Maintenance equipment

*Atlas Lawn Equipment

Atwater Strong Company offers the Lo-Blo air broom sweeper.

John Bean Div., FMC Corp., has expanded its line of golf course sprayers which now feature stainless steel tank models as well as epoxy-lined tanks which now feature stainless steel expanded its line of golf course spray pumps and a design combining both a lower center of gravity for stability and safety and greater ground clearance. The line includes five basic hydraulic sprayer models for boom and gun applications and four models of the Rotomist air sprayer. Three models are the economy-priced Turf-keeper Model MF-100-GE, Turf-keeper Model 1010-GE, which has a stainless steel tank, and the Turf-keeper Model 1010-IT, a trailer-mounted sprayer.

Bolens Div., FMC Corp., offers outdoor power lawn equipment.

The Broyhill Company’s line of spraying equipment includes tractor, trailer or skid mounted models; handgun, boom, portable boom, high pressure (400 to 700 pounds), low pressure or both; centrifugal, piston or roller pumps; engine or PTO drives and many accessories.

Bunton Company makes a heavy-duty commercial trimmer, Model 22SPF-4T8, with front wheel drive and extra large wheels for handling in rough terrain. Without engaging or disengaging any clutches, the operator can trim around shrubs, trees and hard-to-get areas. Grass clippings are evenly discharged into optional grass catcher because of the deep aluminum alloy frame. Width of cut is 22 inches. Especially designed for guard-rail trimming, Model GR18-35THX provides the operator with an off-set cutter housing, completely enclosed, to permit trimming under guard rails, fences, shrubs and bushes.

The Champion Company offers three models in its Doo-All trailer line. Roll-Dump hoppers, available in one-cubic-yard and two-cubic-yard capacities, are also featured on two models. The third model will show the small chassis with the interchangeable flat bed in place. All units feature Terra-Tires. The two-cubic-yard chassis has a new square tongue for added strength for sharp turns under heavy load.

Stanley Clarke Equipment Company, Inc., introduces the Tramp master mechanical sand trap rake. One man operating the rake can maintain over 40 sand traps in four hours, according to the company. The rake teeth scarify the trap and the drag plates float out to smooth and finish the trap surface. Stanley Clarke will introduce also several "revolutionary new products."

The Cyclone Seeder Company carries the Cyclone line of seeder/ spreaders. Models include a lawn spreader, broadcast hand sowers, broadcast hand spreader/seeds, a broadcast spreader/seeder that attaches to lawn and garden tractors and riding lawn mowers and Model M-1A broadcast spreader/seeder.

Dedoes Industries, Inc., introduces a smaller version of the Dedoes Aerator. This model has its own self-contained hydraulic system and has smaller pluggers, making it ideal for tees and greens. The swath width is 42 inches. The unit can be converted to a roller, slicer or spiker, and has the same speed range as the larger aerator unit.


E-Z Rake, Inc., introduces a self-propelled power thatcher, available with an 18-inch rake width (Model 148), 24-inch rake (Model 164), and tine-driven models with similar raking widths (Models 48 and 64). Features include a folding handle for easy transportation, a spin recoil starter, two hp engine, enclosed drive housing, back guard plate and baked enamel finish.


Friend Mfg. Corp. offers a line of sprayers, dusters and industrial pumps.

Gandy Company makes the Turf Tender line of granular chemicals, seed and fertilizer applicators. The Turf Tender 24, has six hand models in the line. They are available with handle or tractor hitch, 75 pound capacity hopper, snap-on stainless steel bottom and slide with 20 triangular openings spaced 1 1/4 inches center-to-center. Turf Tender 42 is a pull-type applicator with six models in the line.

Giant-Vac Mfg., Inc., makes a complete line of vacuums, blowers, truck loaders and thatchers for cleaning all types of debris and renovating turf areas.

Goodall Div., Bunton Company, makes a commercial trimmer-edger, Model 18G-35GL, which has front caster wheel swivels to allow easy level turning when trimming around trees, fences, walls and shrubs. The front caster wheel can be locked in a straight position for tilting when edging along sidewalks, driveways and curbs. Edger guards prevent marking or chipping from blade.

