Cut the cost of expensive horsepower and expensive manpower.



Bolens® HT-20 Tractor.

Jobs too small for big specialized equipment can add up to a punishing expense in manpower. Hauling. Mowing. Tilling. Grading. Loading. Trenching. Backfilling.

The intermediate size Bolens HT-20 Tractor can cut that expense by quickly adapting to over a dozen custom matched attachments including mower, tiller, bucket loader, back hoe, rakes, blades and brooms.

The foot operated hydrostatic transmission goes from forward to reverse without clutching or changing gears. Perfect for close-quarters work. Allows optimum power/speed combinations with hands free to operate hydraulics.

More than just a lawn and garden tractor, the HT-20 is powered by a 19.5 hp twin cylinder Kohler engine. The channeled steel frame, massive rear axle/differential and heavy duty front axle give a full day's work. Day after day.

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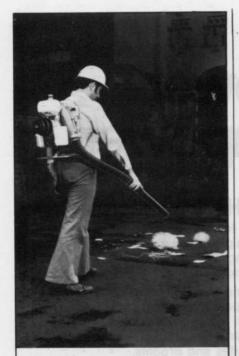
They cut the grass and the workload. In one pass. When a Bolens Mulching Mower cuts the grass, it also cuts and recuts the clippings into tiny particles that are blown down into the turf. There, they disappear and quickly decompose. No clippings. No clean-up. No thatch build-up. The fine mulch actually feeds the turf while the crew moves on to other jobs.*

3, 4 and 5 hp models are specially built for commercial and institutional use. Straight-thru steel axles, rugged all-steel deck, tough one-piece handle and positive cutting height adjustment. Bolens Mulching Mowers. Tough, economical answers to your continuing turf maintenance program.

*For a free copy of a University study on nitrogen return, contact FMC Corporation, Port Washington, Wisconsin 53074.

See the complete line of Bolens commercial power equipment at your nearest dealer. For his name and address, call 800-447-4700 toll-free anytime (in Illinois, call 800-322-4400). FMC Corporation, Port Washington, Wis. 53074.





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or with shoulder straps. Wheels look comfy and modern, all right. But for blowing leaves out of flower beds, rock gardens or from under shrubs, for cleaning staircases, roofs, seat rows in arenas and convention centers, up ladders or down ships' holds, in trucks and rolling stock, or for blowing snow off a car dealer's merchandise on a cold Saturday morning

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This 180,000-square-foot multiple occupancy warehouse in Imeson International Industrial Park, Jacksonville recently received the Florida Nurserymen and Growers Award of Excellence. The landscape design using grassed mounds and berms as well as mature trees indigenous to north Florida was created by Michael A. Gilkey of Hartwig & Associates, Jacksonville.

Hyacinth Control Society Changes Organization Name

The Hyacinth Control Society has changed its name to The Aquatic Plant Management Society, which its members believe better reflects the thrust of the organization.

The change was decided at the organization's recent annual meeting in San Antonio, Texas, and the new title indicates the broad interests of the society membership. Ray A. Spirnock, of the central and southern Florida flood control district in Lakeworth, is the new president.

Horticulture Legally Part Of Agriculture, Exec Says

Over the past decades, the nursery industry has been involved in numerous battles to defend its rightful place as a part of the broad concept of agriculture in federal, state and local statutes.

"For the past 38 years," explained American Association of Nurserymen executive vice president Robert F. Lederer, "the AAN has led the battle to retain the legal status of horticulture as part of agriculture. And over those years we have won many significant victories. The most recent and one of the most important was in the energy field where horticulture retains its position in the agricultural priority for

"Unfortunately, the battle is a constant one. The subject continually arises in all sorts of federal, state and local legislation. For this reason, we have had our attorneys prepare a catalog of AAN victories in this area to help others in the nursery industry defend its position as part of agriculture," Lederer said.

