"Doesn't Toro make a high-capacity rotary that's a trimmer, too?"

Toro does. Like nobody else.

It mows big and handles small, this Groundsmaster 72.
The three rotary blades mow a swath nearly 6 feet wide, yet the trimming side of the cutting unit turns on zero radius.
There's a 4-cylinder, in-line, water-cooled industrial engine for long life at low maintenance cost.
And the drive is hydrostatic: you get instant forward/reverse and infinitely variable speed control.
Ask yourself what you're looking for in a high-capacity trimming mower — in performance, safety, ease of service and value.
Then look at all Toro builds into the Groundsmaster 72 — in detail, on the next page.

ZERO TRIMMING RADIUS  WATER-COOLED ENGINE  HYDROSTATIC DRIVE
What matters most in your buying decision — performance, safety, ease of service, or value?

The features and benefits of the Groundsmaster 72

**PERFORMANCE**
High-capacity: cutting unit mows a 70½ inch swath that covers up to 30 acres of turf a day. High horsepower (19.8 net) 4-cylinder water-cooled industrial engine has power to spare for maximum work output. Durable drive train has industrial-quality transmission and automotive-type differential for continuous high speed operation. Trimming capability: Ross steering gear assembly turns rear wheels for precise control. Cutting unit is offset to right and deck is rounded on right side to permit trimming to within 1 inch of trees and under overhanging shrubs without interference to operator. Hydrostatic drive gives infinite speed control with instant forward/reverse for superior trimming ease and control. Excellent finished appearance: free-floating deck follows ground contours for a smooth, even cut. High-lift blades lift even the longest grass for a cleaner cut. Deep deck permits immediate discharge of clippings in powerful airstream, distributes them evenly.

**SAFETY**
Automotive-type operator area: all switches and gauges are grouped on panel at operator's right for maximum convenience. Large steering wheel and single foot pedal control of forward/reverse simplifies handling, reduces operator fatigue. Operator is positioned up front for a clear, unobstructed view of cutting unit and mowing area. Seat has high-back with molded foam cushions for extra operator comfort, and is adjustable to each operator's need. Prime mover has four wheels and low center of gravity for greater stability, individual wheel brakes for more sidehill control and exceptional maneuverability. Top speed of 10 mph contributes to overall safety of unit.

**EASE OF SERVICE**
Engine area is open and at waist height for easy maintenance. Hydrostatic transmission is a closed, self-lubricating drive system with no gears to change, no clutch to slip. Monitoring gauges on critical components give sight and sound signals to prevent damage to engine. Snap-off cowl for easy access to transmission. Simple design of cutting unit means components are easy to get at for maintenance.

**VALUE**
Optional 60-inch rotary broom is the first of a family of accessories designed to reduce equipment investment and maintenance cost, as well as save storage space. And the Toro parts and service system, recognized as the finest in the industry, backs the Groundsmaster 72 all the way. Add it up: this Groundsmaster 72 combines a high-capacity rotary and trimming mower for superior performance; it gives you safety features found in no other machine of its kind; it's specially designed for ease of service from the prime mover to the cutting unit — and that, with the versatility of optional accessories and the security of the Toro parts and service system, adds up to another solid Toro value — the Groundsmaster 72.

Get your order in now — or let us know when you'd like a demonstration.