(Continued on page 44)
Ransomes Hydraulic is a reel time saver
Power 5/7 Gang Mower

The Ransomes Hydraulic 5/7 has a proven record of high work output. Why? Because it is totally hydraulic—totally! Every part of the cutting action is controlled from the tractor seat—raising and lowering of the units, forward and reverse drive of the reels. Hydraulically powered reels allow you to cut tougher grass—easily, saves turf damage.

Versatility takes priority in this machine—you can have 20 through to 75 cuts per yard—use any number of reels separately or collectively. You can even cut in the wet. You can climb and cut slopes that competitive machines cannot face.

As grass machinery engineers for over 150 years we know how to construct our machines. Ransomes Hydraulic 5/7 is the greatest advance in design since the development of the gang mower.

- Reduced investment. Cuts semi-rough and fairway because of instant height-of-cut adjustments and operator choice of reel speed.
- Greater production; Spring, Summer or Fall, wet or dry, you can go gang mowing with the Hydraulic Powered Gang.
- Increased performance. Cuts up and down steep slopes and banks with all seven units cutting; turns sharper eliminating overlap.
- Reduces labour. Cuts over edge of sand trap and around clubhouse lawns without leaving un-cut grass.
- Lower maintenance costs. Less wearing parts—no wheels, clutches, gears. Instant back lapping from operators seat ensures razor-sharp reels.
- Improved finish. Variable speed control of reels can produce greens finish on fairways....Less turf wear because of spring balanced cutting units. No wheels to cause drag or compaction.
- Super-tough impact resistant steel reels keep sharper—longer.
- Unit construction means quicker servicing time especially on reel and bearing assemblies.
- And finally—the complete cutting assembly can be easily removed from the tractor, leaving it free for other duties.

Apart from all this you have Ransomes name and reputation as Europe's largest grass machinery manufacturer.

To obtain full information of the Ransomes Hydraulic 5/7 contact your nearest Ransomes Distributor:

WARREN'S TURF NURSERY
8400 West 11th Street, Palos Park, Illinois 60464

PEN-GRO SALES COMPANY
P.O. Box 2326, South San Francisco, California

GOLF COURSE SPECIALISTS INC.
6800 George Town Pike, McLean, Virginia 22101, U.S.A.

DUKE LAWN EQUIPMENT
1184 Plains Road East, Burlington, Ontario.
Telephone 637-5216
Importers for the Province of Ontario

MORIN EQUIPMENT INC.
2075 Brandy (Centre Industrial STE-FOY), Quebec 12
Telephone 418 681-7741
Importers for the Province of Quebec

MORIN EQUIPMENT INC.
98 Avenue du Pard Industriel, Longueuil, Montreal P.Q.,
Telephone (514) 527-3406
Importers for the Province of Quebec and the Maritime Provinces

BUTLER BROS., EQUIPMENT LTD.
P.O. Box 100, 10547 King George Highway,
North Surrey B.C.
Importers for British Columbia

For more information circle number 248 on card
Cutting height is adjustable from 1 3/4 inches to 2 1/4 inches; width is 18 inches. Also available is Model 22GSPF-4T8, which has a 22-inch cutting width.

Hahn-West Point Div. introduces for 1972 the Aeri-Boy aerator for use on fairways. A full range of spoons, ranging from one-fourth to three-fourths inch, are available with the unit as well as spiking blades. Other equipment in the line include tractor-mounted aerifiers, a pull behind aerator, walk behind aerator, a Vertical cut unit and the Power Drag.

*Hesston

*Howard Rotavator Company, Inc.

H.D. Hudson has a spray rig with a telescopic mast which puts the spray gun up to 19 feet above ground while being controlled by the operator on the platform. Gun is adjustable from 10 feet to 19 feet high and can spray in almost any direction or angle.

*Jacobsen Mfg. Company

Kohler Company announces that a larger, top-mounted 1 1/2 gallon capacity fuel tank is now standard on its 6 3/4 hp (Model K147), 7hp (Model K161) and 8hp (Model K181) engines. New also is a heavy-duty tank mounting. A side-mounted tank with fuel pump is optional. Standard on all three engines is a 15-amp alternator system. All three are air-cooled cast iron engines of large bore and short stroke design. Model K182, a two-cylinder engine, is an 18hp cast iron engine for heavy-duty use.


