's, huge trailers filling up huge parking lots, all added to the circus atmosphere permeating the entire event. Golf is certainly enjoying an enormous boom and we are fortunate to be involved in such a lively, interesting, upbeat field.

Another thing struck home as the tournament progressed. Play at Kemper Lakes was frequently delayed by thunderstorms during tournament week and some players threatened to walk off the course as lightening bolts danced around the area. Others ignored the lightening danger, leaving themselves in the hands of fate. One bolt came so close as to knock out a power transformer across the street from the course Saturday evening closing down the entire operation. In fact, within the span of 5 days, 15 people were struck by lightening in the Chicago area causing at least one death. Apparently no one learned from the Lee Trevino/Bobby Nichols incident 15 years ago when both were struck by lightening at another Chicago area course during the Western Open.

How often do we tempt fate on our own golf courses? Is it really worth it to get one more fairway cut or to finish that last hole of golf? Don't you have a responsibility to yourself, your employees, and your golfers to treat approaching thunder storms with respect? Golf courses are among the worst places to be during thunderstorms. Maybe you should review your policies and make sure your employees and your golfers are aware of the risk that accompanies threatening weather. I'm sure 15 people in the Chicago area now treat thunderstorms with the respect they deserve. It's one hell of a way to recharge your batteries!

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## **EDINA PHOTOS**



Host Superintendent Bill Johnson has had a very busy year sprucing up the grounds around the beautiful new clubhouse.



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Dr. Joe Delly had his audience in a reflective mood.

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