**SPECIFICATIONS**

**PRIME MOVER:**
- **Engine:** CONTINENTAL, 4-cylinder, water-cooled, forced recirculating system. 19.8 net hp @ 3,450 RPM, 12 volt electrical system with generator. 47.8 cu. in. displacement. 8.5:1 compression ratio. Oil system full pressure — gear driven oil pump. Replaceable oil filter. Forged steel connecting rods. Cylinder liners — wet type — cast iron — easily replaceable. Fuel system — down draft type carburetor. Governor — mechanical.
- **Battery:** 12 volt, 54 plate, 50 Ampere hour capacity.
- **Steering:** Ross Gear Steering Gear Assembly. 15° steering wheel.
- **Fuel Capacity:** 9.0 gallons.
- **Weight:** 1,600 lbs., dry weight with cutter deck.
- **Ground Speed:** 0-10 m.p.h., infinitely variable.
- **Brakes:** Individual wheel brakes and parking brakes with dynamic braking through propulsion system.
- **Gauges:** Hour Meter, Ammeter, Water Temperature — safety light and buzzer, Oil Pressure — safety light and buzzer.
- **Controls:** Hand operated throttle, choke and PTO.
- **Tires:** (2) Rear Steering Tires — 16 x 6.50-8 — 2 Ply, Rib. (2) Front Traction Drive Tires — 23 x 8.50-12 — 2 Ply, Xtr. Demountable drop-center rims.
- **Propulsion:** Infinitely variable hydrostatic transmission. Mounted on GT 20 Dana Axle — 20.9:1 ratio. Ground speed 0-10 m.p.h., infinitely variable. Single foot pedal control of ground speed and forward/reverse.
- **Seat:** High back, replaceable molded foam back and seat cushions. 5° fore-aft slide adjustment.
- **Overall Dimension with Cutter Deck:** Height — 50" to top of steering wheel. Width — 75", Length-111", Wheel base — 48", Tread width — Front & Wheels — 36½". Rear & Wheels — 37½".
- **Accessory Drive:** Splined-universal PTO shaft.

**CUTTING UNIT:**
- **Height of Cut:** 1½"-6" adjustable front and rear, ¾" increments.
- **Width of Cut:** 70½".
- **Cutter Housing:** 11 Gauge steel. 6" deep with a 2" step. Reinforced with 2" x 2" x 5/16" angle iron. Transfer spring for counter balance.
- **Cutter Drive:** PTO Driven Gear Box with 1.45:1 spiral gears on center spindle. "B" section drive belts to end spindles.
- **Cutter Spindles:** 1" diameter shafts turning on two externally sealed greasable ball bearings.
- **Blades:** Three 25" long, heat-treated steel, suction-lift blades.
- **Lift:** Hydraulic.
- **Cutter Wheels:** 4 Gauge wheels for maximum contour following ability. Rear caster — 6" x 2½". Front caster — 10.25" x 3.25".
- **Optional Equipment:** 60" hard surface broom.

 Specifications and design subject to change without notice.
Use this convenient card if you wish to continue to receive your FREE subscription to WEEDS TREES and TURF Magazine.
IMPORTANT NOTICE

IN ORDER TO CONTINUE YOUR FREE SUBSCRIPTION, FILL OUT, SIGN AND RETURN THIS CARD TODAY. NO POSTAGE IS REQUIRED. THANK YOU.

ART EDWARDS
PUBLISHER

COMPLIMENTARY SUBSCRIPTION QUALIFICATION CARD

I would like to receive (continue receiving) WEEDS TREES & TURF free of charge each month:

☐ YES  ☐ NO

A. Please check below the one item which best describes your primary type of business:

(1) ☐ Sod Growers
(2) ☐ Tree Service Companies
(3) ☐ City Managers
(4) ☐ Contract Applicators (Ground and helicopter)
(5) ☐ Rights-of-Way Maintenance, Highway
(6) ☐ Rights-of-Way Maintenance, Utility
(7) ☐ Rights-of-Way Maintenance, Railroad
(8) ☐ Golf Course Superintendents
(9) ☐ City Purchasing Agents
(10) ☐ Parks & Grounds Superintendents, (federal, state, municipal)
(11) ☐ Irrigation & Water Supply Contractors
(12) ☐ Turf Specialists (Includes Seed Growers)

(13) ☐ Armed Forces Installations
(14) ☐ Airports
(15) ☐ Hospitals, Schools, Colleges, Race Tracks, Shopping Centers
(16) ☐ Cemeteries
(17) ☐ Athletic Fields
(18) ☐ Industrial Parks (Factory Lawns)
(19) ☐ Golf Course Greens Chairmen, Owners, Managers and other Supervisory personnel
(20) ☐ Consultants
(21) ☐ Industrial Research Agents
(22) ☐ Institutional Research and Teaching
(23) ☐ Formulators of Herbicides, Insecticides, and Related Compounds for Vegetation Maintenance and Control

(24) ☐ Retailers or Wholesalers of Chemicals Used in Vegetation Maintenance
(25) ☐ Libraries
(26) ☐ Regulatory Agencies, Associations

B. Your Title

C. Date

D. Your Signature

Please fill in those items below

Your Name
Title
Company Name
Mailing Address
City State Zip
I have now submitted my annual report to the members of Connecticut Tree Protective Association, but I thought you would be interested in our activities.

