

Synergism, selectivity, and safety

eliminate broadleaf weed problems
and your herbicide problems, too.

KILLING WEEDS that other herbicides can't — this is what has made TRIMEC Turf Herbicides a favorite broadleaf weapon among landscape maintenance professionals.

With TRIMEC you get a single solution which kills broadleaf pests resistant to almost all other herbicide treatments. Yet, it provides maximum safety to grasses and ornamentals.

It's the patented synergism of TRIMEC that makes the difference. The effects of its herbicidal components, as combined, are greatly multiplied. But only in the response of broadleaf species—not grasses.

This selectivity factor, coupled with the availability of TRIMEC products tailored to the 2,4-D sensitivity of the grass, makes this broadleaf weapon one that can be used with confidence anywhere.

Damage to flowers, shrubs and trees due to root uptake of dicamba are unheard of among TRIMEC users. There's a simple reason.

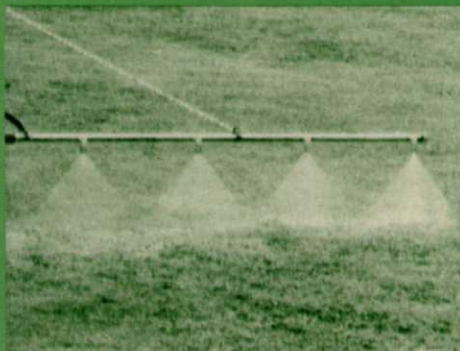
Because of its extra synergistic wallop, dosages required for effective weed control are too light to cause such injuries.

Why not get on top of your broadleaf problems this year with the TRIMEC formulation best suited to your turf and your convenience.

TRIMEC "Fairway" may be used on all commercial turf except St. Augustine grass.

TRIMEC "Bentgrass" is recommended for bent, bermuda and other sensitive grasses.

Get TRIMEC and see the beautiful difference it makes in your turf: As broadleaf-free as grass can be.



TRIMEC attacks the whole spectrum of broadleaf weeds

U.S. Patent 3,284,186

trimec

TURF HERBICIDES®

PBI - GORDON CORPORATION

300 SOUTH THIRD STREET KANSAS CITY, KANSAS 66118

Telephone: 913/342-8780





Government News / Business

It's not too late to comment on a proposed standard for toxic pollutants issued by the Environmental Protection Agency. The standard would prohibit the discharge of nine pollutants in toxic amounts into navigable waters, as defined by the Federal Water Pollution Control Act Amendments. They are: aldrin-dieldrin, benzidine, cadmium, endrin, DDT (DDD, DDE), mercury, PCB's and toxaphene. Comments should be directed to: Dr. C. Hugh Thompson, EPA, Div. of Oil and Hazardous Materials, Rm. 1119 East Tower, 401 M Street, S. W., Washington, D. C. 20460.

The 28 days of February are the critical time to businesses subject to inspection by OSHA. Employers are required to post OSHA Form 102, Annual Summary of Occupational Injuries and Illnesses, during this time. It's got to be displayed in workplaces where all employees see it. It would result in a citation if you neglect this part of the law.

More on OSHA....Aluminum-shelled dry chemical fire extinguishers now need to be tested hydrostatically only at 12 year intervals under amended OSHA standards. The ruling was brought about due to a recent change in the standard of the National Fire Protection Association.

The Williams Companies, Tulsa, Okla., has sold the Agrico plant located at Wellington, Ohio to Lakeshore Equipment & Supply Co. The fertilizer plant has the capacity of up to 20,000 tons production annually. Bulk storage is in excess of 2,000 tons.

Vaughan-Jacklin Corporation, through its Jacklin Seed Division Company, has purchased the Plant Food Center, Inc., a major supplier of fertilizers in the Post Falls, Idaho area. The fertilizer company distributes plant food to growers and other commercial users in addition to packaged goods for commercial distributors. Jacklin Seed has been one of its largest customers. Stock in the Idaho company will be traded for shares of Vaughan-Jacklin.

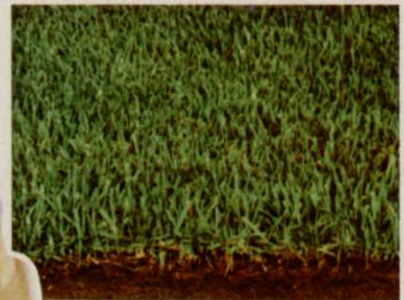
Completion of a quarter-million-dollar modernization program is part of the strategy behind Hahn, Inc. forecast for a 25 percent increase in sales this year. Last year sales rose 28 percent. New equipment now in place will permit the company to step up production. Employment is at a peak 650.

