

Pennfine Perennial Ryegrass. Maybe it's got a weakness, but nobody's found it yet.

For three years now, the professional turf community has been putting certified Pennfine Perennial Ryegrass to the test. The results are in:

Pennfine has consistently outperformed other fine-leafed ryegrasses in trials from Pennsylvania to Florida.

More importantly, Pennfine has consistently matched or exceeded the expectations of turf management people on golf courses, athletic fields, sod farms, parks, cemeteries and public grounds from Maine to California.

No one has reported a real weakness. All the characteristics the Penn State researchers were seeking when they developed Pennfine have proven out in actual application.

Soft fibres to facilitate mowability were the foremost consideration in breeding Pennfine. Both trial data and feedback from the professionals who've used it indicate that Pennfine is the cleanest cutting ryegrass available today.

Pennfine's excellent disease resistance, exceptional decumbency, persistence under a variety of management conditions, fine texture and compatibility with both Kentucky Bluegrass and fine fescue have also been demonstrated. And in the production fields of the Pacific Northwest, a major effort is being made to meet the already heavy demand for certified Pennfine Perennial Ryegrass.

If you would like specific information, write: Pennfine Perennial Ryegrass, P.O. Box 923, Minneapolis Minnesota 55440

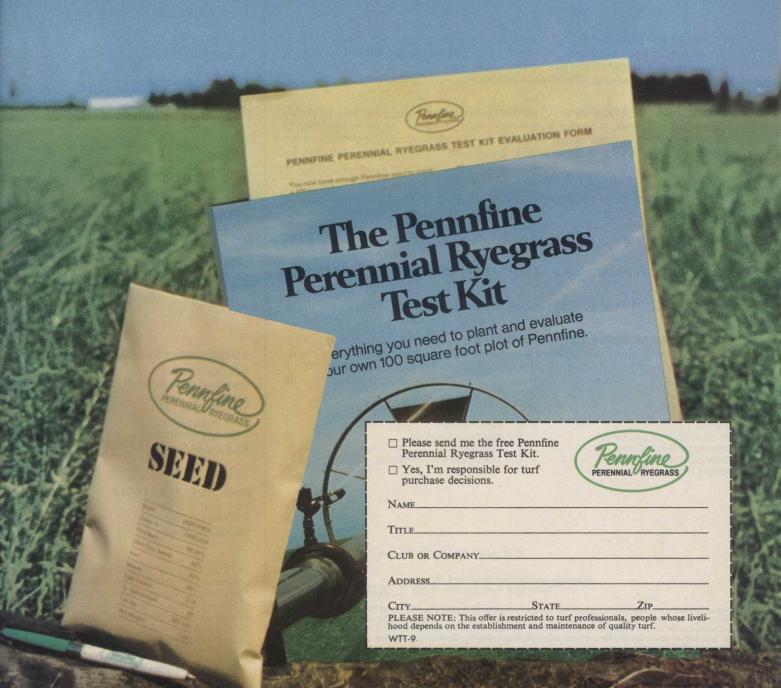


Test it yourself, on your own turf with the new Pennfine Test Kit.

It's free. And it contains enough seed to develop a 100 sq. ft. Pennfine test plot, along with technical data and evaluation sheets. So now you can see for yourself, under your own conditions, if Pennfine is really as good as we say it is. You will be able to test it for establish-

ment, mowability, management requirements, persistence and any other qualities that interest you.

If turf quality is important enough to you to warrant this kind of testing, send us the coupon and we'll send you a Pennfine Perennial Ryegrass Test Kit.



September 1974, Vol. 13, No. 9

THE COVER-Pull strength of nettingreinforced sod is demonstrated at the American Sod Producers annual summer meeting. Sod strength tests along with equipment demonstrations and exhibits highlighted the three day

MY REASONS FOR TREES-Most golf course superintendents are eager/scared (choose one) to plant more trees. Richard Boehm, golf course superintendent, doesn't look at trees as a necessary evil but hopes to create a more positive atmosphere with an intensive tree planting and maintenance schedule......10

PROTECTION, SERVICE AND ... PROFIT—Replacing a tree, whether a landmark or backyard shadetree, is more than a money matter. However, steps can be taken to insure against one of trees' natural destroyers - lightning. John Duling tells how the commercial arborist can profit as well as provide service in lightning protection for

COOL WEATHER WEED CONTROL—Testing the synergistic effects of herbicides at the Lawn Institute, Marysville, Ohio, is proving that season-end applications are effective for broadleaf weed control. A detailed report that may help you make better use of

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HYACINTH	CONTROL	SOCIETY	CONFERENCE	REPORT	·	22

1975 MANAGERS GUIDE TO EQUIPMENT AND SUPPLIES—One of the most important steps when buying equipment is selection. This two-part guide first lists manufacturers and their equipment and supplies. Product groupings and manufacturers are

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As a professional, you know

FALL IS THE BEST TIME OF ALL TO FEED A TREE... with JOBE'S TREE FOOD SPIKES



William Kobel, Superintendent, Union Country Club, Dover - New Philadelphia, Ohio

Autumn is tree feeding time. Because you are a professional, you know that Jobe's Tree Food Spikes hammered into the ground over the roots of trees will help overcome weaknesses brought about by summer heat, lack of moisture, ravages of insects, battering of winds. Especially this fall, when drought has prevailed over much of the country, trees need feeding.

Jobe's Tree Food Spikes will stimulate new root growth right up until the ground is frozen

solid. As the root system develops this fall, it gives trees as well as shrubs the stamina to survive winds, rain, sleet, freeze and thaws of winter. Feeding this fall also gives the tree an earlier start next spring since a reservoir of plant food is provided.

Fertilize the trees you're responsible for with Jobe's Tree Food Spikes. Call your local jobber or distributor or order direct: 5 cases @ \$30 per case, 15 cases @ \$25 per case, freight prepaid.

Jobes TREE FOOD SPIKES

International Spike, Inc. 462 East High Street, Lexington, Ky. 40508

Dept. W

Green Industry crops are non-agronomic, and are of necessity treated as minor crops when pesticide laws are being debated. This is true despite the fact that commercial turfgrass, trees, nursery crops, etc., are in the multi-billion dollar

Now that we are facing October '76 as a deadline for certification of applicators and registration/reclassification of all pesticides, we either act in unison as an industry or we abide by whatever handouts the agronomic lobbies and legislative bodies determine for us.

We are being had in areas relating to research. Why? Because chemical manufacturers are faced with super costs in getting a new product registered for use. Not only more dollars are needed today, but more years of development are required to determine the validity of a new pesticide. The food crop may justify the risk; the non-food crop will seldom do so.

We are being had by law-making bodies. Because most green industry crops are low-priority compared to food crops, the new supportive research data needed to grant special pesticide uses for specific species are not being developed. Further compounding the problem is that many previous pesticide control chemicals are now illegal, the result of the Federal Environmental Pesticides Control Act of October '72.

Ouestions relating to this situation are basic. Who is to blame? What can be done? Answers are equally basic. Both chemical companies and government regulatory bodies are utilizing a practical approach. Attention is given the agronomic (largely food related) crops.

The second answer as to what the Green Industry can do is more involved. But to various segments of the Green Industry, what is actually done may well determine their existence.

For a starter, the many segments nurserymen, custom applicators, sod growers, arborists, golf superintendents, park superintendents, structural pest control operators and all the others - must act as a single entity.

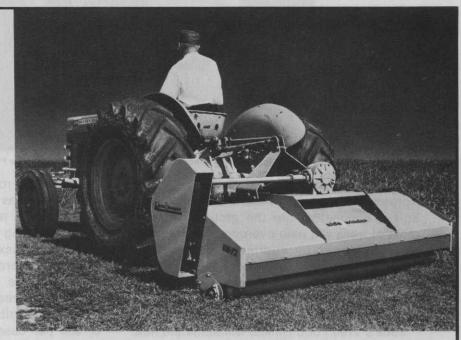
(continued on page 27)

side winder

editorial

Flail Mower

The improved safety of flail mowing (compared to rotary cutting) plus a carpet-smooth finish in 6-foot wide swath. The new Side-Winder FM-72, designed for safer industrial, commercial and institutional mowing. Heavy steel shield and extra strong rubberized safety curtain give protection for operator and bystanders. New patented blade design thatches grass and weeds for smooth, well-groomed finish. Residue is pulverized for cleaner appearance and faster decomposition. Dyna-balanced blade drum protects bearings and gives a much smoother, quieter, vibrationless operation. Compare the FM-72 with any large capacity mower for a safe design and top performance.



GOLF COURSES | RIGHT-OF-WAYS

PARKS & CEMETERIES

RECREATION AREAS

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INDUSTRIAL GROUNDS

Side-Winder Plant Agricultural Machinery Division Box 818 Minden, Louisiana 71055



Chipco Microgreen Liquid is a blend of metallic micronutrients. It will correct yellowing of turf and ornamentals caused by soil deficiencies. Treated turf and ornamentals develop healthier root systems. So they're less susceptible to disease and moisture stress. Chipco Microgreen Liquid: easy to use, effective and extremely economical.

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





A Clinton, Massachusetts firm turned over \$10,000 to EPA in the <u>largest civil</u> settlement ever reached under the Federal Insecticide Fungicide and Rodenticide Act. EPA filed a 12-count complaint against the Van Brode Milling Co. of Clinton on May 14 charging that the firm had made three shipments of an unregistered and misbranded pesticide product. EPA claimed the product was not registered under federal law and the front label did not contain required cautionary statements; did not contain a list of ingredients nor concentration of ingredients; did not list the volume or weight of the product. The shipments were of a product called "Water Purification Tablets."

Alleged antitrust violation charges were dismissed against Monsanto Co. recently. The jury trial centered around allegations that Monsanto's marketing practices in the distribution and sale of its agricultural herbicides to distributors were in violation of federal antitrust laws. The case was brought against Monsanto by Reed Brothers, Inc., Winterset, Iowa. Reed claimed conspiracy relating to alleged territorial and customer restrictions.

EPA's August 2, 1974 intention to suspend label registrations of aldrin and dieldrin will not effect its manufacture or use in the commercial pest control industry, according to a Shell Chemical Co., spokesman. "Although the EPA proposal is to suspend other label registrations of aldrin and dieldrin, it is the intent of Administrator Train to permit the sale and use of labelled, formulated stocks of aldrin and dieldrin on hand as of the effective date of the suspension order proposal," he said. "Thus the sale and application of properly labelled formulations of aldrin and dieldrin for other pest control applications such as soil insect control on turf and nurseries,....will be permitted until existing formulated stocks are depleted."

A Standards Advisory Committee on Hazardous Materials Labeling was named by The Department of Labor. OSHA boss, John H. Stender, said the committee will develop and recommend to OSHA standards for categorizing and ranking hazards of industrial materials. They will also recommend required warnings and safe handling procedures, to protect employees from toxic substances. The 15-member panel includes four representatives each from employees, employers and the federal government, one representative of state government and two from general public.

OSHA is preparing an environmental impact statement of a proposed standard for worker exposure to carbon monoxide. They are particularly interested in receiving public comments and information reguarding the substance.

Section Four of the revised Federal Insecticide, Fungicide and Rodenticide Act dealing with certification standards for commercial pesticide applicators becomes final October 1974. Deadline for public comment was March 1974.

A burst of brilliance... Fylking for the World's Fair!

Fylking Kentucky bluegrass is a superior, elite bluegrass that burst like a star on the scene in the sixties!

Since then Fylking has established records making it the perfect choice for the official grass at the environmental World's Fair, Expo '74.

Fylking has proven to have superior resistance to disease and drought; withstands traffic. Its thickly woven rhizome root system develops dense sod so quickly Fylking can be lifted in 90 days. Fylking can be mowed at 3/4 inch (even 1/2 inch) and thrive. It absorbs carbon dioxide pollutants, gives off oxygen, cools air by releasing water vapor.

A superior mixer, Fylking greens up earlier in spring, stays greener in summer heat, remains green longer into fall.

Choose Fylking and your customers are getting a grass good enough for a World's Fair!



FYLKING KENTUCKY BLUEGRASS

U. S. Plant Patent 2887

Another fine product of Jacklin Seed Company

Fylking's rhizome root system develops so thickly, under ideal conditions sod can be lifted in 90 DAYS.



Low growth, short leaf sheaths and abundant tillering of Fylking (right) compared with another elite bluegrass plant.



Cross section displays thick, luxuriant turf, fine leaf texture and brilliant green color of Fylking.