The AAN Special Summary on Legal Status of Horticulture reviews the status of horticulture under the principle federal statutes wage/hour, labor, tax, OSHA, social security, energy and interstate commerce - and covers the major state statutes in general.

"When involved in questions of definition for the purposes of state and local legislation it has often proven useful to be able to present to a legislature, court or administrative agency a review of the treatment of horticulture in other areas of the law," Lederer said. "That is the purpose of this summary."





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For More Details Circle (134) on Reply Card

Toro Expands to Australia

Toro Australia Pty. Limited, a wholly owned subsidiary of Toro Company, Minneapolis, has been incorporated in New South Wales, David T. McLaughlin, Toro president, told WEEDS, TREES & TURF.

He said the new subsidiary has been formed to distribute the company's irrigation equipment throughout Australia.

Determining Insurance Claim For a Bark-Injured Tree

When a car or piece of construction equipment skins a big hunk of bark from a client's tree, how does a consulting arborist determine an equitable claims against the insurance company? Here is how Bill Porter, a member of the American Society of Consulting Arborists from Rumson, N.J., does it for quick payment to his clients, as reported in a recent newsletter.

First, he lists the charge to the injured party for cleaning up the tree wound and making of necessary bark tracing. Second, he determines how many years it may take for the wounded area to close over and charges for an annual inspection during that period when he may have to dress up the area if die-back occurs around the edges.

Third, he makes an application of fertilizer at the time of the first visit and figures on one on an annual basis until the wound heals and figures the cost of these applications. The total is his figure which goes to the insurance company. So far he has had excellent results in insurance payments to his clients.

Du Pont Profit and Sales Surged in Fourth Period

Du Pont Company, Wilmington, Del., reported fourth quarter net income surged to \$141 million, or \$2.87 a share, from the depressed year-earlier \$35 million, or 67 cents a share. Sales increased 20 percent to \$1.96 billion from \$1.63 billion.

That brought net for all last year to \$272 million, down 34 percent from 1974's \$404 million. Sales rose five percent to \$7.22 billion from \$6.91 billion, reflecting higher

average selling prices last year. But physical volume of shipments fell nine percent last year, it was reported in the Wall Street Journal. Irving S. Shapiro, chairman, said the company's agricultural chemicals performed "consistently well' last year.

California Turfgrass Council Elects Sandhu President

G. S. Sandhu of Orinda Country Club has been installed as president of the Northern California Turfgrass Council during the group's annual awards banquet.

Also named to serve with Sandhu were Phil Wyatt, Sprinkler Irrigation Specialists, first vice president; John Deming, Ewing Irrigation Products, second vice president; and Rich Harrison, City of Alameda, secretary/treasurer.

Board of directors selected are: Don Lancaster, University of California cooperative extension, Hayward; Jack Mahshi, landscape architect of Berkeley; George Henrichs, landscape contractor of San Jose; Tom Churchill, Bay Irrigation and Turf Supply; Bruce Watson, Rain Bird; and Grady Simril, East Bay Regional Parks Department.



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Ohio Reclamation Symposium Is August 9-12 in Wooster

Interest in returning disturbed lands to productivity has intensified recently as more lands are being disrupted in the search for energy. In light of this interest, a group of scientific organizations has organized a symposium on "Reclamation of Drastically Disturbed Lands" which will bring together experts from several disciplines to summarize what is known about reclamation and to identify areas where more information is needed.

The symposium will be held at the Ohio Agricultural Research and Development Center in Wooster, Ohio August 9-12. It is being sponsored by the American Society of Agronomy, Crop Science Society of America, Soil Science Society of America, Society of America, Society of American Foresters, Soil Conservation Society of America, the U.S. Environmental Protection Agency and other organizations.

For further information, contact: Dr. Paul Sutton, Ohio Agricultural Research and Development Center, Route 6, Caldwall, Ohio 43724.