"Do not place in hospital or clinic rooms, such as patient rooms, wards, nurseries, operating and emergency areas." That's what the new label on the No-Pest Strips will be sporting. EPA has determined that certain hospitals across the country have used the strips for flying insect control in patient care areas of hospitals. So Robert L. Baum, deputy assistant administrator for general enforcement at EPA, has notified the American Hospital Association, a 7,000 institution organization, as to their danger. Currently 10 companies manufacture or distribute No-Pest Strips in the U. S.

WINNER in all categories

0217 brand Fylking Kentucky bluegrass is elite and exceptional in every way, proven in 12 years of international tests. Check and compare these Fylking virtues:

1. Fylking has superior disease-resistance to leaf spot (left), stripe smut (right), stem rust, and leaf rust, as rated by every major university and institution where tested.
2. Fylking's rhizome root system develops so thickly sod can be lifted in 90 DAYS. (see right)
3. Fylking seed tests show 97-99% purity, and 85% germination.
4. Fylking seeds germinate and grow faster. 11-day comparison with another elite bluegrass shown below right.
5. Fylking can be mowed at 3/4 inch (even 1/2 inch) and thrive.
6. Fylking greens up earlier in spring, stays greener in summer heat, remains green longer into fall.
7. Fylking is a superior mixer. With other lawn grasses it greatly improves turf quality and density.
8. Fine texture, short sheath and abundant tillering create luxuriant, deep-green, uniform appearance.



U. S. Plant Patent 2887. Another fine product of Jacklin Seed Company,

FYLKING



KENTUCKY BLUEGRASS





By **CHET WENDER**

Golf Course Superintendent
The Plainfield Country Club

ALMOST every day a harried business executive, stealing a few hours for a round of golf, remarks to a golf course superintendent how much he envies him in his leisurely, carefree job.

What such businessmen fail to realize is that golf course superintendents must be "big businessmen" themselves to be successful; in fact, they are confronted daily by the toughest competitor there is—Nature.

Few people understand how business-oriented a golf course superintendent must become to be successful. Mowers, aerators and sprinkling systems have the same importance as the business tools of cost accounting systems, long-range planning, reports, supervisory techniques and budget development.

The planning and execution of a golf course maintenance/improvement program is no easy task. It never has been and never will be. In fact, it is becoming even more complex and demanding because inflation is driving costs upward and forcing superintendents to more finely hone their management skills. To cope with inflation I constantly strive to increase my staff's productivity, keep abreast of, and purchase labor-saving equipment, and carefully plan maintenance-saving course improvements. Then I merchandise these items to my greens committee through our annual report.

Obviously, what works for me will not necessarily provide the answer for another superintendent whose climate, course, and greens committee may vary greatly from my own. But my techniques have proven successful at the Plainfield

The Plainfield Country Club traditionally is ranked among the toughest 50 courses in the U.S. Founded in 1890, this rolling 7,018 yard championship course was designed by Donald Ross. A public 9 hole course adjoins the private championship layout.

\$20 Thousand In Savings Through Labor Management

Country Club and I believe in them.

Years ago, before costs began skyrocketing, 15 men maintained our 18-hole private championship course and an adjoining 9-hole public layout. Today nine men maintain the course and do an even better job than the 15-member crew did.

What's the secret? There isn't one.

My labor costs per man are up 15 percent because I pay at least 50 cents an hour more than many superintendents in New Jersey. However, by paying the top dollar for a well-trained and willing crew, our productivity has increased and our costs have stabilized in spite of inflation.

Statistics at Plainfield bear me out. Operating expenses to maintain golf courses have risen during the last three years an average of 45 percent nationwide compared to just 17 percent at Plainfield. Increased costs of such items as chemicals have been offset by eliminating 5,000 manhours, by adopting good techniques and by purchasing labor-saving equipment even if the initial cost is higher.

A crew is the first key to success. Although we have cut 5,000 manhours from our operating budget, my men can cope with interferences such as excessive rain or special events previously not scheduled in order to keep the course playable. My small, but efficient crew mows the greens every day before the

first golfer tees up and sprays at least monthly, again in the morning before golfers tee up.