'MY REASONS FOR TREES'

Richard Boehm is a man who loves trees.

He would love them even if he didn't need them, but as superintendent of the Wright-Patterson Air Force Base Military Golf Course he feels trees are not just nice to have but an absolute necessity.

So necessary that in his first year, he put out about 490 new trees. That was only more than twice as many as started with. So far this year he's put out fifty more.

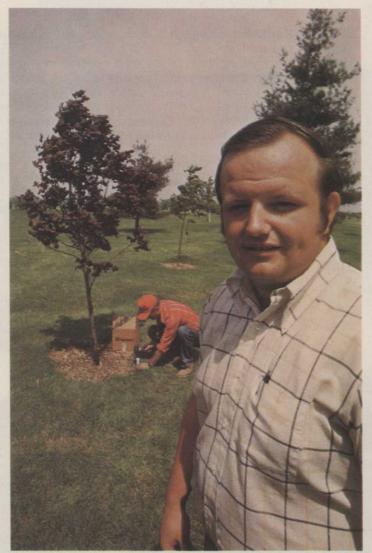
The course is directly across a road from the flight line, and you know where they build airfields: on the biggest, flattest hunk of real estate they can find.

Boehm's course does have some low, rolling "hills," and there is a nice little lake between tee and green of one par three hole, but mostly it's next thing to runway flat.

Fairways going in opposite directions are often separated only by a narrow rough and out-of-bounds markers . . . or were, until Boehm started setting out his trees.

Now those trees delineate the fairways, decorate the tees and greens and do their part to make sure golfers use and hone their skills.

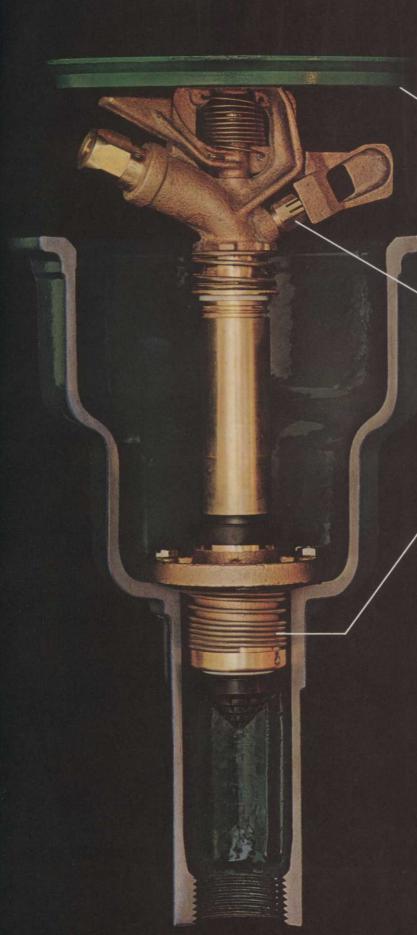
"There are a number of reasons (continued on page 27)



Superintendent of Wright-Patterson Air Force Base Military Golf Course, Richard Boehm (foreground), checks the installation of tree fertilizer. Below: Eliminating time-consuming trimming around trees is accomplished by applying Casoron herbicide around the base. Boehm claims this practice eliminates about 90 percent of all hand mowing.



And the green grass grows all around



Anyone can show you lush, green grass—on someone else's course. Rain Bird shows you the exclusive features of our Pop-up Sprinkler, Model 51, that let you grow your own. For instance...

The highest pop of any sprinkler (2-5/16"). Grass can't distort the distribution pattern. You get uniform growth—no dry rings or wet spots.



Special nozzle features assure a tight, windresistant stream for longer throw and equally efficient close-in watering without puddling. That means even growth throughout a greater area.



 Positive retraction spring prevents heads from sticking up—a hazard to mowers and sprinkler heads. There's no danger of missed waterings or cuttings.



Positive seal features mean maximum pressure through the nozzles—with easy accessibility of parts promoting faithful maintenance.

Don't settle for pretty pictures. With Rain Bird at work, you can see all the lush, green grass you like. It grows all around—all around your course.



Protection, Service and . . . Profit

Everybody stands to gain from a reported trend in our industry — a noticeable increase in purchase of lightning protection materials for trees by arborists and supply houses. Obviously, a growing number of tree protection systems are being installed by people in an excellent position to do so properly and profitably — arborists or tree experts.

The benefits to customers are great for lightning is a major crippler and destroyer of trees and the danger is greatest to those shade and specimen trees that are oldest, tallest, and most valuable. Future generations benefit, too, when historic and irreplaceable trees are protected.

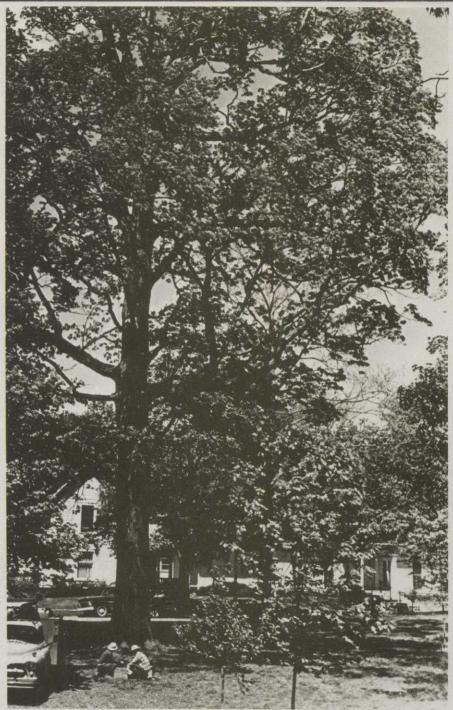
And there are at least a half dozen advantages for us. I have been interested in lightning protection for valuable trees since my early training in the '30's and feel an obligation to advise customers to protect their trees against this danger. We have found that we have gained in the following ways from our lightning protection work with trees:

1. Added business is gained without much additional investment for our trucks, ladders and tools are largely the same.

2. Installation techniques and skills also fit our current knowledge and training. Methods of fastening equipment to trees are quickly learned by our crews. In fact, a skilled climber is in demand in the lightning protection installation business as well as in ours.

3. Lightning protection work is profitable for manufacturer-suppliers furnish counsel and even layouts, as well as special materials when and as needed.

4. Sales leads come naturally and easily for customers whose trees have been damaged by lightning come to us.



The bigger and more valuable the tree, the likelier target it is for lightning injury or destruction. This large white oak in Indiana, a huge specimen of the species found to be struck most often, is in an area of above-average thunderstorm activity. Its protection was a sizeable job.



Lightning protection installation comes naturally. It fits the knowledge, tools, skill and experience of tree climbers.



This is a lightning protection air terminal, manufactured and designed specially for trees.

- 5. There is great satisfaction, I find, in furnishing to customers a means of preventing damage, as an alternative to repairing it after lightning has struck, provided it is repairable.
- 6. Finally, lightning protection materials, equipment, sales, methods and manpower all fit so well with our basic business that it can be encompassed profitably in an over-all business sense. You can offer a valuable service as a profitable expansion

Why and How Lightning Strikes

Lightning strikes trees because they are better conductors than air. Trees most likely to be struck are lone trees, the tallest in a grove, those at the edge of a grove toward an approaching storm, and trees located close to buildings where wiring or plumbing might enhance ground conductivity.

From thousands of lightning property losses reported over a two-year period, the LPI picked 1,000 losses, large and small, in which the lightning bolt's point of entry into the house was known. In 112 of those cases, or 11.2 percent, the bolt first struck a tree, then flashed to the house in search of better ground.

Lightning codes require the house to be fully protected with separate protection on each tree taller than the house which is within ten feet of the building.

Safety a Major Factor

The need to preserve trees of historic or sentimental value has, in the past, been the main motivation for installing protective equipment. However, other factors, such as the desire to protect buildings, cars, and people from the damaging side effects of a lightning bolt striking a tree may enter into the picture.

From 80 to 90 percent of all live-

stock deaths in the United States are caused by lightning bolts. Among cattle, one-third of such deaths occur under trees where the animals have sought shelter.

It is reported that more oaks are struck than any other species. But, there may be more oaks in heavier storm areas. All other factors equal, a tulip tree in a grove of trees containing all species is said to be the likeliest target.

A study has shown that the species most often struck by lightning to be in this order: oak, elm, pine, tulip tree, poplar, ash, maple, sycamore, hemlock, and spruce. Species struck least often are beech, birch, and horse chestnut.

Golf courses lead as sites of outdoor lightning casualties, both those under trees and in open shelters; course owners could equip trees, as well as shelter houses, with lightning protection. So could picnic ground owners, park boards or managers and many home owners.

Probably the biggest single factor in the increase in lightning protection installations is the fact that a turning point has been reached where generally it is more expensive to remove a lightning struck tree than to protect one.

In new outlying residential areas, particularly, real estate appraisals put values on trees that, when viewed against their increasing vulnerability to lightning as they grow taller, makes protection very wise and desirable.

How Installations Are Made

There are several codes and standards covering lightning protection installations for trees. The National Arborist Association now has a standard; the National Fire Protection Association's Lightning Protection Code has a section on tree protection, as does Underwriters Laboratories' Master Label Requirements. The Lightning Protection Institute's new Code includes this tree protection standard:

One main cable should be coursed from the air terminal at the top of the main trunk or branch to the ground terminal. Acceptable secondary conductors should be coursed from miniature branch points, as far out on the main branches as possible to the main conductor on the tree trunk.

To avoid possible injury to roots by locating depth groun-



According to Code recommendations, two down-conductors are needed for large trees having trunks more than three feet in diameter. Cables lead from air terminals at top and on main branches to at least two grounds, located outside main root system.



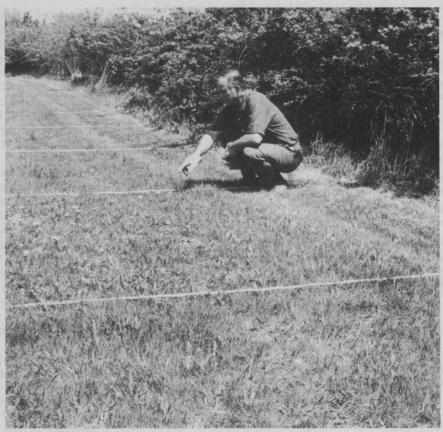
This outstanding banyan tree in Cypress Gardens, Fla., is now protected against lightning. Installation was made during the National Arborist Association meeting in Tampa last winter.

ding near trunks of trees, the conductor should be extended out and away from the base of a tree in a shallow trench to a distance of not less than 12 feet or to the extremity of the overhanging branches. This conductor should terminate in a ground terminal. (It should be kept in mind that usually the underground spread of the roots of the tree is equal in area to the spread of the tree branches above ground.) Depth groundings should be made outside the area of the root spread.

If the grounding on a protected building is within 25 feet of the tree, the two systems should be interconnected. If the tree or grounding of the tree is within 25 feet of a water pipe or a deep-well casing, a connection should be made between them

Trees with trunks which exceed 3 feet in diameter, and which have extra long branches, should have two down conductors. They should be led down opposite sides of the tree and connected to the two ground terminals. These two ground terminals may well be joined by a circular or semi-circular conductor or a counterpoise buried in a shallow trench.

If there are several trees in a row (all major trees), the ground terminals of two trees not more than 80 feet apart may be interconnected by a trench conductor coursed to the base of each intermediate tree. The down conductor of each intermediate tree may connect with the 'trenched' interconnecting conductor. This practice avoids making independent groundings for each tree.



In December 1973, Trimec "Fairway" applications were made to this series of 100 square foot test plots in 9 replications for "heavy" rate and 5 replications at normal dilution. The plot in the foreground and the one immediately behind the figure were treated. A check plot is in front of the figure.

Cool Weather Weed Control

By ROBERT W. SCHERY, Director, The Lawn Institute

We have had great success with late autumn or early winter broadleaf weed control, using a synergistic combination of herbicides of the Trimec or Trex-San type. These effective broadleaf weed controls widely used on golf courses seem destined for homeowner availability as well.

The basic components are the well-proven 2,4-D, MCPP, and dicamba herbicides. They are carefully combined in proportions that research has proven especially effective, resulting in a formulation that "packs more power" than the sum of its components. This is synergism, of course, in which two or more compounds working in tandem enhance the effectiveness of one another. As a result Trimec usually controls more weeds, at lighter rates, than would an equivalent concentration of any single component, - and with consequent greater safety. For added assurance on "touchy" species such as bentgrasses, a special "Bentgrass" formulation steps up the MCPP proportioning over that in the "Fairway" formulation so much used for bluegrass-based sods. Still a third formulation is offered for southern grasses such as St. Augustine. In all cases the herbicides come as a stabilized concentrate requiring only addition of the requisite amount of water. This avoids "workshed chemistry" difficult for inexperienced help unfamiliar with mixing accurately compounds of varying strength and formulation.

