Our Parkmaster mows swaths from 30 in. to 18½ ft. wide at the touch of a finger.

Or buy the turf tractor alone.

Your choice of 5, 7 or 9 cutting units — hydraulically raised and lowered in any sequence, individually and in groups. That's how the Parkmaster gives you a mowing tractor that can cover up to 80 acres of turf in an 8 hour day. It combines flexibility with high capacity, and comes complete with features found in no other mowing tractor of its kind.

The Parkmaster is built around the Toro Turf Tractor — the first turf tractor with an optional ROPS safety package that's certified to meet OSHA regulations. And you can buy the tractor with gas or diesel power, too.

Look over the features and benefits of these classic Toro machines in detail on the next page.
What do the features of our Parkmaster and Turf Tractor mean to you?

**THE PARKMASTER TRACTOR**

All 5, 7 or 9 cutting units are hydraulically lowered for mowing or raised for transport in seconds to give you more time mowing, greater area coverage. All cutting units are mounted to the hydraulic frame to allow maximum movement in following turf undulations — thus maintaining higher quality of cut. Front wheel steering and balanced weight distribution front to rear (engine in front, cutting units toward rear) results in superior energy-saving capability — fewer passes to get the job done. And the Parkmaster takes the Spartan mowers with single-point, center-control, quick and easy bedknife-to-reel adjustment (U.S. Pat. No. 3680293) for more efficient cutting.

**SPECIFICATIONS**

**PARKMASTER 5 — Gas Engine — Model 33755**

**PARKMASTER 4 — Gas Engine — Model 33787**

**PARKMASTER 7 — Diesel Engine — Model 33677**

**PARKMASTER 9 — Gas Engine — Model 33876**

**PARKMASTER 9 — Diesel Engine — Model 33899**

**PARKMASTER HYDRAULIC FRAMES**

Cutting Units: 5, 7 or 9.

Width of Cut: 5 unit — 111; 7 unit — 149/8; 9 unit — 186/8.

Hydraulic Lift for Raising and Lowering All Cutting Units: 1st, 2nd and 3rd cutting units operate together. Cutting units 4 through 9 operate individually, depending on application.

**Main Frame:** Tubular and structural steel, bolted and electrically welded construction.

**Hydraulic System:** Reservoir: 7 Quart capacity with full pressure 20-30 lbs. per sq. inch driven by gear type pump. Full pressure 20-30 lbs. per sq. inch driven by gear type pump. Oil filter — replaceable element. Air cleaner — dry element.

**Engine:** Gasoline — Chevrolet, 6-cylinder — 250 CID 8.5:1 compression ratio. Crankshaft and connecting rods — drop forged steel, heat treated. Oil system — full pressure 20-30 lbs. per sq. inch driven by gear type pump. Oil capacity — 5 qts. in crankcase plus 1 qt. in the oil filter. Oil filter — replaceable element. Air cleaner — dry element. Horsepower: 107 BHP at 2400 R.P.M.

**Power Steering:** Standard equipment, Saginaw rack and pinion automotive steering gear ratio 17.5:1.

**Tire:** High flotation tires for minimum compaction.

**Air Cleaner:** Dry type air cleaner with replaceable cartridge.

**Throttle Control:** Gas and diesel has foot pedal — with manual-choke control. Diesel model has variable speed governor and hand throttle standard equipment.

**Cutting Units:** Spartan or Roughmaster mowers. Note — Spartan mower only on 9 unit version.

**THE TURF TRACTOR**

**GAS ENGINE MODEL 37027**

Designed specifically for turf use — for maximum utility, maximum pulling power and minimum turf damage. Ruggedly built from the larger engines, to synchronized transmission, to the husky rear axle. Low center of gravity and long wheelbase for greater stability, combined with short turning radius for excellent maneuverability and superior performance. Your choice of engines — a 250 CID GM 6-cylinder gasoline industrial, or a 236.4 CID 4-cylinder Perkins diesel (for Parkmaster only) to give you the power plant that’s right for your needs. Operator area is engineered for ease and safety; automotive controls are conveniently located, shift stick is in familiar, comfortable position, to reduce training time and help increase speed of handling. Power steering is standard on all models for less effort, smoother control. Four-speed synchronized transmission for better downshifting. Separate gas tank for balance, and safety when filling. New options are the Roll-Over-Protection System (ROPS) and the cab with ROPS — both certified to meet OSHA specifications.