By having capable help, I am free to plan our overall program, to maintain detailed cost records, to submit monthly reports and to present an annual report on our stewardship. If our greens committee wants to know what we did on a specific day a year ago and what it cost, we have records to tell them.

An annual report is an excellent tool to plan ways to improve course playing conditions and thus reduce expenses. It also aids a superintendent in recapping accomplishments and in presenting future plans logically to the business-oriented greens committee. They are more apt to approve a written plan than a make-shift short goal presented verbally.

Labor-saving techniques and equipment also help in our campaign to keep the Plainfield course in A-1 condition despite inflationary pressures. For example, we apply spray materials to our greens and tees by pulling a 103-gallon fiber glass tank (with a 15-foot boom) with a Cushman vehicle. The technique has reduced the task to a simple one-man operation and the costs in labor and time have enabled us to spend more on chemicals.

Fertilization is an important function in our maintenance "game-plan" and our technique is to fertilize every two weeks—depending upon the season and humidity level—to help grass grow uniformly. I'm a great believer in organic fertilizer
(continued on page 26)

Editor's Note: Since 1952 when he became golf superintendent at the Plainfield (N.J.) Country Club, Chet "Red" Wender has risen to the top in his field. In this exclusive story, Wender explains how he keeps the rolling course at Plainfield ranked among the 50 toughest courses in the nation. Perhaps the underlying key to Wender's success is his high standards. As he once remarked, "A superintendent is his own worst enemy. He could cut corners and the average person would never notice the difference. But he just can't! He's got to strive for perfection to live with himself."



Chet Wender, superintendent, examines turf on the 18th green. He's been testing his theories about management and labor savings for 23 years. Adoption of good techniques and equipment has eliminated 5,000 manhours.



Spray crews don't have to work in spray mist all day with the low-diesel application. Accutrol nozzles keep small particles from floating around. Also note the white marking makes for easy visibility (above left). The dead ash (right)

was sprayed in 1972 near Charlevoix, Mich. Spray mix was two gallons Banvel 510, one gallon Accutrol, 15 gallons oil and 82 gallons water.

Dormant Brush Control With Less Oil

THERE IS A WAY to get around the fuel oil shortage for dormant spraying.

By substituting an air emulsion spray system and an oil soluble formulation of the herbicide, you can reduce the number of gallons of fuel oil per 100 gallons of mix from 96 to 15.

Here's how it works.

The chemical coordinator of one utility line says it has saved 200,000 gallons of fuel oil and transformer oil by using this system. "Previously, we used 4 gallons of 2,4,5-T and 96 gallons of fuel oil per 100 gallons of mix," he says. "This season, we substituted 2 gallons of Banvel 510, the oil soluble formulation mixed with 2,4,5-T, and 1 gallon of Accutrol for part of the oil. We found we needed only 15 gallons of oil per 100 gallons of mix, with the remainder of the formulation being water. We have worked a special technique to avoid freezing problems."

Explains Chuck Middleton, at Velsicol Chemical Corporation, "The Accutrol air emulsion system allows the 82 gallons of water in the new spray combination to mix with the 15 gallons of oil.

"Also, Accutrol has drift control properties. But more important in low-oil, modified cane work, it helps

the chemical penetrate the surface of the bark."

Middleton points out that it's important to spray two-thirds of the stem. The low-oil, modified cane system was first tested in 1969 and used commercially in 1970.

This application has other advantages, though, besides getting around the fuel oil shortage:

1. It's better for the environment. "Reducing the oil content means the grasses aren't burned down as long," says Middleton. "With regular basal work, grasses do not grow back, sometimes for two years or more."

2. The low-oil, modified cane application is safer for the spray crews. "There is a safety factor to consider with the conventional amount of fuel oil," cautions Middleton. "Spray applicators should be warned about smoking around the spray when the temperature gets much above 80°F., and when the humidity is 50 percent or under. Reducing the amount of oil means there is less hazard."

3. The low-diesel, modified cane spray is more comfortable for the crews to use. Large droplets are produced by the Accutrol nozzle," notes Middleton. "Crews don't have to work in the solid mist all day. Even with the low-oil, modified cane application, a spray crew gets some

oil on them. But it's not like conventional dormant spray where the men go home and their wives make them change clothes in the garage."