At the Lawn Institute we have been well impressed through the years with "season-end" control of broadleaf weeds. Sprayings made earlier — in late summer or autumn — kill existing weeds, of course, but seem not to catch the late-starting dandelions, plantains, chickweeds, veronicas, and suchlike. Measured by the frequency of weeds in the next spring's lawn, treatments made after mid October have usually shown up better than earlier ones.

Not only will the later treatment conquer almost all of the weeds destined to sprout for the year, but it takes advantage of a relatively slack season (when mowing is through, and labor demands have materially eased). Phenoxy herbicides alone are not too potent in cooler weather, so that certainly late treatment should include some dicamba. Although Trimec-type formulations are essentially non-volatile, even in warm weather in my experience, an added safety factor with late-season use is that the deciduous ornamentals have finished their growing season and will not sustain drift damage such as might occur when buds are bursting and tender new foliage is exposed.

Although herbicidal control of winter weeds such as annual veronica, rosette crucifers, and volunteer dandelions in shrub beds as well as in lawns had proven most successful, we decided to conduct more elaborate late-season testing in 1973. Thus in early December Trimec

SEPTEMBER 1974 15

REF	LIC	CATES							TOTAL
1	2	3	4	5	6	7	8	9	
1 11	22 13	33 20	30 40	6 43	8 39	12 10	7 35	7 7	127 218
1 6	1 10	1 14	3 12	2 12	1 3	1 16	17 40	8 40	35 153
0 18	4 5	12 100+	20 0	0	0 17	0 30	8 4	0	44 174+
0 10	0	0	0 2	0 2	0	0	0	0	0 14
0 3	1 0	1 3	0 2	0	0	0 5	4 4	3 5	9 23
}	} No talley				Almost none Abundant				
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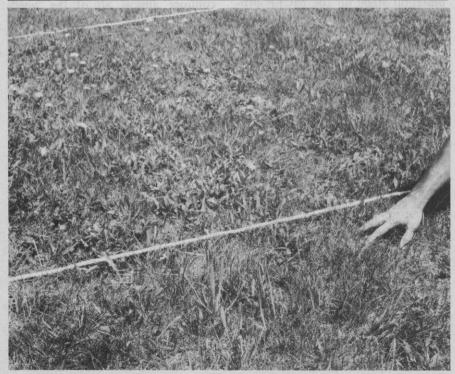
Weeds in all treated plots, 215 — in all controls, 582

Table 1. Exemplary weed counts on April 29, for treatments made previous December 1, using 6 ounces of Fairway Trimec in 3 gallons of water sprayed over 1,000 square feet. Talleys are from "quick counts" in a 5-foot band across center of plot.

	REPLICATES				TOTAL		
WEEDS CHECKED	1	2	3	4			
Plantago spp. treated Plantago spp. control	32 11	20 5	22 6	16 34	90 56		
Dandelion, <i>Taraxacum</i> , treated Dandelion, <i>Taraxacum</i> , control	15 13	6 31	0 19	1 3	22 66		
Prunella, treated Prunella, control	0 13	75	0 0	0 21	0 109		
Other Compositae & misc., treated Other Compositae & misc., control	0 8	2 13	3 2	0	5 23		
Rushes, Juncus, treated Rushes, Juncus, control	No talley			A	Almost none abundant		

Weeds in all treated plots 117 — in all controls 254

Table 2. Exemplary weed counts on April 29, for treatments made previous December 2, using 2 ounces of Fairway Trimec in 3 gallons of water sprayed over 1,000 square feet. Talleys are from "quick counts" in a 5-foot band across center of plot.



A Trimec treated plot in foreground, check plot in rear.

"Fairway" applications were made to a series of 100 square foot plots in 9 replications for "heavy" rate and five replications at "normal" dilution. This particular Trimec formulation, on an active ingredient basis, is 27.6% 2,4-D, 13.8% MCPP, and 2.8% dicamba. Plots alternated with controls of equal size, and were hand sprayed at the rate of 6 ounces of Trimec in 3 gallons of water per 1,000 square feet for the heavier rate (2 ounces for the lighter rate). The test turf had been mowed but not weeded nor fertilized through the exceptionally rainy Ohio summer of 1973. Several severe nightly frosts had occurred, but the season as a whole was moderate and amply moist. Such grass as was present remained quite green, but warmweather weeds were giving ground. The most evident broadleaf weeds in the test area at this time were narrowleaf plantain (Plantago lanceolata) and selfheal (Prunella vulgaris).

Results from these treatments, as measured April 29, 1974, are summarized in the tables. The photographs show that weed control from the December sprayings stood out quite well into spring, even though any treatment is bound to be "temporary" where little grass exists to fill space vacated by the weeds. Even so, weed count showed about a two-thirds reduction at the heavier herbicide rate, and about half at the lighter rate. Plantains (both P. major and P. lanceolata) were the weeds least controlled, perhaps indicating the importance of dicamba in the formulation (dicamba is not particularly effective against plantain). But what was most surprising was thorough elimination of rushes (Juncus spp.) in the treated plots. Rushes are bunchy monocots looking a lot like fine fescue when young, but stiff and hard to mow. Rushes had become quite numerous in the test area during the wet cycle of 1972-73, but (mixing among a scattering of grasses) were paid scant heed, overshadowed as they were by the broadleaf weeds. If the rushes had been included in our tally, weed control statistics would have been even more impressive, since there were literally hundreds of rush plants in each of the check sections, almost none in the treated sections. Of course there is no damage to monocots in the grass family from the Trimec assemblage of herbi-

icides.

The No. I name in golf course irrigation...



The country's top golf courses use TORO irrigation systems. For a number of very good reasons:

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the commercial sod industry

ASPA Convention Report

The Growing Sod Market

"The market is so good but the soil is so bad, that we would grow sod on the walls to meet the demand," John R. Hall said as he addressed members of the American Sod Producers Association (ASPA) at its summer convention July 16 to 18 at New Carrollton, Maryland.

Hall, secretary of the Maryland Turfgrass Association and turfgrass specialist at the University of Maryland, outlining the sod market in Maryland said the state's 80 sod growers made sod production the fourth most important agronomic crop last year. He also presented the group with statistics on housing starts, average family income and potential population growth to prove just how good their commercial sod market is. Maryland's Sod Certification Program, Hall continued, stimulates good management practices, provides for the best varieties of sods and good pest control; and benefits not only the producer but the installer and consumer.

But the modern sod grower is not just confronted with everchanging problems of an uncertain economy. During their annual business meeting Wednesday morning, members faced a dilemma of serious concern to their national organization. Jack Kidwell, thenpresident of the association, asked members to interpret a section of their basic constitution that could alter the course and function of ASPA.

In brief, members were asked to take a position on whether or not to include sod installers as "incidental to the production of sod and thus remain within the definition of agriculture."

Several members voiced opinions pro and con. Some questioned the position as being prejudicial to the interests of their customers, namely sod installation contractors. Others cited the ASPA constitution defining a member as anyone involved in the 'production, maintenance or marketing of sod.'

Kidwell said the producer members would receive a questionnaire asking them to indicate their position on the issue. The ballots would be tabulated and the associa-(continued on page 26)

A special exhibit area in hotel featured the latest developments in sod harvesting and handling equipment. Here ASPA members chat with commercial representatives.



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Under the critical eye of sod producers and installers, this harvester gets a tough workout on some of Maryland's dry, rocky soil. This equipment demonstration took place at Dick White's Sod Farm.

meeting dates

Virginia Tech Field Days, Turf Research Center, Blacksburg, Va., Sept. 18-19.

International Pesticide Applicators Association, convention, Seattle, Wash., Sept. 18-21.

Mississippi Turfgrass Conference, Holiday Inn, Biloxi, Miss., Sept. 23.

Arkansas Turfgrass Field Day and Conference, Little Rock Country Club, Little Rock, Ark., Sept. 24-25.

American Association of Botanical Gardens and Arboreta, annual meeting, Sheraton Hotel, Boston, Mass., Oct. 4-8.

New Jersey Golf Course Superintendents Association, turfgrass supplies and equipment field day, Montclair Golf Club, West Orange, N.J., Oct. 7.

National Institute of Parks and Grounds Maintenance, fourth annual meeting, Pittsburgh Hilton, Pittsburgh, Pa., Oct. 7-10.

American Horticultural Society Congress, Washington, D.C., Oct. 9-12.

Rocky Mountain Regional Turf Equipment and Product Show, Adams County Fairgrounds Exhibit Hall, Brighton, Colo., Oct. 10.

Southwest Turfgrass Conference, New Mexico State University, Las Cruces, N. Mex., Oct. 10-11.

Central California Regional Meeting, Western Chapter of the International Shade Tree Council, Community Center Bldg., Reedley, Calif., Oct. 11.

Hortiscope International Short Course "74" (Oct. 10-12) and 1974 Florida Nursery and Allied Trades Show (Oct. 11-13), Curtis Hixon Convention Center, Tampa, Fla.

Southern California Turfgrass Council, 14th annual exposition, Orange County Fairgrounds, Costa Mesa, Calif., Oct. 23-24.

Central Plains Turfgrass Conference, K-State Union, Kansas State University, Manhattan, Kans., Oct. 23-25.

Tidewater Shade Tree Conference, Norfolk Botanical Gardens, Norfolk, Va., Nov. 12.

8th Annual Turfgrass Conference, Clemson University Cooperative Extension Service, Clemson, S.C., Nov. 12-13.

New Jersey Turfgrass Expo '74, educational conference and trade show, Sheraton Poste Inn, Cherry Hill, N.J., Dec. 2-5.

Midwest Association of Golf Course Superintendents, 22nd annual turf clinic, Medinah Country Club, Medinah, Ill., Dec. 3.

Ohio Turfgrass Conference and Show, Ohio State University, Columbus, Oh., Dec. 3-5.

National Agricultural Aviation Association, convention/exposition, Las Vegas, Nev., Dec. 3-7.

Delaware Turfgrass Conference, John M. Clayton Hall, University of Delaware, Newark, Del., Dec. 9.

New England Chapter, International Shade Tree Conference, 11th annual meeting, Kings Grant Motor Inn, Danvers, Mass., Dec. 11-12.

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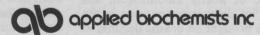
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industry news and newsmakers

Scientist Studies Pollutant's Effect on Woody Plants

Plant physiologist Bruce R. Roberts of USDA's Agricultural Research Service (ARS) is finding significant differences in the abilities of woody plants to take up sulfur dioxide (SO₂), a major air pollutant, from the space immediately around their leaves. Red maple, white birch and sweetgum seedlings have been shown to take up more SO₂ than rhododendron, white ash and azalea seedlings.

Using controlled temperature, light and humidity in a growth chamber at the ARS Shade Tree and Ornamental Plants Laboratory, Delaware, O., Roberts is gaining basic knowledge about relationships between woody plants and air pollution. He hopes this knowledge will enable him to recommend to city planners which trees, shrubs or combinations of plants would be most suitable as "pollution"

fighters." New understanding also may help scientists find ways to protect plants from pollution damage.

Of the major air pollutants — ozone, SO₂, nitrogen oxides, ethylene, and fluorides — Roberts chose to work principally with SO₂. This pollutant can be used as a radioactive tracer to find out what happens to the gas after it enters the woody plant. Roberts has observed that SO₂ molecules are chemically altered soon after they enter the leaf — first they are oxidized to sulfites and then to sulfates. Some sulfuric acid may be formed, which might account for some of the pollution damage to plants, Roberts said.

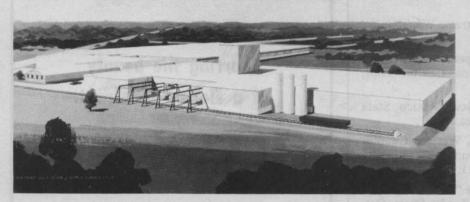
Photosynthesis can be affected by SO₂ pollution. The pollutant damages chloroplasts in the plant cells where photosynthesis takes place. Roberts hopes to be able to diagnose the type and extent of pollution damage by examining affected cells.