Researchers Urged to Work With Nursery Businessman

One of the most serious problems in the nursery industry is the lack of communication between the research scientist and the nursery businessman, according to Robert F. Lederer, executive vice president of the American Association of Nurserymen. His remarks were before the Symposium on Better Trees for Metropolitan Landscapes, held in Washington, D.C. recently.

"All of the nursery businessmen I know need the results of the efforts of all of the research scientists I know," Lederer said. "In order to be properly oriented, research scientists need the opinion of the nursery businessmen. But how often do the two get together? When researchers come up with results, often they are held back waiting for publication in a scientific journal where credits as a scientist can be made. Often, good useable results

never arrive at that point where they can be put into operation, because people who can use them are not those who read scientific journals.

"When you develop your research program," Lederer told researchers, "keep very much in mind that your inclination may be to develop projects that are of most interest to you. Overcome that inclination. Base your projects on what will be of most practical value to producing better products, better

chemicals, better plants for our customer.

"I ask you, why work in a vacuum?" he said. "If your goal is to develop a fine Norway maple, the place to start may very well be by asking the municipal arborist or forester or all of our northern growers to share with you the best Norway maple they know of. He can take you to it right away — he has been watching it for years, but nobody ever asked him about it."

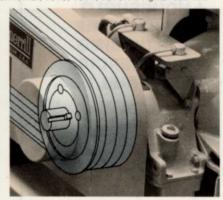


Applying engineering designs which "Sound Conditioned"* our industrial scrap reduction machinery, Mitts & Merrill can modify our brush chippers for low noise levels. At the same time, those engineering features which have made Mitts & Merrill the leader for years have been retained.

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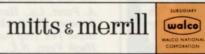


Staggered knife pattern, for years a Mitts & Merrill feature, has always resulted in a lower noise level. First, by segmenting the noise source. Second, through smoother cutting action. Third, by producing smaller chips.



Optional torque converters and the heaviest steel cylinder — even without an external flywheel — combine to give positive cutting action under the most rugged conditions. Isolates the engine from shock. Minimizes maintenance.

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Report Discusses Managing Power Line Vegetation

There are about 3,600 electric utilities in the United States. In 1971 it was estimated that these utilities were operating more than 300,000 miles of overhead transmission lines, occupying about four million acres of land for rights-of-way, according to a recent report done by the State University of New York.

With the demand for electrical power doubling each decade, it was estimated that 100,000 miles of new transmission lines would be constructed on 1.5 million acres of rights-of-way each decade for the rest of the century. This would mean an estimated 600,000 miles of overhead transmission lines on seven million acres of land by the year 2000

Vegetation management on these lines is a matter of great concern to the power companies and to others concerned with the environment. This report was written after an extensive review of the literature, interviews with the vegetation managers and researchers, and on-site inspections of many transmission lines throughout the eastern United States. Copies of this report are available upon request from the State University of New York, College of Environmental Science and Forestry, Syracuse, N.Y. 13210.

Rhodia Inc. Announces Plan For New Herbicide Plant

Rhodia Inc., Monmouth Junction, N.J., has announced plans to construct a new herbicide manufacturing plant at its Portland, Ore. location.

When completed this fall, the plant will double Rhodia's production of two methyl, four chlorophenoxyacetic acid (MCPA) as well as bring on stream ability to produce two methyl, four chlorophenoxyproprionic acid (MCPP). The company said MCPP is a herbicide used to control weeds and clover in turfgrass and lawns. Spokesmen for the company said the production of both products has been planned to supply the current and anticipated market needs and the plant can be expanded further as the market requires.