4. The visibility of the Accutrol system lets you see where you have sprayed. "What most utilities like best about this application is the white marking made by the mix," says Middleton. Dormant spraying is perhaps more critical than foliage, in that you have to work harder to get the proper coverage. You have to make sure you get on both sides of the stem, one way or another.

"One problem with regular dormant spraying is knowing when you have the right amount of coverage — usually when the oil begins to run down the stem. You also have to have coverage on the crown and around the base of the tree where the dormant buds ready to sprout are located."

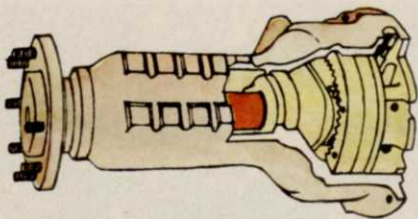
Economically, the low-oil, modified cane application is slightly less costly than conventional spray. But with the added advantage of safety and comfort for the spray crew, less environmental effect, and better spray coverage, many utility companies may decide to stick with the low-oil, modified cane application even if the availability of fuel oil does improve. □



Landscape Special: Ford 3550.

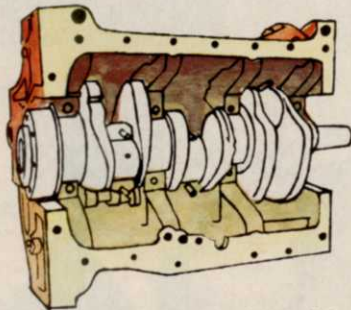
Here's a fresh combination of power and equipment for your loader and landscaping operations. With 56.4 bare engine hp diesel engine . . . $\frac{3}{4}$ cubic-yard loader . . . and heavy-duty final drive . . . Ford 3550 has everything it takes to step up operations.

Big double-reduction final drive is carried in a husky rear axle housing with 9,000-pound overall capacity. Final drive features inboard planetaries to reduce stress on transmission gears . . . with multiple disc brakes sealed in oil to dissipate



heat and give long, trouble-free service.

56.4-hp diesel features heavy, strong parts in a short, rigid block; famed Ford 3-cylinder design for long life and low maintenance. Add the

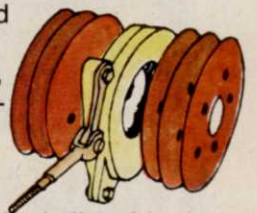


torque converter option with power reverser and you've got the engine and transmission combination to step up all operations with loader or 3-point hitch equipment.

Power-assist steering eases maneuvering. Optional diff-lock keeps you moving where others spin out. And heavy-duty front axle with 28,000-pound maxi-

mum strength rating resists the stresses of rough going under heavy front-end loads.

Try the 3550, landscape special from Ford. Your Ford tractor and equipment dealer is listed in the Yellow Pages under "Tractor Dealers" or "Contractors' Equipment & Supplies". See him for information on how to buy, lease, rent or finance.



ROPS, front wheel weights, and hitch-mounted equipment is optional at extra cost.

NUMBER ONE ON WHEELS AND GROWING

FORD TRACTOR



For More Details Circle (142) on Reply Card

Green Grows The Business In Ohio

OFFICIAL figures have revealed a total registration of 1102 persons at the most successful Ohio Turfgrass Conference and Show in Cincinnati, Ohio. Of the total attending 823 were from Ohio, 269 from 23 states, 3 from Belgium and 7 from Canada. Golf course superintendents,

sod growers, turfgrass managers, and industry representatives in attendance attended eight educational sessions and reviewed products and equipment in over 100 exhibits.

Paul Mechling, program committee chairman, was responsible for compiling the educational program. The

first session consisted of research reports by several University personnel.

Dr. Gilbert, of North Carolina State University, presented a summary of turf conditions and research in North Carolina. Dr. Harry Niemczyk, Ohio Agricultural Research and Development Council (OARDC), followed with a presentation on insect problems in Ohio. He emphasized the current status of research work relating to the control of chlordane resistant grubs in Ohio. Dr. Richard Riedel, Ohio State University, followed with an address on the effects of nematodes on turfgrass areas in Ohio. Dr. Merle Niehaus and Dr. Dave Martin reviewed the turfgrass research projects at Wooster and Columbus.