Studies have indicated depression of photosynthesis. Red maple seedlings fumigated with 1 ppm of SO₂ for four to six hours took up slightly more carbon dioxide than unfumigated seedlings. In contrast, leaves of seedlings exposed to an SO₁ concentration of 6 ppm were severely damaged, permanently depressing photosynthesis. Seedlings exposed to 4.5 ppm were damaged, but their ability to photosynthesize rebounded rapidly.

Roberts' SO₂ experiments indicate that, unless plants are injured by the pollutant, uptake remains constant — at least over a six-hour period. In some species of woody plants, he observed that the amount of uptake varied little, whether they were exposed to SO₂ concentrations of 1 ppm or 0.2 ppm.

"We're not sure exactly what happens here," Roberts said. "I think it involves the pollutant's effect on stomatal opening."

Roberts theorizes that stomates in the leaves of shade-tolerant trees may open and close faster, making these trees also more tolerant to pollution. If this theory is borne out in further studies, plant breeders will be better equipped to select trees for pollution tolerance.



Construction has started on this all-electric foundry for The F. E. Myers & Bro. Co., Ashland, Ohio. The \$5 million, 110,000 square-foot facility is scheduled for completion in late summer, 1975.

Two More Seasons of Tight Fertilizer

The nation can expect continued tight fertilizer supplies through 1975 and 1976, said Robert C. Gunness, vice chairman of Standard Oil Company (Indiana).

Gunness said that nitrogen fertilizer shortages have developed during the 1973-74 season both in the U.S. and throughout the world, and the outlook is for continued domestic shortages during the 1974-75 and 1975-76 seasons. Domestic demand has risen sharply in the past two years. While Gunness views the probable shortfall at closer to five percent, he said estimates of the current U.S. shortage vary from five to 15 percent.

U.S. ammonia capacity, the source of nearly all nitrogen, has been flat since overexpansion in the 1960's brought on drastic declines in ammonia prices. One new plant is scheduled for the early part of 1975,

but no further additions to domestic capacity are expected until 1978. The result is the U.S. will have to look to increased imports to meet the higher demand for nitrogen fertilizer over the next several years. With foreign supplies of nitrogen also tight, it appears unlikely that enough will be available on world markets to fully meet U.S. needs, Gunness said.

As for phosphate, Gunness said considerable additional capacity is scheduled to come on stream in 1974 and 1975, and the current shortages of about eight percent are expected to be eliminated by the 1975-76 season. Ample supplies of potash, both now and in future years, are expected because North American production capabilities, especially in Canada, are considerably greater than expected demand levels.

NASA's Quarantine Vans To House Plant Pathogens

Quarantine vans built for the astronauts have been "recycled" for use by the U.S. Department of Agriculture (USDA).

In 1971, returning Apollo astronauts were picked up from the space capsule by helicopter and were transferred immediately to \$140,000, six-ton, 30-foot mobile isolation vans. En route to more spacious quarters at the Lunar Receiving Laboratory in Houston, Tex., the astronauts spent four days in the vans, transported by ship and flatbed trailer-trucks. Today two of these four vans are being readied for a new kind of tenant — foreign plant pathogens for research on biological control of agriculturally destructive weeds.

A gift from the National Aeronautics and Space Administration (NASA) to USDA's Agricultural Research Service (ARS), the moon mission vans have rolled again, this time to the Southern Weed Science Laboratory in Stoneville, Miss. A third van is in the Smithsonian Institution and the fourth remains in Houston.

In Stoneville scientists will test plant pathogens such as the rust fungi, *Uromyces rumicis*, on curly dock (*Rumex crispus*), and *Puccinia chondrillina* on skeletonweed (*Chondrilla juncea*). Curly dock is found nationwide and is a problem in the humid South. Skeletonweed is a problem in Washington, Idaho and in several counties in California. The weeds compete for space, nutrients and water causing increased expense for chemical controls.

Because curly dock and skeletonweed have both been introduced from foreign sources without their normal complement of natural enemies, and because native pathogens have not been able to control the weeds over large areas, foreign pathogens will be imported from those countries where the weeds are native. They will then be isolated in the NASA quarantine vans, and tested for their ability to attack and damage only the host weed and their inability to damage other plants. After the pathogens have been thoroughly evaluated under quarantine conditions they may be released to help control the weed species.

The project will include studies

on other weeds such as prickly sida, velvetleaf, spurred anoda, morning glory and nutsedge to determine if there are native pathogens with potential for biological control.

Plant Pathologist Howard D. Ohr is the ARS project leader in the study at the Stoneville laboratory.

Ciba-Geigy/Funk Merge

Ciba-Geigy Corporation announced that Funk Seeds International, Inc. has become its wholly owned subsidiary as the result of a merger of Funk and the agricultural division of Ciba-Geigy. Under the terms of the merger, stockholders of Funk prior to the merger are entitled to receive \$17 in cash for each share held.

Army Weed Controllers Transferred to USDA

Five senior scientists from the Army's Vegetation Control Division, their support staff and an installation are being transferred to the U.S. Department of Agriculture (USDA) to begin new research on weed control.

The scientific team is headed by Dr. Robert A. Darrow. Office, laboratory and greenhouse facilities, and a 140-acre research site

near Frederick, Md., needed to accommodate the group are also being transferred to USDA without additional capital investment.

The unit has a data storage and retrieval system that has information on the herbicidal activity of about 31,000 compounds. With this system, USDA will be able to increase the scope of its weed research already being done by the Agricultural Research Service (ARS). The laboratory will operate as an installation of the Chesapeake-Potomac area of the ARS northeast region, as an addition to ARS's existing plant disease research laboratory at Frederick.

A major research objective for this small contingent of scientists will be to develop technology for either inhibiting weed-seed germination or to stimulate germination at times of the year unfavorable to weed survival.

The lack of preventive weed control technology hinders efforts to reduce the cost of controlling weeds and also reduces the effectiveness of weed management programs. Herbicides are now applied to more than 160 million acres. The need for such wide applications could be reduced if scientists assigned to this research mission succeed in finding ways to reduce the vast amount of weed seeds in the soil and to prevent their recycling without adverse environmental effects.



Leo Donahue (left), administrator and legislative liaison for the American Association of Nurserymen (AAN), reviews the AAN's testimony for increased research funds with Congressman William J. Scherle, Republican from the Fifth Congressional District of Iowa. Scherle is a member of the House Appropriations Subcommittee on Agricultural, Environmental and Consumer Protection, and a long-time friend and supporter of the nursery industry.

Hyacinth President Favors Certification

Certification will benefit pesticide applicators. It will bring an air of professionalism. It will set the applicator aside from untrained labor. That's the thinking of Alva P. Burkhalter, president of The Hyacinth Control Society, soon to become The Aquatic Plant Management Society, Inc.

Besides professionalism, Burkhalter believes certification will offer the applicator a better salary, better advancement potential and more job security.

Burkhalter opened the recent annual convention of the Society at Winter Park, Fla. by saying that certification will also stimulate interest in the area of biological control, leading to "integrated management of aquatic control and encouraging expansion into other fields."

Switching to the energy crisis, he warned delegates to "avoid an 'attitude shortage' or an 'internal energy crisis' . . . and get back to a hustling attitude in this Society."

The 1974 registration figure was 306 at this 14th annual convention. This was a near 30 percent increase over last year. Registered participants included delegates from several foreign countries and some 20 states. Research, sales, development, and industrial, governmental

and educational progress highlighted the four-day sessions.

Appearing for the Environmental Protection Agency, John Ritch, director of the EPA Registration Division, stated "The registration division of EPA doesn't know all pesticide applicator problems, and thus doesn't have solutions, but," he said, "we're establishing contacts and learning."

According to Ritch, EPA's intent regarding federal registration is not to eliminate pesticides, but "that the use of pesticides be carefully managed to protect health and property with minimum adverse effects on the environment."

Robert D. Blackburn, formerly at the Aquatic Plant Management Laboratory of the USDA and now president of Florida Aquatic Weed Control, Inc., a private firm, traced the history of the battle against aquatic weeds in Florida and internal strifes which have delayed control. Blackburn said, "While we argued in courts about what to do, water hyacinths continued to grow . . .

"We didn't carry out what we originally set out to do — management of aquatic weed control. We have to have a management program. We've got to learn to work together," he said.



This year's annual banquet was a buffet-style luau held poolside at the hotel. Members were treated to a diving exhibition by a local high school swim team. Banquet speaker William E. Fulford, state representative of District 40, Florida, spoke on "Weeds and Politics."



Alva P. Burkhalter (right) turns the gavel over to L.V. Guerra, the Hyacinth Control Society's new president.

According to Blackburn, answers to the problems of aquatic weed control lie in integrating mechanical, biological and chemical controls and not in political circles. "Let's resolve some of our controversy by face-to-face contact instead of political maneuvering," he said.

More than 50 papers were presented in concurrent educational sessions. The research sessions featured such topics as fungi and water hyacinths, future utilization of water hyacinths for proteins and energy, hydrilla in Iowa and chemical retardation of hydrilla growth.

Applicators' sessions were devoted to operations and field techniques and treated subjects such as weed control with the bifluid invert system, effects of laser radiation on water hyacinth, boating and aquatic weed problems and various means of algae control.

Highlighting the sessions was a joint panel on what chairman John Gallagher of Amchem Products, Ambler, Pa., termed the Society's "Watergate" — the pros and cons of the herbivorous white amur.

Panel speakers included Burkhalter of the Florida Department of Natural Resources, Bill Woods of the Florida Game and Fresh Water Fish Commission, David Sutton of the University of Florida, and John Stanley of the Division of Fishery Research, Bureau of Sport Fisheries and Wildlife, Stuttgart, Ark.

The panel indicated that introduction of the white amur into Florida is still an unresolved issue, with many questions yet to be answered as the program moves from laboratory to Florida waters.

Once the controversial fish is introduced into Florida, the situation may be irrevocable, so many view absolute safeguards and answers to plaguing problems as a necessity.

At the annual business meeting, the following slate of officers was approved by the Society for the coming year: president, L. V. Guerra, Texas Parks and Wildlife Department, San Antonio, Tex.; first vice president, Ray A. Spirnock, Central and Southern Florida Flood Control District, Lake Worth, Fla.; second vice president, Robert W. Geiger, The 3M Company, Pompano Beach, Fla.; past president, Alva P. Burkhalter, Tallahassee, Fla.; treasurer, Brandt G. Watson, Naples Mosquito Control District, Naples, Fla.; editor, David L. Sutton, Fort Lauderdale, Fla.; secretary, T. W. Miller, Lee County Hyacinth Control District, Fort Myers, Fla.; Nelson Virden of Jackson, Miss., and Kerry Stewart of Fort Lauderdale, Fla., as new members of the board of directors.

Next year the group will meet in San Antonio, Tex. Plans include a post-convention trip to Mexico City.



Society members listen attentively to the joint panel discussion on the pros and cons of the controversial white amur. John Gallagher of Amchem Products, Ambler, Pa., presided over the discussion.



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One of the specially designed gang mowers draws attention from the members. This mower and others were demonstrated at the Larriland Sod Farm. Also featured were PTO-driven sweepers and a small spraying unit.



There's a strong new entry in the Kentucky bluegrass lawn field, selected for its attractive appearance, low growth profile and good overall turf performance, including an ability to grow in moderate shade. A selection from Rutgers University, Glade has excellent turf quality, and has demonstrated good resistance to important lawngrass diseases including stripe smut, leaf rust, and powdery mildew. Glade mixes especially well with other elite bluegrasses and fine

fescues. Glade persists in areas of moderate shade where many other bluegrasses weaken because of too little sun. Nationally tested as P-29, it is one of the fastest germinating and establishing bluegrasses; quickly produces a heavy close-knit rhizome and root system, and a very attractive, leafy, persistant turf. Ask for new Glade for use in full sun or in mixtures with fine fescue for shade at your local wholesale seed distributor.

Another fine product of Jacklin Seed Company

SOD (from page 18)

tion would take that position indicated by the majority of voters. Following reports from secretary Gerry Brouwer, treasurer John Nunes and executive secretary Bob Garey, the meeting adjourned.

The sod business is an outdoor enterprise and field demonstrations and tours largely occupied members. After the annual meeting, the members visited a number of

Maryland sod farms.

First stop was Fairwood Turf Farm. A box lunch was served and participants were treated to demonstrations of the newest sod harvesting and handling equipment. Beck, Ryan, Princeton, Nunes, Brouwer and Finneyfrock operated their units on Maryland's typically rocky and dry soil. A new idea in fork lifts, the Frate Lift, designed by Brouwer, attracted attention. The yellow unit featured a three-wheeled chasis, and instead of being towed to the job site, the unit links up to the rear of a truck and lifts itself into travel position, eliminating towing.