Lely South West, Inc., offers new this year the Roterra which features vertical tines that whirl horizontally through the soil. The machine can be operated at depths up to eight inches, is hitch-driven and pto-driven. Several models are available in widths ranging from 60 inches to 180 inches. Other models in the line include the Model HR and Model WGR.

Lindig Mfg. Corp. introduces the Kajon 914 Chipper, which when combined with larger Chippers in the line, provide turfmen with mid-size brush Chippers with engines ranging from 14 to 30hp. They are designed for towing behind trucks or turf vehicles and for direct truck/tailer loading. The new M-8 Shredder/Screener for manual feed processing of topsoil, compost, turf and manure is also available. Lindig also has new this year its SCM-720 PortaScreen for high quality power screening. Improved this year is the KT-15 Shredder/Screener, which now comes with a 14 or 18hp air-cooled gas engine with an electric starter.

Mallinckrodt Chemical Works offers the Mark II Spray-Hawk, a mobile turf sprayer. The operator can coordinate the pressure to his walking speed, thereby spraying at the exact rate recommended by the manufacturer.

Smithco, Inc., introduces the Little Beaver Spiker. The self-propelled spiker has a hydraulic lift for the spiking reel and can do 18 greens in two hours, according to the company. It has a seven-inch drag mat for spiking and dragging simultaneously. Also new is the Super Duper Lark Sprayer with a 110-gallon capacity fiberglass tank and 10 gpm Golden Eagle pump. Other sprayers in the line include the Spraymate Chickadee. Also new is the Top Rider mechanical top dresser and the Trap Rider sand trap rake.

*Skaggs Turf Equipment

The F.E. Myers & Bro. Company features a full, new line of boom and gun power sprayers for weed, fungus and insect control. Called TurfLine, the line includes sprayers for large turf areas, for mosquito control, tree and shrub care and right-of-way maintenance. The Greens Sprayer (Model TL10ETMG) features an adjustable fast hitch, allowing it to be used with a utility cart, lawn tractor or turf tractor. The boom covers a 15-foot spray swath, has drip-proof diaphragm check nozzles and can be compactly stored.

Ryan Equipment Company introduces this year the Ryan Sand Trap...
"PO-SAN (TM) stops Poa annua!"

IF YOU DON'T BELIEVE IT, CALL ME COLLECT!"

"I'm Marv Scobee, superintendent at Highland Golf and Country Club, Indianapolis.

Last fall I PO-SAN-treated 18 fairways. Some had 85% Poa annua. A week after the PO-SAN application, I drill-seeded all fairways to Highland bentgrass. Result? Astounding! The initial turf yellowing from the PO-SAN (which I had expected) left in about 10 days — and the bent, well fertilized, "came on like gang-busters" — filling in quickly as the Poa retreated. My fairways, shown here 5 weeks after the PO-SAN treatment (and 4 weeks after seeding) are the most beautiful we've ever had. The Poa is down to about 25% — and I'm rapidly approaching 100% bent fairways! A new PO-SAN bonus — it killed practically all the clover, knotweed, and other broadleaf weeds! Now I have beautiful fairways, far less Poa than ever before, and 350 mighty pleased club members and officials.

You bet I'll continue PO-SAN in 1972! To share my enthusiasm for PO-SAN, give me a buzz. PO-SAN has to be "the way to go" in fairway Poa control."

Yours for Poa-free fairways

Marvin Scobee
Call me collect at (317) 686-6776

MALLINCKRODT CHEMICAL WORKS
ST. LOUIS
Jersey City • Los Angeles • Montreal

ILLINOIS:
PO-SAN has dropped my fairway Poa annua, at least 25%, with a single year's application and with no harmful residues. I'm certainly going the PO-SAN route again in '72.

Leon Hartogh
Oak Park C. C., Chicago
Call me collect at
(312) GL 3-7525

WISCONSIN:
... pleasing to observe PO-SAN's results in Poa control.

I'm hopeful all our fairways will be on the PO-SAN program in the near future."