**SPECIFICATIONS**

**PARKMASTER (POWER UNIT) AND TURF TRACTOR**

**Engine:** Gasoline — Chevrolet, 6-cylinder — 250 CID 8.5:1 compression ratio. Crankshaft and connecting rods — drop forged steel, heat treated. Oil system — full pressure 20-30 lbs. per sq. inch driven by gear type pump. Oil capacity — 5 qts. in crankcase plus 1 qt. in the oil filter. Oil filter — replaceable element. Air cleaner — dry element. Horsepower: 107 BHP at 2400 R.P.M.

**Power Steering:** Standard equipment, Saginaw rack and pinion automotive steering gear ratio 17.5:1.

**Tire:** High flotation tires for minimum compaction.

**Air Cleaner:** Dry type air cleaner with replaceable cartridge.

**Throttle Control:** Gas and diesel has foot pedal — with manual-choke control. Diesel model has variable speed governor and hand throttle standard equipment.

**Cutting Units:** Spartan or Roughmaster mowers. Note — Spartan mower only on 9 unit version.

**OVERALL DIMENSIONS (Parkmaster and Turf Tractor)**

<table>
<thead>
<tr>
<th>Wheel Base</th>
<th>Length</th>
<th>Width</th>
<th>Transport</th>
<th>Mowing</th>
<th>Height</th>
<th>Weight (2)</th>
<th>Tread Width</th>
<th>Rear Ground Clearance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turf Tractor</td>
<td>99&quot;</td>
<td>133&quot; (1)</td>
<td>84&quot;</td>
<td>N/A</td>
<td>66&quot;</td>
<td>1460</td>
<td>1540</td>
<td>161/2&quot;</td>
</tr>
<tr>
<td>Gas 5 Unit</td>
<td>99&quot;</td>
<td>188&quot;</td>
<td>96&quot;</td>
<td>11&quot;</td>
<td>66&quot;</td>
<td>1580</td>
<td>4740</td>
<td>16 1/4&quot;</td>
</tr>
<tr>
<td>7 Unit</td>
<td>99&quot;</td>
<td>188&quot;</td>
<td>96&quot;</td>
<td>14 3/8&quot;</td>
<td>66&quot;</td>
<td>180&quot;</td>
<td>4740</td>
<td>16 1/4&quot;</td>
</tr>
<tr>
<td>9 Unit</td>
<td>99&quot;</td>
<td>180&quot;</td>
<td>96&quot;</td>
<td>18 6/8&quot;</td>
<td>91&quot;</td>
<td>1220</td>
<td>6060</td>
<td>16 1/4&quot;</td>
</tr>
<tr>
<td>Diesel 7 Unit</td>
<td>99&quot;</td>
<td>177&quot;</td>
<td>96&quot;</td>
<td>14 6/8&quot;</td>
<td>66&quot;</td>
<td>180&quot;</td>
<td>4780</td>
<td>16 1/4&quot;</td>
</tr>
<tr>
<td>Diesel 9 Unit</td>
<td>99&quot;</td>
<td>175&quot;</td>
<td>96&quot;</td>
<td>19 6/8&quot;</td>
<td>91&quot;</td>
<td>1220</td>
<td>6060</td>
<td>16 1/4&quot;</td>
</tr>
</tbody>
</table>

(1) Without dump box. 150" with dump box.

(2) Includes oil, fuel, coolants and Spartan mowers in the transport position. Additional weight may be added using liquid ballast in the tires.