To begin with, secretary Oscar Stone, Charlie Barr and I have appeared before sub-committees of the Connecticut State Legislature. I met with individual legislators many times in response to bills in the State concerning our profession and its members.

Jerry Stone and I attended the planting of a memorial oak tree at Cromwell, Connecticut in honor of Neal Milliane our first president.

I have met with Dan Lufkin, former Commissioner of Environment, and discussed with him our side of our problems. Subsequently, our Secretary Oscar Stone wrote a wonderful letter to him explaining our operations concerning the spraying we do.

The severe ice storm that covered the State last December 17th and 18th kept our members busy and will continue to keep us busy for quite awhile. We received a letter of thanks and appreciation from Antony Wallace, President of Conn. Light & Power Co., for the services rendered by our members during the ice storm. We also received national publicity on NBC television showing member’s equipment working under adverse conditions during the ice storm.

Jerry Stone and I appeared on the New Haven Station WELI on John Birchard’s talk show on Sunday, Dec. 23rd, for two hours — 6 to 8 o’clock. We answered many questions and made comments on the ice storm, informing the general public not to panic and to avoid doing business with the fly-by-night tree men. Hire only our members who are reliable and charge fair prices. This not only put our organization before the public but kept them well informed about who and what we are. John Birchard of the Radio Station asked if Jerry and I would appear again to participate in another two hour talk show . . .

John Stashenko, President Connecticut Tree Protective Association.

Your item on the Agrico price increases in the “Government News/Business” section of your last issue (Jan. 1974) omitted some important information and created some misunderstanding for Agrico in the trade.

The points in order of importance were: 1. Although the price increases were effective January 1, the company said it was honoring the lower prices on orders received and scheduled for delivery January 31, 1974. 2. All Agrico customers were notified in advance of the price increase and given an opportunity to place or increase orders for delivery by January 31 at lower prices. 3. Only part of the orders at lower prices for delivery by January 31, were able to be filled from inventories of products purchased and manufactured at lower cost and that Agrico was absorbing the additional costs of fulfilling all of the orders for delivery by January 31.

The absence of this information apparently led a number of your readers to conclude that what Agrico had presented to its dealers as a generous way of handling the price increase problem, was based on nothing more than the company having ample supplies of lower priced products from which to fill orders. This was not the case. . . . Agrico did indeed absorb significant costs in carrying out this policy for the benefit of its dealers. . . . Merton Flir Associates, Inc., Merton Flir, president.

TIME TO RENEW: Your Renewal Card Is Bound In Above

WEEDS TREES AND TURF is sent to you because you and your business are part of the Green Industry. You receive this magazine on a free basis.

To continue receiving each issue at no cost, we need your okay. Subscriptions are limited to bonafide members of the Green Industry. If you operate commercially within this dynamic marketplace, you qualify.

MAY WE HEAR FROM YOU TODAY? The attached card above is for your use. Please check the type of business you are engaged in, sign the card and drop it in the mail. We’ll do the rest. We want your continued support. If you returned the qualification card in the January issue of WEEDS TREES AND TURF, please disregard this notice. Thank you, Arthur V. Edwards, Publisher.

(This renewal notice is a requirement of our national auditing service to verify that you are a member of the industry and that you wish to receive the magazine.)
Contingency Use Of DDT Granted

Russell E. Train, Administrator of the Environmental Protection Agency, has granted the U.S. Forest Service an emergency exemption from the prohibitions of the Federal pesticides law for the contingency use of DDT against the tussock moth in the States of Oregon, Idaho, and Washington.

Announcing his decision at a news conference in Seattle in late February, Train emphasized that permission “is not a directive from EPA that DDT should be used this summer against the tussock moth. It is the hope of EPA that an actual emergency will not arise ... at the time of egg hatch and that spraying will not be necessary.”

Whether DDT will, in fact, be used this spring depends on the outcome of the Forest Service’s ongoing biological evaluation of the extent of the moth infestation and the levels of the moth’s natural enemies. DDT would be used only if the Forest Service determines that an actual emergency exists which will not be controlled naturally.