Bill Sell
Ridgeway C. C., Neenah
Call me collect at
(414) 722-7493

NEW JERSEY:
"PO-SAN has done what you claim. We've reduced the Poa in our fairways quite considerably." Jack Mountain
Woodcrest C. C., Cherry Hill
Call me collect at
(609) 429-0848

NEBRASKA:
"PO-SAN has reduced my Poa remarkably with no injury to my bluegrass fairways. It has also saved labor in reduced fairway mowings. I plan increased PO-SAN usage in '72."

Joe Hardwick
C. C. of Lincoln, Lincoln
Call me collect at
(402) 423-4415

OREGON:
"PO-SAN has turned the tide in controlling Poa annua. It's way down from the 50% we had in early 1970. We plan PO-SAN again on all fairways in '72 — and some PO-SAN tests on greens..."

Tim Mannion
Columbia-Edgewater C. C., Portland
Call me collect at
(503) 285-8111

For more information circle number 178 on card
slicer and optional rake bar. Landscape 4 and 6 are also available. The Rake-O Vac rakes, vacuums, renovates and conditions turf and can be used on hard surfaces. The Trojan 3 all-purpose maintenance machine is a snow blower, snow grader, leaf blower, leaf mulcher and rotary broom. Powered by a 14hp Kohler engine, it has a 60-inch Whirlwind rotary cutter, electric starter, power steering.

Turf-Vac Corp. features Model-FM5 and Model 70 from its line of turf sweepers. FM5 has a sweep of five feet, a hopper capacity of five cubic yards, 12hp engine and comes with accessories such as a 14hp engine, electric starter and scoop brush. Model 70's hopper capacity is 38 cubic yards.

Vandermolen Corp. introduces the 7-11 Fastblo wheeled blower which has a 180 mph airblast, weighs 48 pounds and does not use crankcase oil. Another product in the line is a portable gas-powered knapsack blower, available now with a tank which allows two hours of operation without refilling. This blower generates a 225 mph airblast, weighs 19 pounds and comes with an optional sprayer kit. Van Der Molen also markets the Diadem 290 spreader and seeder which is finished in a new epoxy plastic.

Vermeer Mfg. Company makes the Tree Spade line of tree removers for commercial use. Available in six models, ranging from a trailer-mounted "mini-spade," which removes and transplants trees up to three inches in diameter, shrubs and bushes, to a remover which can dig a tree ball 66 inches in diameter and can move trees up to six inches in diameter. Also available are seven models of stump cutters.

Maintenance vehicles

Bruce Mfg., Inc., has improved the 1971 models of Pug four-wheel drive utility vehicles by adding more powerful, quieter engines and new options. The vehicles can carry up to 1,500 pounds or seven adults plus the driver.

Cushman Motors has the Turf Truckster line of transportation and light hauling vehicles. The four-wheel models are equipped with 18hp gasoline engines, automotive steering and four-wheel hydraulic brakes. Options include a wind-shield, fiberglass cab with folding doors and rear view mirror.

Ford Motor Company offers new this year a 14hp hydrostatic lawn and garden tractor (Model 145), a 12hp hydrostatic tractor (Model 125), a gear-driven tractor (Model 120) and a 10hp, gear-driven tractor (Model 100). All models feature new design Kohler engines, tubular frames arched at the center for added ground clearance and automotive-type worm-gear steering. Other features include large rotary mowers up to 50 inches, large dozer blades, snow blowers and tiller and a quick hitch system. Also shown will be the Model 340 compact loader.

Harley-Davidson Motor Company features its 1972 Utilicar model, which has a wheelbase of 70.5 inches; an over-all length of 98.5 inches; an over-all width of 42.35 inches and an over-all height of 38 inches. Six body styles are available, all gasoline powered, all three-wheeled.

*Hawaiian Motor Company

International Harvester Company introduces the 46hp International 2400A industrial tractor and a No. 71 Industrial Mower. The 2400A is available in a regular and Lo-Boy version with a four-speed, synchronized, constant mesh spur gear transmission and can be used for mowing, blade work, scarifying and scraping, loading and backhoe operations. Also to be show is the new 14hp International 149 Cub Cadet hydrostatic drive tractor with a new No. 1 Sand Trap Rake attachment. The 72-inch rake has two gang; the front to break up crust and stir up weeds, the rear to smooth out the sand. The 149 Cub Cadet is equipped with flotation tires. The 15hp International Cub 154 Lo-Boy tractor will be shown with an International 3260 rotary mower and is designed for grounds maintenance and landscaping.