See turf tractor specifications for additional specifications and optional equipment.
Green Industry Book Report

Diseases Of Turfgrasses, by Dr. Houston B. Couch, Professor of Plant Pathology, Virginia Polytechnic Institute and State University.

The author, Dr. Houston B. Couch, has substantially updated the text of his first book in this popular second edition. Those who have the first printing will find the new book as refreshing and authoritative as the one in their collection. Those less fortunate now have an opportunity to purchase one of the best and most comprehensive texts in print today.

As a whole, Diseases Of Turfgrass is excellent. It is written in easy to understand yet specific style. A superintendent or grounds keeper knowing little about plant pathology would benefit from having this text in his personal library. In a deeper sense, however, the book is complete in detail to serve as a handy reference or text for the plant pathologist.

There are basically five chapters to the book. Organization is one of the keys to knowledge and the author has developed a system throughout this work which is easy to understand. Chapter one serves as introduction into the concept of plant disease, its causes and history.

Chapter two discusses diseases of turfgrass caused by pathogenic fungi. Chapter three lists diseases of turfgrass caused by pathogenic nematodes. Chapter four is a discussion of diseases caused by viruses and mycoplasma-like organisms. The last chapter should be read first, especially by those concerned with environmental protection chemicals. It is a highly interesting analysis of fundamentals of turfgrass disease control.

Convenience in organization is best shown in the way fungi, nematodes and viruses are presented. Sections are arranged in this order: 1. symptoms; 2. the pathogen 3. hosts; 4. disease cycle; 5. control. The reader can quickly locate any disease.

Another special feature of this text is the appendix tables which comprise roughly a third of the book. Cross-indexing of diseases according to grass species affected, common names, grass species susceptible to turfgrass pathogens by common name, and grass species susceptible to turfgrass pathogens by technical name provide a quick and easy reference.

Speaking of references, Dr. Couch has cited 364 literature references to help the reader understand more about a specific disease.

Diseases Of Turfgrasses is published by Robert K. Krieger Publishing Co., Huntington, New York. $17.50

Poison Treatment Chart Available

An excellent chart which quickly details the necessary actions in cases of acute pesticide poisonings is now available.

“Emergency Medical Treatment For Acute Pesticide Poisoning” lists for insecticides, rodenticides, herbicides and solvents, chemical basis, commercial products and generic names, pharmacologic action or site of toxicity, toxicity rating, symptoms, treatment, and laboratory tests. It is all contained in this 17-inch by 21-inch chart which can be mounted on a wall.

For a copy of the chart, write: Disease Vector Ecology And Control Center, United States Navy, U.S. Naval Air Station, Jacksonville, Florida 32212.

MARCH 1974
The Occupational Safety and Health Administration (OSHA) is moving ahead on regulations that would affect agriculture and the Green Industry. Latest proposed rules would require guarding of farm field equipment and farmstead equipment. Not included are farm shop equipment or portable power tools. Most farm machinery is adequately guarded, anyway. OSHA would make it a law. This means that power take-off drives on all tractors and equipment must be guarded no later than April 1975. All other mechanical power transmission components must be guarded after Jan. 1, 1975; all equipment, regardless of manufacture date by Jan. 1, 1976. OSHA also proposes that operators be instructed in safe operation and servicing of all equipment.

What about seed supplies? Dr. Guy W. McKee, secretary of the Agricultural Experiment Station Seed Committee at Penn State University, says Pennstar Kentucky bluegrass and Pennfine perennial ryegrass is more available now than in previous years. Seed stocks seem to be good.

Acme Pesticide Division of Sherwin-Williams Company, Cleveland, Ohio, has been acquired by PBI-Gordon Corp. The line of Acme Lawn and Garden Products is considered to be one of the oldest leading pesticide lines. No disclosure was made as to the purchase price. The acquisition extends the Gordon operations to 49 states.