The first session was concluded with an address on "The Energy Crisis — Its Problems and Solutions" by Dr. Roy M. Kottman, dean, college of agriculture and home economics, Ohio State University. Dean Kottman reviewed the current energy problems and shortages, and spent considerable time on the possibilities of new fuel sources and the need for
(continued on page 21)



The latest in turf equipment (upper left) was on display for this year's show. Take it easy with E-Z Go, says the manufacturer (upper right). Here's a good example. OTF scholarships (middle left) went to Joe Renner, Clark Technical College (l) and Dick Kress, Agricultural Technical Institute (r). Lou Greco (c) was scholarship chairman. The Toro Greenmaster (middle right) represents the latest in greens mowing. GCSAA scholarships (middle) went to Ohio State University students Robert Cochran (l) and Mike O'Connell (r). John Spodnik (c) makes the presentation. Another scholarship winner was Scott Cook. New OTF president, Ron Smith (extreme lower left) of Bowling Green Univ. presents OTF Presidents Plaque to outgoing president Paul Morgan, Browns Run Country Club. Educational sessions were well attended as witnessed by this attentive crowd (below).



It earned its fame by giving sand traps a whole new look.

Now the Sand Pro turns all-pro as a spiker and finish-grader, too.



SPIKES GREENS



GRADES SEEDBEDS

Now look at what the Sand Pro can do for you! It can dress up your entire course with distinctive, uniformly beautiful traps that consistently play as well as they look. It can do a better job of spiking your greens than any specialty spiker on the market (and we'd like to prove it on your own greens). It can take the drag out of pulling a drag-mat over the greens. And, with the new Finish-Grader it can handle fine grading, scarifying, shaping and contouring of seedbeds. All this in a highly maneuverable, low maintenance unit with hydrostatic drive to all three extra-low-pressure tires. It's another classic from Toro — backed by the Toro parts and service system. Look over the features and benefits, in detail, on the next page.

SAND PRO®

TORO®

Any way you put it together, you can't beat the features and benefits of the Sand Pro!

PRIME MOVER

Heavy-duty industrial quality hydrostatic drive to all three wheels gives excellent torque with no gears to change, no clutch to slip. Single foot pedal gives infinitely variable ground-speed control — as well as forward to reverse in one smooth, continuous motion. Short-wheelbase tricycle design, low center of gravity and midship-mounted engine combine to give machine maximum maneuverability, stability and traction. Special ATV tires carry only 4 psi for excellent traction in sand, good flotation on greens. Automotive-type steering to front wheel turns machine on zero radius to left or right for superior handling ease. Simplified operator control area reduces learning time and operator fatigue, increases safety.

SPECIFICATIONS*

FRAME: All welded tubular-steel construction.

WHEELS: Standard demountable — interchangeable for three positions. 21 x 11:00-8 tires. Extra low-pressure, 4 psi compass tread.

ENGINE: Kohler 8 hp Model 181 SP. Cast iron block, dry element air filter, fuel pump. Rubber mounted.

STARTER: 12 v. Bendix-drive electric starter is standard. Key switch controlled from dash.

DRIVE: 3-wheel hydraulic. Engine-mounted variable-displacement piston pump through flexible coupling to 3 Ross Torqmotors® on wheels.

STEERING: Automotive-type steering wheel. 6:1 reduction ratio.

SEAT: One piece molded with back support. Adjustable forward and back.

OPERATOR CONTROLS: Key start, hand throttle, hand choke, ammeter and hour meter on dashboard. Foot pedal controls forward/reverse and speed. Hand-operated hydraulic control lifts and lowers rake, spiker or grader. Valve disengages pump for towing or pushing.

FUEL TANK: 2.7 gallons.

HYDRAULIC RESERVOIR: 1½ gal.

HYDRAULIC OIL FILTER SYSTEM: 10 micron replaceable element.

SPEED RANGE: Infinitely variable to 5½ m.p.h. maximum.

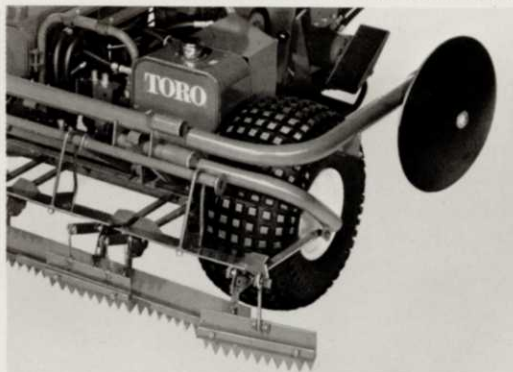
TURNING RADIUS: Machine turns on zero radius to the left or right.