Smithco, Inc., introduces eight and 10hp models of the Red Rider work cart with number 50 chain and new handle bars. The Big Red work cart is a larger version of the Red Rider and has a capacity of 29 cubic feet; the over-all width is 74 inches.

Mowers

Bunton Company's Model 36HDW-10TCL is a heavy-duty mower designed and built for rough terrain and high cutting. It features dual traction and extra large caster wheels and has a 10hp engine.

Excel Industries, Inc., makes the XL-272 Hydrostatic Hustler Multi-Mower which features as standard an 18hp Kohler, two-cycle air-cooled engine, hydrostatic transmission for each drive wheel, attachment hitch, electric clutch and locking attachment for parking, among others. The mower attachment cuts a 70 Vi inch wide swath, has three 24-inch blades, which have a cutting height of from two to five inches in three-eighths increments.

Hahn-West Point Div. offers the Tournament Triplex Greens Mower (Continued on page 49)
Now lower-cost, better, safer crabgrass control with Betasan

Betasan is the leader for sure crabgrass control with one early application on your golf greens and other turf. Safer to use than many herbicides, without any turf burn, Betasan at this year's new low price saves you $8 to $10 per acre.

Betasan also controls goosegrass along with several annual broadleaf weeds. Remember too, that Betasan controls poa annua that germinates in late winter or spring.

For best results in control of crabgrass, goosegrass and poa annua at low cost, be sure you use Betasan. See your distributor now for turf-care products made with Betasan. Stauffer Chemical Company, Agricultural Chemical Division, Dept. HD, 299 Park Avenue, New York, N.Y. 10017.

Betasan from Stauffer

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SUPPOSE YOU COULD WATER BETTER IN LESS TIME WITH LESS WATER AND LESS LABOR

Would it matter to you?
Of course it would.

That’s why you need to know — now — about the new Weather-matic turf sprinkler systems that put you in command — and keep you in control. You touch a button, put water where it’s needed, save it where it’s not — all automatically. You survey your course through a lighted control panel that tells you at a glance what’s going on everywhere.

Command and Satellite Control units let you call your shots. May we show you personally how this sophisticated but remarkably self-maintaining new system actually does a better job — while saving you time, labor and money?

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Come visit our booths, G-32 and H-19, at the G.C.S.A.A. Convention. Or, ask us to show you our new, informative golf course brochure.

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Please bring me additional information on your new golf course irrigation systems.

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agement System, capable of greens cutting, tee and collar mowing, spiking and verti-cutting. The self-propelled unit can be changed from one operation to another in a few minutes, according to the company. The cutting units are driven by flexible cables, thereby eliminating the possibility of greens damage due to hydraulic hose ruptures.

*Jacobsen Mfg. Company

Locke Mfg. Div., offers the Maxi riding mower with a 10 hp Kohler engine, and the Triplex lawn mower, which comes optional for riding.

Mott Corp. has new for 1972 the Expediter mower, which cuts a width of 18 feet, 10 inches when complete. Height of cut can be adjusted and ranges from three-quarters inch to six inches. Standard features include heavy-duty front bumper, positive lock transport position, independent operation of three mowers and totally enclosed drive.

Roseman Mower Corp. introduces an 11-gang hydraulic lift-type mower. Cutting width is 24 feet or about 30 inches per unit. Height of cut is about one-half to three inches. The mower can be used with any utility-type tractor equipped with a hydraulic system.

The Toro Company announces new accessory attachments for its Greensmaster 3 triplex greens mower: a roller cleaner and thatching reels.

Turf products

Agrico Chemical Div., Continental Oil Company, offers Agrico Country Club and Gold Cup fertilizers.

Agway, Inc., makes the Agway line of fertilizers, chemicals and seed.

*American Research Corp.

Applied Biochemists, Inc., offers Cutrine, an algacide for lakes and ponds.