Most equipment featured at the demonstration was in the form of improvements and optional equipment for already field-proven units. Specially designed gang mowers, PTO-driven sweeper units and a surprise razing by a crop duster airplane were featured at the Larriland Sod Farm. At Dick White's Sod Farm equipment also included Pyles, Allis Chalmers and Champ fork lifts, a Barnes tiller, a Jacobsen seeder and a Roterria irrigation unit. A Harley Stone Picker was demonstrated at Stedding Turf Farm.

Guest speaker at the banquet was Herbert Wallace, executive vice president of Hart, Schaffner and Marx. The newly elected officers are: president, Charles Davis, Wharton Turf Grass, Inc., Wharton, Tex.; vice president, Paul Florence, Marysville, Ohio; secretary, Charles Lain, Pine Island Turf Nursery, Inc., Sussex, N.J.; treasurer, Wallace Huggett, Huggett Sod, Marlette, Mich. New board of directors members include Norm LaGrande, Hendricks Sodding and Landscaping, Lincoln, Neb., and Thomas A. Thornton, Thornton's Turf Nursery, Elgin, Ill. Attendance at the meeting included 223 sod producers, 78 commercial representatives, 90 wives and children and 20 university members.

TREES (from page 10)

for putting trees on a golf course," says Boehm. If trees are set out in the right places "... they define the hole and make a good backdrop for the hole. We try to keep nice open fairways with a few traps around the greens for the scenic value of that nice white sand. If a golfer hits down the fairway, he's got a nice easy shot ... but if he hits out in the boonies he ought to be lost out there behind a tree. There are still some open areas, but I'm putting in trees to make those more challenging holes. Still, this is an easy course for the average golfer. Even with the trees he doesn't get penalized that much."

"I just want this place to look good and play good and be a good golf course, and the only way to do it is to define the holes. You've got a fairway on one side and a fairway on the other side and what's the use of playing one way when you might as well be playing with the other group coming the opposite direction? You don't want that; you want to be in your fairway and play your hole by yourself. You don't want to share it, except with your playing partners. Never with the party playing the next fairway."

It isn't just a matter of putting out any old tree for the sake of its being a tree. Variety and placement are important.

"I like color," says Boohm, "I like to put out the red maples and flowering trees; crabapples and purple plums. We get dark greens from our pines; red pine, white pine and scotch pine. We also use mountain ash, lindens, honey locust, sycamore and maples."

Boehm's trees are not little bitty ones. The smallest are 7-8 feet high and big enough to do some good for the course right now, although, he says, "... they gave us some little ones this year, so we found places for them."

You can't just stick in a bunch of trees and forget them.

Boehm says: "Some people don't believe in fertilizing trees." He says it as if he really means some people don't care about trees; perhaps consider them a necessary evil, existing mainly to make mowing and turf care more difficult, and in an age of soaring labor costs, more time-consuming.

It isn't so.

"Maybe you can ignore an established tree. Some big old river cottonwood with a massive root system isn't going to have any trouble finding nourishment. But a young tree — anything less than 8-10 inches in diameter — needs food."

The old, established methods of fertilizing trees take time. You can go out with an auger and bore holes and pour in bulk fertilizer. It works, but you need the auger, a crew to run it and it's time-consuming. If you broadcast fertilizer around the tree — enough to do any good — you either make the grass grow so much faster than surrounding grass that it's unsightly, or you put down too much and burn the grass. There was no easy way.

Now there is, says Boehm. "We use Jobe's Tree Spikes. As far as I know they're the only people making fertilizer in this form."

The spikes are fertilizer compressed into a stick with one end slightly pointed and a plastic cap on the other. "You take a box of spikes, a hammer and pound one spike into the ground for each inch of tree diameter. That's all it takes. Last year, after we put in all those new trees, I sent a three man crew out to fertilize and they were done in a day and a half. Seven hundred trees. I couldn't believe they'd done them all so fast, so I checked. They had," said Boehm.

"You can see the difference it makes. There are some places on the edge of the course where similar trees were put in on the other side of the road. Ours are greener."

What about time consuming close-trimming around trees? Its been all but eliminated. "We use Casoron, a granular type product which completely kills all vegetation but doesn't hurt the tree. You put it around in the winter. when the tree is dormant, using a little spreader of any type. In the spring we put wood chips around the trees so the dead grass won't look unsightly. We also use this treatment around out-of-bounds markers and buildings. You can mow right around them with a rough mower. It eliminates about 90% of all hand mowing, you still have to do some, but you can't imagine how much it saves.

"Of course any time you put out that many new trees, you're going to have some problems. That man out there on a seven-gang mower has to learn where each of those trees is, and how to make his cut so he gets close enough, but misses the tree. Sometimes the man on the mower runs over a tree. When that happens, I send him back out with a can of tree paint, have him paint it up and stake it, and let him know he'd better not do it again. They learn fast. That's another reason for big trees — because they're easier to miss — or should be."

Boehm doesn't neglect turf care, of course. He has established regular programs of soil testing, so he can give each part of his course exactly what it needs, and aerification, to relieve the compaction caused by the muckey, clayey soil and the very heavy use of the course.

EDITORIAL (from page 6)

This simply means that segmented lobbying — such as being done now by each little group — will never be wholly satisfying in terms of favorable legislation and/or rulings by EPA, OSHA, USDA, etc.

For a time we had hopes that this could be accomplished via a "Green Industry Council" in which every organized group - associations, societies, foundations and whatever - might serve as a communications and lobbying medium whereby forces necessary to achieve needed action could be raised. Now. we are not so sure. There appears insufficient interest to develop the type of council body which could conceivably coordinate the efforts of the segmented Green Industry. Funding is a further problem. We as a magazine are open to suggestion.



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25th Anniversary Planned

The Sprinkler Irrigation Association will celebrate its 25th anniversary during the annual convention to be held at the Contemporary Resort of Disney World in Lake Buena Vista, Fla., Oct. 27 to 30.

Convention activities are planned to portray the role that the Association has played in the growth of the sprinkler irrigation industry and to recognize those leaders in education, industry and government who have contributed to sprinkler irrigation progress and

to the development of the Associa-

Programs, registration information and room reservation forms for the convention can be obtained from the Sprinkler Irrigation Association, 13975 Connecticut Ave., Suite 310, Silver Spring, Md. 20906.

Biological Weed Control Proposed by Scientists

A new biological control for weeds, which would avoid the use of selective herbicides has been proposed by a Michigan State horticulturist and a Cornell University agronomist.

In the current issue of "Science," Alan R. Putnam and William B. Duke note the well-known phenomenon of allelopathy — that is, the ability of certain plants to inhibit the growth of other plants, such as weeds, by releasing chemicals toxic to other plants into the soil.

"If this allelopathy is an inherited trait, which is likely, attempts could be made to incorporate weed resistance into commercial crops in the same manner that insect and disease resistance were bred into plants," Putnam and Duke suggest.

Successful biological control of weeds has been limited to a few cases where insect predators have been introduced to reduce certain weeds. Plant scientists usually fight weeds by selecting strains for their ability to outgrow weeds, an advantage attributed to rapid growth.

American Garden Products Names New Vice President

American Garden Products, Inc., producer and distributor of horticulture products and related items, announced that Peter J. West has been appointed executive vice president and chief operating officer. West, formerly on American Garden's board of directors, succeeds C. A. Hellar.

The operations of American Garden Products, Inc. include Gurney Seed and Nursery, Cole Nursery, Horton Nurseries, Western Seed, Cal-Turf and Perry's Plants, Inc.

New Agrico Division Names Sinclair President

Kenneth R. Sinclair has been elected president of Agrico International, a new division of Agrico Chemical Company, a subsidiary of the Williams Companies.

Agrico International is responsible for Agrico's overseas investments, marketing and a number of new overseas production facilities now in various stages of development.

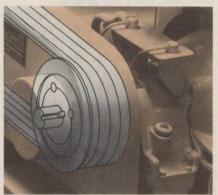
Agrico International has overseas offices in Panama City, Paris, Milan, San Paulo and Tokyo.



For more than 115 years Mitts & Merrill has been making specialized machinery for industry. A major part of our business is equipment to reduce scrap and waste. This experience is incorporated into design features on our brush chippers that result in higher efficiency and longer, trouble-free service for you. Only Mitts & Merrill brush chippers offer features like these:



Staggered knife pattern for smoother cutting action. Mounted on an all-steel cylinder that, even without an external flywheel, is heaviest in the industry. Each cylinder revolution gives more cuts, produces smaller chips of uniform size. Self-adjusting knives are reversible; give twice the service between sharpening.

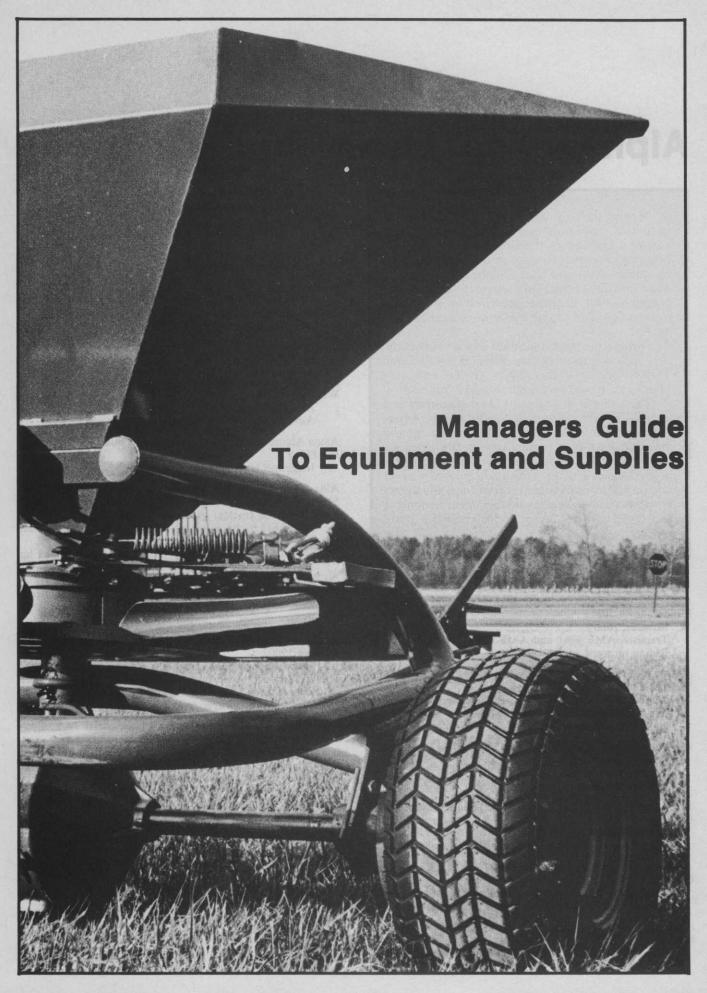


Optional torque converter isolates engine and transmission from cutting shock to minimize maintenance. Makes operation virtually fully automatic; increases operator productive time. Available on all models.

Positive safety-lock pin for greater operator safety
 Swing-away, folding feed chute protects cutting chamber; allows instant access and increases maneuverability
 Heavy duty construction includes coil spring, torsion-type suspension, and box tubular steel frame.



Dept. WT 94, 109 McCoskry St., Saginaw, Michigan 48601



Alphabetical Listing of Suppliers

Making the right decision in selection of equipment and supplies is one of the most important jobs of a manager in the Green Industry. Besides being an important item on an investment budget, equipment must also be maintained. This calls for wide initial selection, correct accounting procedures for depreciation, effective preventive maintenance and proper major maintenance when needed.

Perhaps the most important step is in selection. It is with this in mind that WEEDS TREES and TURF presents this 1975 Green Industry Manager's Guide to Equipment and Supplies.

The guide is in two parts. Manufacturers and their equipment and supplies are listed first. Advertisers are in bold face type. Product groupings and manufacturers of a particular item are listed second. Because manufacturers add and delete product lines, change names and generally never remain static, omissions of certain manufacturers or product lines are unavoidable. Your comments and suggestions are invited to help improve future editions.