REFUSE CONTAINER: Removable and located within easy reach of operator.

DIMENSIONS: Width — 58½". Overall length — 62½". Wheel base — 40". Height — 42". Weight — approx. 650 lbs. with fluids.

SAND RAKE (with Prime Mover)

Four independent cultivator bars and nine free-floating finish rake sections hug banks and contours to give continuous coverage over entire trap surface. Adjustable weights on free-floating rake sections for best finished appearance under various sand conditions. Hydraulically raised and lowered rake and cultivator bar can be held at proper depth of penetration for best mechanical cultivation, weeding and finish combing — eliminating chance of green damage by herbicides. Wide 68-inch rake combined with exceptional maneuverability of prime mover reduces trap maintenance time to less than



OPTIONAL MAINTENANCE EDGER

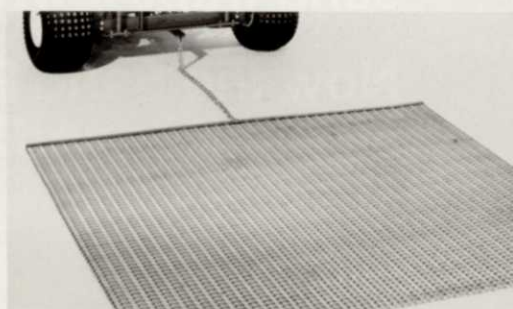
half that of hand raking an average trap. Optional maintenance edger (model No. 08822) is a hydraulically raised and lowered coultter blade that trims vegetation around edge of trap, leaves a clean, tailored appearance and eliminates slow hand maintenance.

SPECIFICATIONS*

Model No. 08875
Hydraulically raised and lowered. Four forward conditioning sections utilizing subsurface bar for breaking crust. Nine finishing sections. Angle of conditioning bar adjustable for depth of penetration. Finishing sections have adjustable weights. Width: 68".

SPIKER

Special Toro profile-tooth blade spikes cleanly without ruffling turf (hold-down fingers prevent lifting turf, too, so greens are immediately playable after spiking — no rolling or cutting needed). Extra large tires provide flotation equal to the Greensmaster®, 3, and the transfer spring puts up to 22 lbs. per blade across the 58 inch spiking reel width for maximum 1¼ inch penetration. 3-point hitch makes spiker simple and quick to attach and detach. Optional drag mat (model No. 08844) and hitch kit (model No. 08833) turns incorporation of top dressing into an easy job, and crushes and crumbles aerifier cores.



OPTIONAL DRAG MAT

SPECIFICATIONS*

Model No. 08855 without hydraulic cylinder.

Model No. 08866 with hydraulic cylinder.

WEIGHT: 280 lbs.

UNIT WORKING WIDTH: 58".

WORKING DEPTH OF SPIKER: 1¼" maximum.

SPACING OF BLADES: 2¾".

NUMBER OF SPIKE HOLES: 21 holes per square foot.

SPIKER BLADES: High carbon steel — .105 inch thick. Special profile design for minimum disturbance of soil surface when spiking. 8 points per blade, 24 blades. 7¾" dia. blade point to point.

POWER: Ground driven.

FINISH-GRADER

Spring-loaded Finish-Grader has closed ends to prevent windrows, is automatically self-relieving across entire width of scraper as machine travels forward to leave a smooth, even surface. Hydraulically controlled up and down for ease of operation and control of grading and scarifying depth. Heavy-duty steel teeth can be dropped out of transport position for soil conditioning and scarifying loosened soil. Hi-flotation tires and balanced weight distribution of Prime Mover means less compaction than with a heavy tractor when fine grading, shaping and contouring seedbeds. Rugged construction, simple design means long life, low maintenance.

SPECIFICATIONS*

WEIGHT: 200 lbs.

DIMENSIONS: Length: 10 inches. Width: 66 inches. Height: 10 inches.

LIFT: Hydraulic.

DESCRIPTION: The Sand Pro Finish-Grader accessory consists of a box plow and scarifier designed to quick mount to the Sand Pro. The unit is capable of light ground maintenance and grooming, replacing hand shoveling and raking on ball diamonds, on golf courses, and for landscaping in small areas where use of larger machinery is not feasible.

*Specifications and design subject to change without notice. The Toro Company, Bloomington, Minnesota. Printed in U.S.A.

SAND PRO®

TORO®