Aquatrols Corp. of America offers Aqua-Gro and Aqua-T soil wetting agents.

Chanderlin Seed Company, Div. of Loft Seed Company, offers fine turfgrass seeds.

Chemagro Div., Baychem Corp., offers Baygon 70% Wettable Powder for control of flies and mosquitoes; Dexon 35% Wettable Powder, a non-mercurial fungicide for controlling Phytophthora and Pythium on lawns and turf and Dyrene 50% Wettable Powder for controlling leaf spot, copper spot, Sclerotinia dollar spot, Typhula snow mold, rust and brown patch.

Chipman Div., Rhodia, Inc., offers the Chipco line of turf products. Turf Kleen controls broadleaf weeds and comes in 30 and five-gallon drums and in one-gallon cans packed six in a case. Turf Herbicide MCPA controls surface-creeping broadleaf weeds, such as clover, chickweed, stitchwort, ground ivy and knotweed. Micro-green, a water-soluble blend of metal complexes of iron, zinc and manganese, corrects turf nutritional deficiencies. It comes in 50 pound bags and four-pound bags, 12 in a case. Wetter Water is a non-ionic wetting agent.

W.A. Cleary Corp. offers a non-toxic wettable powder fungicide called Cleary's 3336 for control of cudium-resistant dollar spot, copper spot, brown patch, Helminthosporium, (Continued on page 52)
Highly resistant to stripe smut, rust and leaf spot. Stripe Smut (Ustilago striiformis) sporulates in May or June, shredding individual leaves. Field trials show that, while Merion is quite susceptible, Pennstar is highly resistant. A very strong plus.

Pennstar is also highly resistant to rust (Puccinia spp). Rated on a scale of 0 (best) to 10 (worst), test data give a 1.7 rating to Pennstar versus 8.7 for Merion.

Most improved bluegrass varieties are resistant to leaf spot (Helminthosporium vagans). However, in university tests, Pennstar was significantly more resistant than some improved varieties.

Well adapted from the East Coast to California. Pennstar’s disease resistance, drought resistance and other characteristics enable it to do well wherever Kentucky Bluegrass is adapted. It establishes well and resists fadeout under a wide variation in management.

Medium color, good density, easy to manage. With its pleasing medium bluegrass color, Pennstar blends well with other varieties. In mixtures, it’s neither too dark nor noticeably light.

Pennstar persists at moderate-to-low fertility levels. It doesn’t over-react to higher fertility. Because it’s decumbent (the leaf angle is closer to 90° from vertical than 45°) Pennstar can tolerate a close mowing without thinning out. And it’s shown the ability to withstand drought conditions better than some other Kentucky Bluegrass varieties.

**No excess thatch after 11 years.** Pennstar does not produce damaging quantities of thatch. In tests at Penn State, plots of Pennstar torn up after 11 years revealed no excess thatch. (No dethatching had been done in that entire period.) Normally aggressive varieties can be expected to thatch up under good management practices. Not Pennstar.

**Ideal component for turf mixtures.** Is it better to plant a single variety or a blend? This is the difficult question that confronts turf managers. A single variety planting is undeniably beautiful. Yet a single strain can be destroyed by disease or weather. Which is why Pennstar was developed — to make available a bluegrass variety that would be highly resistant to disease and capable of surviving extreme weather conditions.

These qualities make Pennstar very suitable for a mono-culture. Or a mixture, particularly when considering its other characteristics: It’s not overly aggressive. It’s easy to manage. Its pleasing texture and middle-of-the-road color make it visually compatible with other varieties. Indeed, Pennstar blends so effectively, it could help convert some managers to mixtures.

**DEVELOPED AND RELEASED BY PENNSYLVANIA STATE UNIVERSITY**

**Pennstar Kentucky Bluegrass**

(Poa pratensis)

Pennstar is an improved variety that has been released by Penn State after over 15 years of testing and evaluation. Pennstar is outstanding for disease resistance and for compatibility with other improved grasses in turf mixtures. Pennstar is not overly aggressive and is compatible with other varieties. Pennstar is persistent; reasons include its ability to withstand low mowing, its high resistance to disease and its ability to compete under low fertilization.