A

AMF Western Tool Division, 3811 McDonald Ave., Des Moines, Iowa 50313

Mowers, rotary

Tractors, AMF 1281 and AMF 1293

Riding mowers, rotary

A.O.A. Research & Development, Inc. (P.O. Box 6081C) 608 Virginia Dr., Orlando, Fla. 32804

Underwater weed cutter, manually operated, spring steel, serrated, doubleaction blades cut weeds with forward and backward stroke

Ace Pump Corp., 1650 Channel Ave., Memphis, Tenn. 38113 Pumps, centrifugal

Pumps, nylon roller

Pumps, diaphragm

Acme Products, 1201 Kalamazoo Street, South Haven, Mich. 49090

Masks, Dust, Gas Respirators

ADS—Advanced Drainage Systems, 1880 MacKenzie Dr., Columbus, Ohio 43220

Corrugated Plastic Drainage Tubing, sizes of tubing and fittings from 4 inches to 18 inches in diameter

Adventure Line Mfg. Co., 3333 Main St., Parsons, Kansas 67357

Astro Hook, crane/ladder, truck mtd., hydraulic Highworker, platform lift, truck mtd., hydraulic

Tailgate, 1,000 lb. cap. pickup mtd. tailgate, all of our equipment is designed for use on pickup trucks

Aeroquip Corporation, 300 S. East Ave., Jackson, Michigan 49203

Hose and fittings, hydraulic, fuel, air, oil, water; pressure from low to super high

Agresults, Inc., 5501 S.W. 74 St., Miami, Florida 33143 Hydrofyer Umbilla-Kal Injection System, Airifyer Adaptor for pressurized injection of pesticides, fertilizers or other chemicals into greens or tees

AgTronics Mfg. Co., 1560 State St., Barstow, Calif. 92311 Soil moisture meter

Air-Lec Industries, Inc., 3306 Commercial Ave., Madison, Wisconsin 53714

Air-Lec, aquatic weed cutter Air-Lec, aquatic weed rake

Alcoa Aluminum Co. of America, Alcoa Building, Pittsburgh, Pa. 15219

Irrigation pipe

Allis-Chalmers, 1205 S. 70 Street, Milwaukee, Wisconsin 53211

Model 620 tractor, 19 1/2 hp with tires rear 34.0"

Model 615 backhoe-loader, Allis-Chalmers 56 hp gasoline engine

Model 816 backhoe-loader, Perkins diesel engine 83 hp Model 918 backhoe-loader, Allis-Chalmers diesel 84 hp engine

Mower (sickle bar), length 56" tractor (620) mounted Rear mtd. Roto-Tiller, 48" size for 620 tractor Rotary mower, 48" swath for 620 tractor

Amchem Products, Inc. Brookside Avenue, Ambler, Pennsylvania 19002

Meter Miser, liquid spreader gives precision application of Weedone liquid herbicide products without the need for calibration

Directa-Spra, sprayer end unit

American Arborist Supplies, Concord Industrial Park, Concordville, Pa. 19331

Arborist supplies

Welders

Chippers, Chain Saws, Hand saws, Climbers Rope, Pruning Equipment, Hardware (screw rod, cable, thimbles)

American Excelsior Corp., 850 Ave. H, East Arlington, Tex. 76010

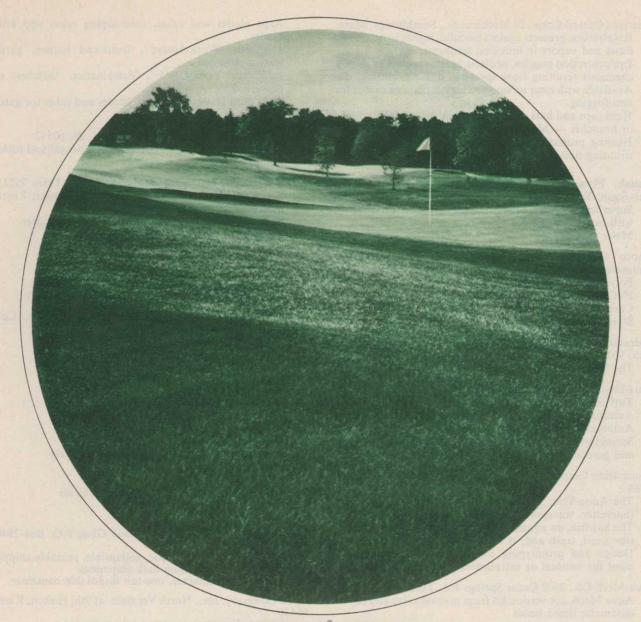
Erosion Control Products Soil Retention Products

American Hose & Reel Co., P.O. Box 639, Marland, Okla. 74644

Thermoplastic spray hose with working pressure of 250, 400 and 800 PSI; ¼, ¾, ½, ¾-inch sizes Fertilizer applicator tubing; ¼, ¾, ½, ¾-inch sizes Hose reels; small, 300 ft., ½-inch hose, 1000 P.W.P.;

large, 300 ft., ¾-inch; adjustable drag

American Lincoln Corp., 518 S. St. Clair, Toledo, Ohio



Dacthal drives 20 annual weeds off the course with one easy swing.

One application early in the spring. That's all it takes. Dacthal preemergence herbicide prevents 20 annual weeds from sprouting all season long. Problem weeds like carpetweed, chickweed, purslane and others. So you can devote time and manpower to more important work.

Dacthal doesn't stop there. It also drives out troublesome crabgrass and *Poa annua*. Hit'em in the spring. And follow through with Dacthal in late summer for control of *Poa annua* and other late-germinating weeds.

Over the years, Dacthal has proven to be the closest thing to worry-free weed control. It won't harm new grass when used as directed. Won't leach out with frequent waterings. And there's no problem of residue buildup in the soil.

Dacthal degrades, naturally, in one season. Just read and follow label directions.

You can even use Dacthal to keep the weeds out of flowers and shrubs. It's cleared for use on over 120 ornamentals. That's one more beauty of it.

This year, drive out weeds with Dacthal...the allaround favorite preemergence herbicide. Available in wettable powder or granules. Ask your supplier for more information or write: Agricultural

Chemicals Division, Diamond Shamrock Chemical Company, 1100 Superior Avenue, Cleveland OH 44114.



Diamond Shamrock Chemical Company

A UNIT OF DIAMOND SHAMROCK CORPORATION

American Optical Corp., 14 Mechanic St., Southbridge, Mass. Respirators, protects against harmful, highly toxic sprays, dusts and vapors in inticides, fertilizers, etc.

Eye protection goggles, protects against impact or dust & chemicals resulting from spraying, dusting, cutting, etc. Available with clear or sunglass lenses, plain or coated for anti-fogging.

Hard caps and hats, head protection against falling limbs or branches — Meets Amer. Nat'l Std. Z89.1-1970 Hearing protectors, protects hearing from damaging or irritating noises of tractors, sprayers, power saws, etc.

Ametek, Plymouth Products Division, 502 Indiana Ave., Sheboygan, Wisc. 53801

Superflexon plastic boxes, plastic irrigation valve boxes with turf green covers Meter pits, plastic

Amoco Chemicals Corp., Industrial Products Div.,1530 Commerce Dr., Stow, Ohio 44224

Polyethylene pipe and fittings for irrigation PVC pipe and fittings for irrigation Corrigated plastic drainage tubing Styrene rubber plastic drain pipe and fittings

Andrasko Engineering Co., P.O. Box 4633, Santa Barbara, Calif. 93103

The Meter Matic, fertilizer injector for irrigation systems

Aqua-Dial, P.O. Box 1325 Newport Beach, Calif. 92624 Turf irrigation Equipment

Automatic valves, hydraulic and electric, remote control Automatic controllers

Sprinklers, gear driven, pop up, vandal resistant, lawn and garden

Aquamarine Corp., Box 616, 1116 Adams, Waukesha, Wisc. 53186

The Aqua-Trio, 3-piece aquatic weed harvesting system (harvester, transport and shore conveyor) The Sawfish, an aquatic weed cutter and front end loader (for weed, trash and/or oil spill cleanup on water) Design and prototyping service for specialized equipment for unusual or extraordinary weed problems

Aqua-Mech Co., 2609 Cedar Springs Rd., Dallas, Tex. 75201 Aqua Mech, conversion kit from manual valve and key to automatic timed heads

Arctic Mizer Mfrs., Inc., 2116 E. Norse Ave., Cudahy, Wis.

Arctic Mizer, spreader, self-powered; vacuum-thatcher, self-powered

Ariens Company, 655 W. Ryan Street, Brillion, Wis. 54110 Ariens Emperor, riding mower — 30" and 38" rotary; 8

Ariens Fairway, riding mower — 26" rotary; 5 and 7 hp Ariens S-8 Tractor, lawn tractor — 36" rotary; 8 hp Ariens Lawn Vac, lawn vacuum

Ariens Trac-Team, 26" rotary mower, lawn vacuum, rotary broom on one 8 hp tractor

Armor Metal Products, P.O. Box 822, Helena, Montana 59601 Anderson Rock Picker, heavy-duty rock removal machine for use in seedbed preparation

Asplundh Chipper Co., Div. Asplundh Tree Expert Co., Blair Mill Road, Willow Grove, Penna. 19090

Chipper, high speed, tapered blade Forestry truck, Models L-40, 42, 45, 50; dump body, 12inch chipper, aerial bucket Brush hooks

Arps Corp., 1711 Wisconsin Ave., New Holstein, Wis. 53061 Arps 728, backhoe, tractor-mounted Arps 730, backhoe, tractor-mounted

Arps blades and rakes, landscaping rakes and utility

Johnson "Work-Horse", front-end loader, garden tractor-mounted

Johnson "Terra-Comb", combination thatcher and power-rake

Arps mini-blades and rakes, blades and rakes for garden tractors

Aurora Pump, 800 Airport Rd., Aurora, Ill. 60542 Aurora pumps, irrigation pumps centrifugal and turbine

Austin Products, Inc., 1000 Singleton, Dallas, Texas 75221 Servis Saturn, 5 rotary mower; 6 rotary mower; 7 rotary

Servis Cyclone, 60 rotary cutter; 72 rotary cutter

Servis Flex, 15 rotary cutter

Servis Gold Star, post hole digger Servis landscape rakes, box scrapers

Auto Hoe, Inc., S. 3rd St., De Pere, Wis. 54115 Auto Hoe, power hoeing machine 3.4 & 5 (HP)

Avco New Idea, Farm Equip. Div., 420 S. First St., Coldwater, Ohio 45828

Tractors:

EGT-200, battery powered, 18 hp class EGT-150, battery powered, 16 hp class EGT-120, battery powered, 14 hp class EGT-100, battery powered, 10 hp class EGT-80, battery powered, 8 hp class 35 attachments and accesories

Avco Ezee Flow, Coldwater, Ohio 45828 Spreaders, gravity drop, broadcast, fertilizer Seeders, broadcast Mowers, rotary Applicators, granular, insecticide-herbicide

B.A.G. Corporation, 9443 Sherwood Glen, P.O. Box 28403, Dallas, Texas 75228

Taicon Container, plastic, collapsible, reusable shipping container for handling bulk shipments Super sack container, one-ton disposable container

BMB Company, Inc., North Vermont at 9th, Holton, Kansas

Utility, 5' tractor operated rotary mower Special, 6' tractor operated rotary mower

XL and Brute, 5' and 6' tractor operated rotary mower Fury, 7' tractor operated rotary mower

Twin Brute 120 and 144, 10, and 12, tractor operated rotary mower

Twin Fury 144 and 160, 12 and 13'4" tractor operated rotary mower

Mighty Mower, 15, 18' and 20' flexible tractor operated rotary mower

Suburban 48, 48" trailing rotary mower w/ 8 hp gas engine

BMB Flail Mowers, 72", 90", 144" and 180" tractor

Bachtold Bros. Inc., 619 N. Center St. Forrest, Illinois 61741 Rotary mower 8 h.p. Tuff-Bee "30", Rotary mower rider 8 h.p.

Badger Dynamics, Inc., P.O. Box 305, 1221 S. Park St., Port Washington, Wisconsin 53074
"Bucky" Forklift, outdoor forklift 2500 lb. capacity

Models 6035/6045, Towable rough terrain forklift 6000 lb. capacity

Baker Equipment Mfg. Co., 1710 High Point Ave., Richmond, Va. 23230

Aerial towers, mobile equipment Derricks, mobile equipment

Bartlett Mfg. Co., 3009 East Grand Blvd., Detroit, Mich.