Representatives from 19 states participated in the recent legislative conference sponsored by the American Association of Nurserymen in New Orleans. The meeting, attended by state and regional association executives and legislative chairmen, dealt primarily with state legislative problems, such as taxation, labor laws, OSHA, license laws, etc. Participating in the conference were: (bottom from left) Roy Hacanson, Wash.; Gary Gern, Mo.; AAN administrator Leo Donahue; Honore Hacanson, Wash., Curtis Peterson, Fla.; Jane Barry, Mont.; AAN president Palmer W. Bigelow, Jr.; AAN executive vice president Robert F. Lederer; and Joe Weston, Mo. (middle from left) Dr. James A. Foret, La.; Harold Thornhill, Ala.; Rudy Hough, Miss.; Hunter Boulo, Ala.; David Spencer, Ill.; Keith Law, Minn.; Dr. J. H. Tinga, Ga.; Larry Little, N.J.; and Bill Bradshaw, Tex. (top from left) Jack Wick, Calif.; George Hoar, Utah; Charlie Barr, Conn.; Hugh Vann, N.C.; David Laird, Va.; Howard Davis, Pa.; Bill Fullingim, Tex.; Charlie Dunn, Fla.; Kent Langlinais, La.; and John Flemer, N.J.







It can take months to compact a green. It takes 60 minutes to fix it.

Greens aeration is one of the most important maintenance jobs you have. Months of compaction can damage a green by preventing air, water, and fertilizer from penetrating the surface. Proper aeration is essential. But it must also be done quickly to get your course back in play and keep your golfers happy.

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And like all Ryan equipment, these machines are built to last. We believe longevity is just as important as performance.

Whether your greens need aerating twice a year or twice a month, there's no better or faster way than with Ryan aerating equipment.

For your free catalog, write OMC-Lincoln, a Division of Outboard Marine Corporation, 6725 Cushman Drive, P.O. Box 82409, Lincoln, NB. 68501.





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Standing behind a model of a new bisphenol-A plant to be built at Haverhill, Ohio, Duncan J. MacLennan (left), president, and William W. LaRoche, vice president, USS Chemicals, Pittsburgh, discuss details of the planned 120-million-pound-per-year facility. End uses of the product include fungicides, bactericides and rubber compounds.

Four Medicap Meetings

Creative Sales, Inc., is sponsoring four dealer-applicator meetings this month: two in Ohio and two in Michigan, to review the firm's Medicap injection program . . . iron chlorosis, manganese chlorosis and an update on the experimental systemic insecticide program. EPA clearance for the latter program (Orthene/Medicaps) is expected later this month.

Locations and dates for the meetings: Dayton, Ohio, Imperial House South, March 16; Columbus, Ohio, Ramada Inn North, March 17; Southfield, Mich., Ramada Inn, March 18; and Grand Rapids, Mich.,

Hospitality Inn, March 19.

The Ohio program will feature Dr. Elton Smith, Extension Specialist in Landscape Horticulture with The Ohio State University. The Dayton, Southfield and Grand Rapids meetings will also feature Dr. James Kielbaso, Associate Professor of Forestry with Michigan State University.

Dr. Smith will discuss Ohio State results with iron and manganese, and Dr. Kielbaso will talk on manganese deficiency/maple decline. Dr. Kielbaso has indicated that manganese deficiency is a major contributing factor to much of the north central and New England maple decline.

Registration (\$5 in advance) can be made with Warren D. Wolfe, 402-727-4800.

Response of Woody Species To Urban Air Pollutants

In a recent study conducted at Rutgers University in New Jersey, it was determined that among the gaseous pollutants that caused significant damage to plant life were hydrogen fluoride and ozone. The study was done by Eileen Brennan and Ann F. Rhoads.

They said sulfur dioxide damage was conspicuously absent, no doubt due to legal restrictions on burning high sulfur fuels during the period of the study, 1973 through last year. A particulate causing extensive damage was cement dust, and this occurred in a native oak forest 30 years after the dust had been emitted into the ambient air from a local source. Along heavily traveled highways another particulate, cadmium, was detected in appreciable quantities in certain tree species, particularly in pin oak. The paper appeared in the *Journal of Arboriculture*.

bio de-thatch®



Photograph of plugs removed from test plots at University of Florida. Plantation Field Laboratory, Ft. Lauderdale, Florida. Research is continuing.