Public Comment is invited on a criteria document before OSHA on worker exposure to inorganic mercury. Specific views are needed on alternatives to recommendations, environmental impact, worker injury and illness experience with mercury, and estimated compliance costs.

Look soon for a ruling by the Environmental Protection Agency on the use of DDT for control of Tussock Moth. The last of the five public hearings was held in Washington D. C. in early February. At presstime, no ruling had been made yet.

71,441 billboards have met their demise, according to the Department of Transportation. Secretary Volpe, who heads the Outdoor Advertising Removal Program, hasn't been cooling his heels with the Highway Beautification Act of 1965. To date, 112,587 small political posters have been removed in addition to the billboards. Colorado leads the states in the removal program with 11,267, followed by South Dakota with 11,237; Georgia, 7,090; Wyoming, 3,444; and Montana, 3,327. Volpe said that with the help of the new "Sign Cost and Depreciation Schedules" developed recently, "we expect that the removal of unsightly billboards will be greatly accelerated in the future."

Velsicol Chemical Corporation is expanding its line of industrial vegetation control chemicals with the addition of the Vegatrol herbicide series. This line includes formulations of 2,4-D and 2,4,5-T amines and low volatile esters. The company continues to manufacture and market Banvel.

Sales forecast for Hahn, Inc., Evansville, Ind. is for a 25 percent increase in 1974. Last year's increase in sales was 28 percent. The company has just completed a quarter million dollar equipment modernization program. This will enable Hahn to step up production for all three divisions.
The first time a turf expert sees Fylking and he gently tests the turf, lifts a swatch and examines the root system, and closely scrutinizes the low-growing, 90-degree side angled leaves, please notice the subtle smile that crosses his face. This is the countenance of the wine connoisseur who has wet his lips with classic vintage, the man who recognizes the truly classic beauty of the Venus de Milo, the research agronomist who has spent years seeking the perfect turf and now views Fylking. Once he has, he wants to know more about this obviously elite Kentucky bluegrass. This man will appreciate knowing Fylking has received overall superior disease-resistance ratings from every major university and institution where tested for leaf spot, stripe smut, stem rust and leaf rust. When he examines the technical brochure he will smile again. Fylking is not perfect, but it's the closest of any. Fylking. It's a name you can't forget.

Fylking Kentucky Bluegrass
U.S. Plant Patent No. 2887
Another fine product of Jacklin Seed Company

If you would like our full color technical brochure No. 102 on 0217® Fylking Kentucky bluegrass, please ask your Fylking sod or seed distributor or write to Jacklin Seed Co., E. 8803 Sprague Ave., Spokane, WA 99213.
TO THE TYPICAL homeowner in the Midwest, the gypsy moth is a strange and distant phenomenon, one that does not threaten the beauty of his own backyard.

The moth has begun to rate editorial space many miles from the devastated Northeast, however. The Oct. 6, 1973 Chicago Tribune presented an article titled "Gypsy moth a threat to nature in Illinois." The story said that the first gypsy moth in Illinois was trapped this past summer in Palos Township in south Cook County by a ranger of the Cook County Forest Preserve District.

Stanley Racheksky, entomologist at the University of Illinois speculated that the gypsy moth (in egg stage) may have hitched a ride to the heartlands on a variety of vehicles. A new pest for the future? "It may or may never become a problem in Illinois," Racheksky said. "It's just too early to tell."

In Michigan, the threat of gypsy moth infestation has officials worried even though damage was "slight" last year. But the threat was sufficient for Michigan State University's department of entomology to name gypsy moth the "Insect Pest of the Year." In 1973, some 13,000 acres in central Michigan — where the pest is most prominent — were sprayed. If the infestation spreads this year, results could be disastrous, officials warn.

Progressive Midwestern arborists and custom spray applicators will probably be turning more and more to biological control or larval pests like their counterparts in the Northeast.

The gypsy moth and other larval pests defoliated an estimated 1.7 million acres of northeastern woodland last year (up 30 percent from 1972), says the USDA, but arborists and municipal officials there were successful in combating the pests with Bacillus thuringiensis (Bt), trade-named Dipel.