Saws, tree, combination pruner and saw
Saw, pruning, hand
Saw sheaths
Tree bracing materials
Belts, safety
Tree paints
Trimmer, tree (hydraulic & pneumatic)
Shears, lopping (two hand)
Pruners, (long pole) fiberglass
Saws, (long pole) fiberglass
Rope, climbing

Bar-Way Mfg. Co., P.O. Box 640, Stamford, Conn., 06904
Spray guns, long-range, worm-gear control on end of barrel
Swivel adapters
Invigorator guns — liquid fertilizers
Suction refillers strainers
Couplings

Beatty Trailers, Box 1027, Burlington, N.C., 27215
Beatty Trailers, self-contained, hydraulic dump; capacities 2, 3, 5, 9, 13 yard; transport trailers, 6 to 30,000 lb. capacity; tag-a-long and goose neck

Beck Manufacturing Company, P.O. Box 752, Auburn, Alabama 36830

Lawn-O-Matic, turf grass planter, plugger — sprigger Sod-O-Matic sod cutter, sod cutter cuts 3 16" strips at one time Sod-O-Matic sod harvester, Beck's big roll — sod harvesting and laying system

Beeco Products Co., Industrial Park, Fort Washington, Pa. 19034

Beecomist, spray head for LV and ULV agricultural and insecticide spraying for aerial or ground equipment, rotary type, 12V DC or 24V DC, three models

Bell Helicopter Co., P.O. Box 482, Fort Worth, Texas Helicopters

Bemis Company, Inc., 800 Northstar Center, Box 215, Minneapolis, Minn. 55402 Bags and liners, plastic Bags, tree balling, litter, grass catcher Twine, tying

Wm. Bergman Co.,1335 M-15, Reese, Mich. 48757 Service, stone picking, seeding, land preparation

Berkeley Pump Co., 829 Bancroft Way, Berkeley, Calif. 94710 Pumps, electric and gasoline; irrigation, one to forty hp, higher hp available, centrifugal and turbine

Bermuda King, Inc., Rte. 1, Okarche, Okla. 73762
Sprig harvesters, 20", 28", 42", 30 to 60 hp, 500 to 1,000 watt an hour rating
Sprig planters, 1, 2, 3 and 4-row, large capacity
Fairway spriggers, 2 to 10' width, large capacity

Bete Fog Nozzle, Inc., Greenfield, Mass.
Stubbies, nozzles, mini-sized, three cone angles, flow rates from 3 to 300 gpm
Spray nozzles
Spray applicators
Fog spray nozzles

Big Brute Turf Cut, Div. of Finney Frocks, 18035 Georgia Ave., Olney, Md. 20832 Big Brute turf cutter, sodcutter

Billy Goat, P.O. Box 229, Grandview, Mo. 64030 Billy Goat, suction sweeper Winro, leaf blowers Shred-N-Bag, shredder Chippit, chippers, vacuums

Black & Decker 701 E. Joppa Road, Towson, Md. 21204
Lawn mowers, electric rotary
Grass shears, battery powered (re-chargeable)
Hedge trimmers, 13" to 22" Black Knight—both electric
and battery
Lawn edgers, electric
Patio vacs, 5 and 10 gallon dry and 8 gallon wet/dry
Garden hose connectors, complete line of hose fittings

John Blue Co., P.O. Box 1607, Huntsville, Ala. 35807
Spreaders, fertilizers (liquid, dry, bulk)
Tanks, spray and fertilizer
Sprayers, mounted and pull type, rights-of-way
G-1000 tractor (16 h.p.) rear engine, agricultural type. Attachments include rotary mower, cultivator, harrows, etc.
L-900 Metering Pump, injection of liquid fertilizer for irrigation systems
Cotton Module Maker, 24' and 32'
Cotton Module Trailers, straight tongue or gooseneck, 24' and 32'

Blue Bird International, Inc., 2778 So. Tejon, Englewood, Colo. 80110

Bluebird, lawn combers, A/K/A thatchers, dethatchers, lawn rakes, rnovators and vertical mowers, 4 hp, 5 hp, 7 hp Bluebird "1500", engine hoists, knockdown type Bluebird "3000", engine hoists, towable type Bluebird "Yardbird", utility crane Bluebird, engine stands Bluebird "F .20B", lawn comber, compact type, 5 hp

Bombardier limited Valcourt, Quebec, Canada Muskeg brush cutter, tracked vehicle (90 hp) equipped with front-mounted hydraulic rotary brush cutter Muskeg carrier, tracked vehicle (90 hp) with spraying equipment

Boss Irrigation, P.O. Box 191, San Angelo, Texas 76901 Irrigation sprinkler

Bowie Industries Inc., P.O. Box 931, Bowie, Texas 76230
Hydro mulcher—used in sprigging, seeding, mulching, fertilizing, insect control and weed control 350, 500, 800, 1,000, 1,500, 2,500 and 3,000 gallon tanks. Trailer or skid-mounted

Agrisppayer multi-purpose low volume 400 gallon

Agri-sprayer, multi-purpose low volumn 400 gallon sprayer, fiberglass tank trailer-mounted, remote hydraulic operation. P.T.O.

Bridgeport Implement Works, Inc., P.O. Box 491 WT, 60 Rachel Drive, Stratford, Conn. 06497
Pixtone, trailer-type—self-powered, picks stone 3/4 to 9-inch diameter

Briggs & Stratton Corp., P.O. Box 702, Milwaukee, Wis. 53502

Engines, 4-cycle, single cylinder, gasoline

Brighton By-Products Co., Inc., P.O. Box 23, New Brighton, Pa. 15066

Weed Chek, fiberglass landscape mat Triton, planters & benches, fiberglass Bridgestone, high pressure spray hose

Brillion Iron Works, 200 Park Ave., Brillion Wis. 54110 Mow-Safe, safety flail mowers (72" and 88") Swing-Cut, rotary mower (60" and 72") Turf-Maker, seeder for sod-growers Sure-stand, landscape and agricultural seeders Terra-Scraper, landscape rakes Versa-Mower, 180" rotary cutters

Brinly Hardy Co., Inc., P.O. Box 1116, Louisville, Ky. 40201
Brinly attachments, gardening and landscape equipment
for tractors equipped with sleeve type hitch
Brinly implements, gardening and landscape equipment
for tractors equipped with Cat. "O" 3-pt. hitch
Brinly lawn maintenance equipment, pull behind equipment such as roller, aerators, broadcast spreaders

Brouwer Turf Equipment Limited R.R. No. 1, Keswick, Ontario, Canada

Sod harvester, attached to a 35-40 hp farm tractor Frate Lift, 3-wheeled, self loading forklift

The Broyhill Company, No. Mkt. Sq., Dakota City, Nebr. 68731

Sprayer, skid-mounted, mechanical agitation Sprayers, trailer mounted, mechanical agitation Sprayer parts: pumps, hose, tanks, trailers, nozzles, handguns, spring boom

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Buckner/Johns Manville Irrigation, Greenwood Plaza, Denver, Col. 80217

Full line irrigation, automatic electric controllers, impulse sprinklers, valve-in-head sprinklers, quick couplers, popup sprinklers, hydraulic controllers, valves

Buffalo Turbine Ag. Equipment Co., Industrial Place, Gowanda, N.Y. 14070

Sprayer, mist blower, ULV hand carried, sonic ULV, mist blower, turntable

Sprayer-duster, mist duster, combination

Duster, dust only

Sprayer-duster, back pack, power take-off

Bunton Co., 4304 Poplar Level Rd., Louisville, Ky. 40213 Mowers, rotary Lawn and turf equipment

E. L. Caldwell & Sons, Inc., 3204 Agnes St., P.O. Box 9316, Corpus Christi, Tex. 78408

Interstate, rotary mower, 15 ft.

Challenger, rotary mower

Manta Ray Interstate, rotary mower, 10 ft.

Brush Beaver, rotary mower, 5 ft. or 6 ft.

Manta Ray, Jr., rotary mower, 16 ft.

Contur Flail, heavy-duty, flexible flail, 15 ft., 3 sections Shark-go, flail-type shredder, 90 inches

Barracuda, lift-type flail mower, 72-inch

CareTree Systems, 7030 Huntley Rd., Worthington, Ohio 43085

CareTree transplanter, tree transplanter for installation on agricultural or industrial tractors or 4-wheel loaders

Cast Iron Pipe Res. Assoc., 1211 W. 22nd, Oakbrook Exec. Plaza, Suite 23, Oakbrook, Ill. 60521

Cast iron pipe for irrigation

Campbell-Hausfeld Co., Sales Ave., Harrison, Ohio 45030 Lombard CS1500 (electric), saw, chain, electric, 12-inch bar, 12 amps

Lombard Pony (CS2500), saw, chain, gasoline, 12-inch

bar, 61/2 lbs.

Lombard Comango (CS3500), saw, chain, gasoline, 16-

inch bar, manual oiler Lombard Super Comango (CS3501), saw, chain, gasoline,

1/2 "anti-vibe", auto oiler Lombard Super Lightning (CS3502), saw, chain, gasoline,

1/2 "anti-vibe", auto oiler Lombard Super Lightning Anti-Vibe (CS3503), saw, chain, gasoline, full "anti-vibe", auto oiler, decompression valve

Cascade Corporation, P.O. Box 25240, Portland, Oregon 97225

Cascade Knuckleboom, truck mounted hydraulic crane that stows in less than 2' of bed space. Capacities to 9,650 pounds at 5'

J I Case, Outdoor Power Equipment Division, Winneconne, Wisconsin 54986

Snow Blowers, J81 (32") J80 (38") J84 (48")

Compact Tractors, 108 (8 hp) 118 (8 hp) 210 (10 hp) 220 (10 hp) 222 (12 hp) 224 (14 hp) 444 (14 hp) 446 (16.5 hp) Loader Tractors, 644 (14 hp) 646 (16.5 hp)

Rotary Mowers, J41 (34") J40 (38") J44 (44") J46 (48")

Dump Carts

Utility Blades, G51 (38") H50 (44") H54 (54")

Rotary Tillers, H70 (41") J72 (32")

Century Engineering Corporation, 221—4th Ave. S. E., Cedar Rapids, Iowa 52401

Sprayers, trailer, tractor, jet or mechanical agitation Washers, high pressure

Heaters, portable oil and gas

Certain-Teed/Daymond Co., 230 Collingwood, Suite 150, Ann Arbor, Mich. 48103

Certa-Flex, corrugated plastic tubings of various diameters for land drainage and trickle — irrigation

Certain-teed Products Corp., P.O. Box 860, Valley Forge, Pa. 19482

Fluid-Tite™ double gasket asbestos-cement and PVC pipe, irrigation; fittings, irrigation pipe.

Champion Brass Mfg., 1460 N. Naud St., Los Angeles, Calif. 90012

Champion 466, 466P, anti syphon valves

Champion 17, 18, 19, lawn sprinklers, flush, popup, shrub Champion E.A., C.E.A., electric adapters

The Champion Company, 400 Harrison St., Springfield, Ohio 45501

Doo-All Roll-Dump Trailer, 1 and 2 cu. yd. hopper

Doo-All End-Dump Trailer, 3 cu. yd. hopper, hydraulic

R. E. Chapin Mfg. Works, Inc., 29 Liberty St., Batavia, New York 14020

Dusters, flamethrowers, sprayers

Charles Machine Works, Inc., Ditch Witch Division, P.O. Box 66, Perry, Okla. 73077

Ditch Witch trenchers, 7 hp to 195 hp, vibratory plows, backhoes, trencher mounted trailers, horizontal boring

Clarke Div., Clarke-Gravely Corp., 1849/75 Estes Street, Muskegon, Michigan 49441

Litter Vac, indoor/outdoor vacuum for picking up large debris from grounds (5 hp Tecumseh engine)

Space Sweeper, Models T-71-2-3 power sweeper (gas, elec., battery)

Airlift, sweeper (the Clarke revolutionary regenerative air principle)

Clark Equipment Trailer Division, P.O. Box 410, Michigan City, Indiana 46360

Clark Equipment mini trailers, a 22 dual axle and 30 ft. tri-axle flatbed trailers designed for use with 5th wheel connecting pick up trucks.

Clinton Engines Corporation, Clark & Maple Streets, Maquoketa, Iowa 52060

Engines, gasoline

Club Car, Inc., A Johns-Manville Company, P.O. Box 1625, Augusta, Georgia 30903

Caroche, four-wheel electric golf car (2 passengers) Caroche Utility Truck, four-wheel electric utility truck (2 passenger and 500 lb. load

Caroche Personnel Carrier, Four-wheel electric (4 passengers)

Caroche Islander, combination commuter & golf car

Conaway, Inc., P.O. Box 303, Lawrence, Pa. 15055 Chain saws, portable generators, gasoline hedge trimmer, portable brush cutter, lawn and garden tractors, 7 to 16 hp., riding mowers, lawn mowers 2 and 4 cycle, lawn and garden tractors 8-16 hp., composters, garden tillers, riding mowers 5-8 hp., vacuum blowers, grounds keeper, high wheel rotaries

Container Development Corp., 424 Montgomery St., Watertown, Wisconsin 53094

Golf course equipment

Lewis line, ball washers, flag poles, tee markers, cups, cup cutters, flags, rakes, etc.