On January 3, 1974, the Forest Service requested contingency authorization for treatment of 650,000 acres of Douglas fir forest in Washington, Oregon, and Idaho, including the Colville Indian Reservation. The Forest Service request specified that the pesticide would be applied by helicopter at the rate of 0.75 pounds per acre. Spraying would begin soon after egg hatch in late May or early June and would end around June 30.

The Forest Service was required to seek an exemption from the Federal pesticides law for the use of DDT. Effective December 31, 1972, EPA banned most uses of that pesticide. Last year, the Agency denied a similar Forest Service request for DDT use on the tussock moth based on predictions that the moth population would collapse without chemical control as a result of a naturally occurring virus. Contrary to expectations, however, the natural virus did not achieve larval kills sufficient to control the total moth population.

Train noted that the 1973 failure of the virus to afford control and the inconclusive results of tests on alternative control mechanisms “put decision into a far different light.”

“After examination of all of the facts,” he said, I conclude that the potential for a serious emergency this summer is present, and that DDT is the most practical control available.”

In granting an exemption for the use of DDT this year, Train imposed numerous restrictions on the actual Forest Service spray program. He required as a condition of approval that testing of alternatives to DDT be conducted. Among the restrictions are:

—maintenance of an unsprayed buffer strip of at least 200 feet long live streams and waterways.

—marking of waterways with flags and other devices to insure that they will not be sprayed.

—no spraying in winds exceeding 6 mph, or where temperatures inversions exist.

—placement of warnings in public places within all areas to be sprayed, giving the date, time, and duration of the spray project.

In imposing research requirements as a condition of his approval of the Forest Service request, Train said, “It is to remedy the inadequacies of past USDA per-

(continued on page 70)
We'd like to lay down a few facts before you buy a new sprayer.

Looking at sprayers? Here are some facts you should consider about the Myers TL10E3 Turf Line, a sprayer especially suited to custom lawn and landscape service. FACT NO. 1. Consider its versatility. The TL10E3 is ideal for chemical applications on trees, shrubs, turf maintenance and even right-of-way spraying. FACT NO. 2. Consider its mobility. The TL10E3, with high flotation running gear, performs almost anywhere. Use it on park, golf course, lawn, landscape, nursery and most other spraying jobs on your schedule. FACT NO. 3. Consider its dependability. The TL10E3 is equipped with quality features proven in years of service on other Myers sprayer models - components like Myers Du-All pump (10 GPM, 500 PSI), 300 gallon epoxy coated steel tank, built-in suction strainer, hinged 21' spray boom, arc welded box frame and many more - plus a choice of optional accessories. For more facts, call your Myers distributor. You'll find there's nothing else around like the TL10E3. That's a fact you should consider too.
The Energy Crisis
And The Turf Industry

What caused it? How will it affect us, this energy crisis?

For whatever its causes and for whatever its effect, the energy crisis has become a topic of considerable discussion throughout the turf industry. One thing seems apparent—every segment of our country, including the turf industry, is being affected by it in some way or another.

There will be changes and alterations in the life style Americans have enjoyed for the past several decades. The energy crisis is one of the biggest factors contributing to today's uncertainty about the future.

At the 28th annual Texas Turfgrass Conference, held last December at Texas A&M University, one of the main topics of interest was the effect of the energy crisis on the turf industry. Over 350 turfgrass managers found there were no easy answers to the problem, but some light was shed on the subject by the conference's keynote speaker, Dr. James R. Watson, vice president of consumer relations for the Toro Company.

Watson saw the energy situation as a turfgrass industry opportunity. He spoke with confidence that the events of the past months will allow the industry to adjust without undue hardship.

Where is the turf industry heading? Dr. Watson thinks the beneficial effect of the energy situation will be seen in better maintenance and more utilization of turf facilities.

He pointed out that two factors overlooked by many are that demands for luxuries will help fuel the economy by creating jobs and the vast majority of Americans want and enjoy these non-essentials such as turf facilities.

Dr. Watson had some advice for turf managers. Don't fuel the flames of uncertainty by responding to, or passing along, idle, unfounded and often distorted rumors. In other words, don't become an alarmist.