"It worked quite well for us this year against the gypsy moth and other caterpillar pests," said George W. Gauer, director of purchasing for Lawn Doctor Inc., Wickatunk, N. J., the parent company of some 95 lawn servicing and tree spraying operations nationally. Lawn Doctor has 20 dealers in the northeast.

The northeastern dealers sprayed some 600,000 sq. ft. of ornamental trees and shrubs for gypsy moth. Dealer feedback was very favorable, Gauer said.

"Gypsy moth infestation ranged from a nuisance in some areas to a devastation in others," he reports. "Ocean County, New Jersey, a heavily forested new housing area, was among the latter. We were still able to bring the moth under control in Ocean County after two or three applications."

(continued on page 28)

What Is BT?

Bt is a natural bacterium, Bacillus thuringiensis. An improved Bt strain, trade named DIPEL, is available as a wettable powder.

When gypsy moth or other caterpillars ingest foliage sprayed with Dipel, their digestive mechanism is disrupted and the pest immediately stops feeding. Death follows from within three hours to three days.

Unlike the organic chemical insecticides, this compound controls only Lepidopterous larvae — the group which includes worms such as: gypsy moths, tent caterpillars, and inchworm. It is not harmful to desirable insects, animals, fish, humans, or plants.

Larvae which have died are not dangerous, either. Tests have shown that birds and other predators readily eat and thrive on sprayed larvae. Dipel can be applied by any means normally used to apply conventional insecticides. During the past three years, it has been applied by hydraulic and mist sprayers, garden-type tank sprayers, helicopters, fixed-wing aircraft and garden hose spraying attachments. Using correct techniques, all were equally effective. Thorough coverage is important as larvae must ingest the material to be effective.

Cost is somewhat higher than other environmental protection chemicals. But safety and negligible environmental impact, however, make the small difference in cost seem insignificant.

Dipel is manufactured by Abbott Laboratories, North Chicago, Illinois. For more details, circle (723) on the reply card.
New Emerald variety produces the most uniform creeping bentgrass turf that can be seeded. No patchiness, no objectionable grain—because every seed traces back to a single outstanding parental plant.

Emerald's vigor crowds out weeds, including *Poa annua*, and self-heals divot wounds and cart tracks. Yet, there's less puffiness, less thatch—even less mowing required. It means added beauty and playing quality for the course, with less work and problems for you.
From the day we started out in business we’ve never been completely caught up,” says Forrest Lytle, owner and operator of Lytle and Sons, one of southern Ohio’s oldest and most trusted custom application businesses. “Our sales have jumped every year since 1944, and I’m sure they’re going to keep right on going.”

Within a 25-mile radius around greater Cincinnati, Lytle and Sons carry out expert custom spray and weed eradication programs for such major accounts and operations as General Electric, Proctor and Gamble, hospitals, municipalities, cemeteries and the billboard industry. Forrest Lytle speaks proudly of the growth of his business.

“We started out in business with $1,100 — the cost of our first spray-er,” says Lytle. “Despite forecasts of doom from some of our friends, our business volume has skyrocketed about 3000 percent since our first year of operation.”

The success of Lytle & Sons is due in large measure to Forrest Lytle’s keen awareness of knowing exactly what the customer wants — and then delivering, first time, every time.

“The customer wants to see results — plain and simple,” says Lytle, “and we give him results. When we promise to get rid of weeds around a city’s baseball diamond, we do it — no if’s, and’s or but’s.”

Attesting to the success of this basic common-sense business philosophy is the fact that the best advertisement for Lytle and Sons is a job well done.

“We’re in our 30th year of business and we’ve never used a newspaper advertisement or anything of the kind,” proclaims Lytle. “We depend solely on personal recommendation and word-of-mouth. We know that your best advertisement is to do your job right. Ninety percent of all our business is repeat business. We’ve found that a lot of our work comes from companies telling each other about us. Of course, the product you use is also extremely important.”