It's a proven fact that thatch is a major problem in highly maintained turf. Thatch reduces air and water movement into the soil, impedes utilization of fertilizers, and provides a favorable environment for insects, fungi, and diseases. The sample on the left shows what happens when thatch is allowed to build up. And look at that compaction layer.

Now take a close look at the plug on the right. Bio dethatch was applied to this turf. Before total decomposition, the grass turned a darker green and the rate of growth increased. The actual decomposition became apparent approximately 8 months after application. By the end of 12 months, most of it had disappeared and the changes in soil structure were dramatic.

It's readily apparent that the micro-organisms in bio dethatch have done their job well—the thatch is gone, leaving a rich humas for better water penetration, retention, and improved soil tilth. It all adds up to a stronger, healthier turf when using this proven product. If you'd like more information on bio de-thatch see your local USSAC distributor or, write to USS Agri-Chemicals, P.O. Box 1685, Atlanta, Georgia 30301.

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Granular Linuron Control Of Poa Annua In Bluegrass

Poa annua in Kentucky bluegrass varieties grown for sod production purposes can be satisfactorily controlled with 2.5 to 5.0 kg/ha of granular linuron, according to a report given at the recent 30th Annual Meeting of the Northeastern Weed Science Society in Boston. The report was prepared by Dr. Paul Henderlong, Ohio State University professor, and Paul L. Jacquemin, research agronomist at O.M. Scott & Sons Co., Marysville, Ohio.

In their paper, entitled "Selective Control of Poa annua in Kentucky Bluegrass", the researchers noted their studies were conducted to determine the minimum effective application rates of granular linuron under varying environmental and soil conditions. A representative for O.M. Scott & Sons Co. told WEEDS TREES & TURF its ProTurf Selective Poa annua Control is registered in Colorado, Nebraska, Minnesota, Iowa, Pennsylvania, New Jersey, Michigan, Ohio, Indiana, Illinois, New York and Wisconsin for use on bluegrass sod fields only, because of the low linuron tolerance of other grass species.



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A design award for the belt-tensioning adjustment assembly on belt-driven centrifugal pumps was recently given to Hypro Division, Lear Siegler, Inc., by the Gray & Ductile Iron Founders' Society. The award was accepted on behalf of Hypro by Ramon Pareja (right), engineering vice president. It was presented by Albert W. Gruer Jr. of the Society. Hypro is in St. Paul, Minn.

Butz Names 12 Scientists To Plant Genetics Board

Secretary of Agriculture Earl L. Butz recently announced the appointment of 12 scientists to a United States Department of Agriculture advisory committee of plant genetic resources. Appointed to two-year terms were:

Dr. D. F. Beard, vice president of research, Waterman-Loomis Co., Adelphia, Md.; Dr. William L. Brown, president, Pioneer Hi-Bred International, Inc., Des Moines, Iowa; Dr. Paul J. Fitzgerald, associate deputy administrator, North Central Region of USDA's Agricultural Research Service, Peoria, Ill.; Dr. W. H. Gabelman, professor of horticulture, University of Wisconsin-Madison; Dr. Charles O. Gardner and Meyer Katz, professors of agronomy, University of Nebraska-Lincoln; Dr. Harold D. Loden, executive vice president, American Seed Trade Association, Inc., Washington, D.C.; Dr. Don C. Peters, professor and head, Department of Entomology, Oklahoma State University, Stillwater; Dr. Charles M. Rick, professor and geneticist, University of California-Davis; Dr. H. F. Robinson, chancellor, Western Carolina University, Cullowhee, N.C.; G. F. Sprague, professor of plant breeding and genetics, University of Illinois at Urbana-Champaign; and Dr. Sterling Wortman, vice president, Rockefeller Foundation, New York, N.Y. Robert W. Long, assistant secretary of agriculture for conservation, research and education, will serve as chairman.



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