"Keep abreast of all new developments in turf and related fields," he said. Emphasizing management, he continued, "The turf manager must know how much it costs to grow and to maintain his turf facility at the standard or level desired by his club or controlling organization. He must know what his expenditures for equipment and supplies will produce in terms of lower operating costs. And he must be prepared to defend his budget."

Certain generalizations are expected as the energy situation continues. "Delays in delivery but not necessarily shortages of some products are evident," the executive predicted. He does concede the possibility of shortages of fertilizer and is certain of an increase in fertilizer costs as well as the cost of most other materials and supplies.

"There will be shortages and delays in delivery of petro-chemical products, particularly polypropylene derivatives." Dr. Watson advised turfgrass managers to be patient with suppliers, distributors and their manufacturers. "They will be doing everything possible to meet turf industry needs," he said.

"We will see tighter budgets and higher prices in general. And on top of this, there will be increased usage of most turf facilities. For those that do not experience increased usage, a change in their operating format is inevitable. But this will not necessarily be harmful. In fact, for the few facilities that experience decreases in utilization, there will be an opportunity to upgrade, repair and improve their facilities," he commented.

Decreased utilization may preclude the necessity of restricting or limiting the number of visitors to those facilities that already support maximum numbers.

"Reduced or limited travel will intensify the use of local, readily accessible golf courses and parks," Dr. Watson said.

The possibilities go on.

"It may speed the development and enjoyment of 'bowls'—outdoor bowling—a highly popular sport in other parts of the world."

And on.

"The resort golf course may experience more intensive play, because once there, the patron will spend most of his time at the facility rather than taking off in his automobile for one or two day sightseeing trips. The resorts will be finding ways to get their customers to the facility."

The Toro official said besides the shortages of petro-chemicals and delays in some deliveries, the energy crisis will make it increasingly necessary to stock and inventory critical parts. "There will possibly (continued on page 44)"
Chipco Spot Kleen is the systemic fungicide for prevention and control of dollar spot, Fusarium blight, large brown patch, copper spot and stripe smut.

Its long residual control makes a program based on Chipco Spot Kleen effective and economical. And Chipco Spot Kleen has a wide margin of safety to turf.

Once you use a Chipco something, you'll use Chipco everything.

For More Details Circle (156) on Reply Card
David Wolfard, a turf management student at Oklahoma State, conducted the nematode control test. The area above was treated with Dasanit 15G at the rate of three pounds per one thousand square feet. Chart below shows results.

**Nematode Control Pays**

**By DR. R. V. STURGEON JR.**

*Extension Plant Pathologist*

*Oklahoma State University*

NEMATODE damage to turf has been recognized as a problem in many of the northeastern and southern states for several years. High nematode populations are found in the putting greens of most of our older golf courses in Oklahoma. Sometimes these heavy populations of Stylet, Spiral, or Ring nematodes can be associated with wilt, lack of vigor, off-color, and thinning of the grass.

These symptoms can be confused with poor soil aeration, drought, low fertility, and insects or disease. To convince the superintendent that his problems were caused by a tiny worm-shaped animal feeding on the root system has been difficult, to say the least.

In past years several attempts have been made to demonstrate the effects of controlling nematodes. Soil analyses showed that we were reducing the nematode populations in the various control studies; yet, little difference could be noted in turf density. We could only suggest that the high maintenance program carried out on the courses we were working with may have masked the nematode damage.

In an effort to demonstrate the effect of nematode control on bentgrass putting greens, three greens were selected at the Westwood Park Golf Course in Norman, Oklahoma. The study was carried out by David Wolfard, a turf management student at Oklahoma State University. This course was being maintained under one of the better programs in the state and had what was considered moderate to high populations of Ring Criconemoides sp. and Spiral Helicotylenchus sp. nematodes.

Dasanit 15G, being the only granular nematicide suggested for use in Oklahoma, was applied at the highest suggested rate at various times during the season to established Penncross greens. Dasanit 15G at three pounds formulation per 1000 square feet was applied April 4 on the south one-half of three greens. A similar rate was applied July 20 on the east one-half of the same greens.