For his general weed killing programs, Forrest Lytle uses Daconate, a postemergent herbicide. He normally mixes Daconate at the rate of three gallons per 100 gallons of water.

“That’s my recommended knock-out dose,” the colorful applicator says.

“Daconate takes weeds right down; it hits hard and does the job quickly. Daconate usually gets results for us in three days, although when applying it on really hot days, you can turn around and see the weeds burning up right behind you.”

“Two years ago we sprayed soil sterilants between Christmas and New Year’s — the first time in my 30 years in business that we sprayed for chickweed in the wintertime,” Lytle exclaims. “Then, last spring there was so much rain we didn’t turn a wheel until May — the weather has a tremendous impact on our business.”

“In the beginning we had to hit weeds several times in a season,” Lytle explains. “However, with the chemicals available today, we hit them once and they’re dead, although in a few cases we have to (continued on page 26)
Aerial applicators:
want to take off with this kind of drift control?

You can. Just use Lo-Drift™ spray additive the next time you fly on an Amchem herbicide.

What you see here ground-applied is what you’ll get airborne—a major reduction of fines that can cause drift problems. Instead, the spray is made up of large, heavy droplets that fall faster, stay intact, and land where you want them. And stick better, too. Because Lo-Drift not only increases droplet size, it helps them to adhere to foliage.

Lo-Drift mixes readily and requires no special nozzles or mixing/spraying equipment. It won’t corrode equipment, and clean-up is simple using just water.


LO-DRIFT™
SPRAY ADDITIVE
More than 1000 weed scientists listened to over a 150 papers during this year’s meeting. Here, friends gather in informal discussion while others hurry to hear another paper.

First place graduate research paper award went to B. C. Troutman, University of Arkansas (1). It was presented by Dr. Dave N. Weaver of Texas A&M University. Troutman received $50 in the competition.

Southern Weed Science Society Report

WITH the determination of General Grant’s army sweeping toward the sea a battalion of more than 1000 weed scientists marched to Atlanta in January for the 27th annual meeting of the Southern Weed Science Society. They came by the hundreds — extension weed specialists, research scientists, Federal and state workers, chemical manufacturers, and more — until the Sheraton-Biltmore Hotel virtually jumped with activity. Few can say that their attendance at this meeting didn’t spark enthusiasm to return home and do a better job. The Southern Weed Science Society continues to stimulate the young and old (or the experienced and the not so experienced) alike.

Theme for this year’s meeting was “Weeds — Environmental Bandits.” And, if in a small way, this theme noted the tremendous need of the environmental protection chemical industry to tell the American consumer the role chemicals have played in the production of quality food and fiber as well as in turfgrass care and industrial weed control.

Dr. Allen F. Wiese, president of SWSS, pointed to this need in his keynote address. Speaking on the subject “Are Herbicides Environmental Contaminates?” he said that weed scientists have done a good job of keeping each other informed. “On the other hand we have failed to tell people outside of agriculture that herbicides are not only valuable tools, but absolute necessities for modern day agricultural production,” he said. “We have done a worse job when it comes to relating the environmental impact of herbicide usage.”

The weed scientist later said that “We have neither a problem nor a

A panel on “How weeds affect the environment” was presented by five industry leaders. They are: (1-r) Dudley T. Smith, Texas Ag. Expt. Sat., College Station, Tex.; A. E. Smith, Ga. Ag. Expt. Sta., Experiment, Ga.; John H. Kirch, Amchem Products, Inc., Ambler, Pa.; and Dr. Robert D. Blackburn, ARA, USDA, Ft. Lauderdale, Fla. Not shown is John A. Long, O.M. Scott and Sons.

There was standing room only in this section on control of Weeds and woody plants on utility, railroad and highway rights-of-way and industrial sites. Papers were presented on three experimental compounds, Spike tebuthiuron, Krenite brush control agent, and Roundup glyphosate.
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