Hence, each green consisted of four treatments: 1. early, April 4; 2. late, July 20; 3. early + late, April 4 and July 20; and 4. no treatment. The product was distributed evenly over the greens in each treatment with a 21 inch Gandy Turf Tender and drenched in with one-half inch of water.

Soil samples were taken during the season for nematode analysis and processed by the Oklahoma State University plant disease diagnostic laboratory.

To determine the effect of nematicide applications, grass clippings were taken late in the season from a 125 square foot area in each treatment. Root depth measurements were made from samples taken at (continued on page 50)

<table>
<thead>
<tr>
<th>Treatment, rate, and Time of Application</th>
<th>Dates Samples Were Taken</th>
<th>Nematode Population Rating1</th>
<th>Clipping</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dasanit 15G 3 lbs/1000 ft</td>
<td>April 28 May 16 June 6 June 28 July 19 Aug. 15 Sept. 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early (April 4)</td>
<td>1 1 2 2 4 4 4 4 175 45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Late (July 20)</td>
<td>2 2 5 6 5 5 5 5 170 57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early &amp; Late (April 4 &amp; July 20)</td>
<td>1 1 2 2 2 2 2 2 158 125</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No Treatment</td>
<td>4 5 8 8 7 7 9 9 80 30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1Ring and Spiral nematode populations were rated as one unit based on Oklahoma State University diagnostic analysis rating (0—9): 0 = None; 1 = Trace; 3 = Moderate; 5 = Heavy; 9 = Very Heavy.
2Root samples (7” x 3” x 1/2”) taken near end of season with Noer soil profile sampler.
3Grass clippings taken from 125 ft² area, green weight.
The whole-in-one fungicide...
Daconil 2787
eradicates the
ten key fungus diseases.

Why use two or three fungicides to do what Daconil 2787 does all by itself?
It's the whole-in-one cure for: brown patch, copper spot, Curvularia leaf spot, dollar spot, fading out, gray leaf spot, Helminthosporium leaf spot and other leaf spot diseases, stem rust, pink snow mold (approved in Washington and Oregon) and Alternaria leaf spot (approved in California.)
Many leading golf courses use Daconil 2787 for disease prevention on greens and fairways. It has performed well on over 25 grass species and varieties. You can spray during hot, humid weather without worry when you follow label directions.

No surfactant is needed. Daconil 2787 adheres to the grass blade, resisting washoff from heavy rains or irrigation. Saves you extra applications.
And Daconil 2787 is cleared for disease control on certain ornamentals. Another attractive benefit.
Ask your supplier about Daconil 2787. Or write: Agricultural Chemicals Division, Diamond Shamrock Chemical Company, 1100 Superior Avenue, Cleveland, Ohio 44114.
Turfgrass: The People Pleaser

Speakers Discuss Management, Turf Chemicals, Equipment And Irrigation

The largest turfgrass meeting and equipment and display in the world—the 45th International Turfgrass Conference and Show—was staged at Anaheim, Calif, in mid-February. The global affair attracted over 5,000 persons from a dozen foreign countries, as well as representatives from every state in the nation. The conference, sponsored by the Golf Course Superintendents Association of America (GCSSA), was at California's Disneyland, where more socializing took place at the bus stops than in the exhibit area.

Highlighting the conference at the Anaheim Convention Center were some 40 speakers whose presentations covered a range of topics including golf course management, technical problems in maintaining top-quality turfgrass, use of plant protectants and automatic irrigation.

One keynote speaker, Gerald L. Langlois, assistant golf cart sales manager for Harley Davidson Motor Company, said an estimated 50,000 golf carts will produce annual rentals of $500 million by 1980.

"The convenience of a golf car has kept membership rosters well filled. The golf car has now made golf 'more fun'. All of the increase in play creates adequate operating budgets and higher salaries for the golf course superintendent. Today, the golf car is the largest source of revenue for most clubs," he said.

Langlois, outlining the impact of the present energy situation, described the competitive struggle of gas versus electric powered cars. "If you choose gasoline power, some of the more favorable features are: more power, greater range, less to operate, fewer maintenance problems, no battery failure problems, greater reliability and less turf wear because of reduced weight. Electric cars in turn offer these features: a quieter vehicle, less mechanical adjustments, no gasoline storage tanks."

(continued on page 22)