Contree Sales, Inc., P.O. Box 129, Columbus, Wis. 53925 Rice Paddy Daddy, sprayer Boom Dye-Marker, marks areas treated

Wat Sol Oil, lubrication, preservative, storage oil Auger, Model S.S., 4-inch, 12 volt for materials handling

Conwed Corporation, 332 Minnesota St., St. Paul, Minn. 55101

Conwed Hydro Mulch®, a wood fiber mulch used in hydro seeding

Conwed Economy Erosion Control Netting, tough plastic net used over loose mulches in high erosion areas

Cooper Mfg. Co., 422 S. First Ave., Mardhaltown, Iowa 50158

Edgers, gasoline powered Mowers, reel, walking Champion 21, greensmower

Corona Clipper Co., 14200 E. 6th, Corona, Calif. 91720
Tree and ornamental care and pruning equipment
Grass shears, anvil pruners, hand pruners, lopping
shears, pole pruners, pole saws, hand saws & pruning
paint

Correct Mfg., Hughes Keenan Div., P.O. Box 689, Delaware, Ohio 43015

Sky-Worker, aerial bucket—reaches up to 71 ft., horizontal to 45 ft.

Coursigns, Inc., 6500 N. Clark St., Chicago, Ill. 60626 High impact plastic stakes and golf course signs, cart directional. Large signs such as: "course closed," "tee closed" etc.

3/16" Poly rope 1M & 2M ft. spools
Sand trap rakes, combines steel head & plastic teeth
Plastic chain & ground posts
Tee caddy, container for tees, matches, scorecards

Howard S. Crane, Inc., P.O. Box 88, Oneida, New York 13421 Quick Test Moisture Tester, instrument to test grain

Aqua Probe Sub Soil Moisture Meter, instrument to test soil

Creative Sales, Inc., 200 South Main St., Fremont, Nebraska

Tree systems—medicaps, systemic tree trunk injection

Cresline Plastic Pipe Co., Inc., 955 Diamond Ave., Evansville, Ind. 47717

Cresline, PVC pipe and fittings Cresline Polyethylene pipe and tubing Cresline polybutylene pipe and tubing

Curtis Dyna Products Corporation, P.O. Box 297, Westfield, Indiana 46074

Dyna Fogger, thermal fogger BP-145, backpack sprayer, duster

Cushman, OMC-Lincoln, 1401 Cushman Drive, Lincoln, Nebraska 68512

Cushman turf care system, 12 hp and 18 hp gasoline vehicles for turf care

Cyclone Seeder Co., Inc., Urbana, Ind. 46990 Seeders

D

Dadco, P.O. Box 2086, Fresno, Calif. 93719

Dadco, battery clamps, guaranteed never to corrode. Supplies more power from battery to cable. Easy installation or removal. Available pre-molded on 2 & 4 gauge cable to 72"

Ross Daniels, Inc., P.O. Box 430, 1720 Fuller Road, West Des Moines, Iowa 50265

Ross Root Feeder, to feed as you water to the roots of trees and shrubs

Davey Tree Expert Co., Kent, Ohio 44240
Tree nursery, 150 varieties of shade and ornamentals

Tree service, nationwide and Canadian representation

Davis Mfg., Div. J. I. Case Co., 1500 S. McLean Blvd., Wichita, Kansas 67213

Fleetline®, rubber tire trenchers, 7-65 hp Task Force®, track mounted trenchers

Road Run'r®, trencher 57 hp with backhoe attachment Boring and reaming attachments for trenchers. Also direct borial equipment

Mini-Sneaker®, 25 hp vibratory plow

Scatback™, 30 hp 4-wheel drive articulated loader

Deere and Co., John Deere Equipment, John Deere Administrative Center, John Deere Rd., Moline, Ill. 61265

JD 350B & JD 450C, crawler; 42 and 65 hp; loader bulldozer blades and log fork available

JD 760A & JD 860A, elevating scraper; 9.5 and 15 cu. yd. JD 380 & JD 480B, forklifts; 4000-5000 lb. lift and 5000-6000 lb. lift

Mowers, rotary, flail; push, riding, self-propelled; side mounted cutter bar available

JD 24, JD 70 & JD 170, skid steer loader; 25 and 37 hp JD 820, grounds maintenance tractor, 31 hp; belly mounted mower, cuts 6 ft. swath

Tools, 237 different tools for shop, work and home

Roto Tillers Lawn Sweepers Blades

Snow Throwers Chain Saws

JD301A, tractor, utility, 43 hp, utility loader, 43 hp JD 300B, loader, 43 hp, loader/backhoe, 43 hp

JD 3024 loader 50 hp, utility loader 50 hp

JD 302A, loader, 50 hp, loader/backhoe, 50 hp JD 401 B, tractor, utility loader

JD 401 B, tractor, utility loader JD 401 C, loader, loader/backhoe

Delavan Mfg. Co., 811—Fourth St., West Des Moines, Iowa 50265

Nozzles, all conceivable types, sizes and spray angles Accessories, boom control valves, pressure relief valves, strainers, agitators and spray guns Pumps, roller, turbine, piston

DESA Industries, Inc., 25000 S. Western Ave., Park Forest, Ill. 60466

Remington, gasoline chain saws, electric chain saws, pneumatic chain saws

Dico Co., Inc., P.O. Box 1344, Des Moines, Iowa 50305
Dico, Knuckle boom for sod loading & transporting
For wood, brush, trash
Log loaders. Trolly boom hoists
Traveling boom & cranes
Wheels and brakes

Digz-All Trencher Co., Div. Wing King Co., Merril, Iowa 51038

Digz-All, trenchers

DriAll, Inc., P.O. Box 309, Attica, Ind. 47918

Air Curtain Destructor, pit incinerator for disposal of trees and wood products—air pollution approved Scarifier Levler, leveling device with scarifying teeth for landscapers, sod growers

Yard Levler, leveling or grading drag

Dunlop Tire & Rubber Corp., Box 1109, Buffalo, N.Y. 14240
Dunlop tires, for cars and trucks, tractors and implements

E

ESB Brands, Inc., Willard, Exide, Box 6949, Cleveland, Ohio

Willard and Exide batteries, 6-volt electric golf car and golf utility vehicle batteries. Lead acid storage batteries for lawn and garden tractors

ESB Battery Chargers

SEPTEMBER 1974

E-Z Go Car, Division of Textron, Inc., P.O. Box 388, Augusta, Ga. 30904

E-Z Go Golf Car, X-440 electric 3-wheel, GX-440 gas 3-wheel, X-444 electric 4-wheel, GX-444 gas 4-wheel GT-7 gas turf vehicle

E-Z Rake, Inc., 1001 S. Ransdell Road, Lebanon, Indiana 46052

E-Z Rake, Spring Tine Thatchers and power rakes, lawn vacuums that attach to garden tractors and riding mowers

Eagle Mfg. Co., 24th & Charles St., Wellsborg, W. Va. 26070 Eagle manufactures a complete line of oilers, safety cans, oily waste cans, lab cans, oil and gasoline containers and safety storage cabinets

Echo Chain Saw Div., Kioritz Corp. of America, 350 Wainwright Ave., Northbrook, Ill. 60062

Echo Chain Saws, full range of chain saws from CS302, 30cc unit to CS100, 100cc unit

Echo Power Blowers, compact, lightweight knapsack type blower, 40 cc engine

Echo Duster/Mist Blower, compact, light weight knapsack type blower, 40cc engine

Echo Swing Scythe, lightweight, shoulder type, 20cc engine

Economy Tractor, 1005 Anoka Ave., Waukesha, Wisc. 53186 Mowers, rotary, tractors (13-20 hp)

Engineering Products Co., P.O. Box 284, Waukesha, Wis. 53186

Economy, man-size all-gear tractor, 14 hp Mower, rotary, mounted under tractor, 60 inches

Edwards Manufacturing Company, P. O. Box 1275, Ponca City, Oklahoma 74601

Edwards Sprayers, power sprayers, 50, 100, 200, 300, 400, 500, 1,000 gallons; 3 to 50 hp engines

Rue R. Elston Co., Inc., 815 E. 79th St., Minneapolis, Minn. Gopher Getter Jr., injection equipment

Energy Mfg. Co., Inc., 100 N. Main, Monticello, Iowa 52310 Hoists, pick-up

Hoists, truck

Hoists, bolster wagon

Hydraulic cylinders, valves, pumps, motors, reservoirs, gauges, couplers, filters, cylinder breathers

Erickson Corp., 211 St. Anthony Blvd., N.E., Minneapolis, Minn. 55418

Erickson, hydrostatic drive compact front end loaders

Erie Go Mfg. Inc., 1432 Tiffin Avenue, Sandusky, Ohio 44870 500 Ken Roll, ½ ton, hydrostatic, recoil start, manual steering

3000 Ken Turf Roll, 48" wide, hydraulic drive, manual start (electric start optional)

Eversman Mfg. Co., Curtis at Fifth St., Denver, Colo. 80204 Eversman, land leveler

Red Ewald, Inc., P.O. Box 1167, Karnes City, Texas 78118 50-gallon spray rig, the basic unit is 50-gallon fiberglass tank, skid, 5 hp engine, 6 roller pump, 25' hose and handgun, plumbing and regulator

Excel Industries, Inc., P.O. Box 385, Hesston, Kansas 67062 Hustler, mower, rotary Model 272, 18 hp, dual hydrostatic transmission, 72-inch cut, winter attachments available

Hillside Hustler, mower, rotary, 24 hp, dual hydrostatic, Model 360, self-leveling for maximum safety and performance on hillsides and level ground; 60-inch flail, too

F

FMC Corp., Agricultural Machinery Div., 5601 E. Highland,

Jonesboro Ar. 72401

Bean Sprayers, hydraulic, all-purpose, pull-type Bean sprayers, hydraulic high pressure, mist blowers, skid mount, trailer mount, complete line of booms,' accessories, components. Rotary and Flail tractor

Mistblowers, truck mounted, nozzle parts

mounted mowers, tilthers

FMC Corporation, Sweeper Division, 1201 E. Lexington St., Pomona, Calif. 91766

Wayne Stump cutter and Wayne Brush Chipper

FMC Corporation, Outdoor Power Equipment Div., 215 South Park Street, Port Washington, Wis. 53074

HT-20, tractor, garden, hydrostatic, twin cylinder, 19.5 hp 54-inch rotary mower, 48-inch two-stage snow thrower, 42" single stage snowthrower, 54" blade, 33" tiller expandable to cover wheel widths.

QT-16, tractor, garden, hydrostatic drive, twin cylinder 16 hp, 48-inch rotary mower, 42" single stage snowthrower, 54" blade, 33" tiller expandable to cover wheel widths. QS-16, tractor, garden, hydrostatic drive, 48-inch rotary mower, 16 hp, 42" single stage snowthrower, 54" blade, 33" tiller expandable to cover wheel widths, 16 hp single

cylinder engine H-14, tractor, garden, hydrostatic drive, 14 hp 42-inch rotary mower, 38" single stage snowthrower, 42" blade, 33" tiller expandable to cover wheel widths

G-14, tractor, garden, 14 hp, 42-inch rotary mower, 38" single stage snowthrower, 42" blade, 33" tiller expandable to cover wheel widths

G-10, tractor, garden, 10 hp, 38-inch rotary mower, 38" single stage snowthrower, 42" blade, 33" or 22" tiller G-8, tractor, lawn, 8 hp, 32-inch rotary mower, 32" single stage snowthrower, 42" blade 828, 829, mower, riding, 8 hp, electric and recoil start, 28-inch rotary

Mowers, mulching type, rotary, two 22-inch self-propelled, 22-inch and 18-inch, hand propelled, mulching type, rotary, 3 special application units, 22" push, 2 18"

Mulcher Baggers, two models, 6 hp and 3.5 hp, both equipped with safety interlocks and leaf ramp option Tillers, horizontal shaft, 5 hp; vertical shaft, 3.5 hp Attachments to fit tractors

FMC Side-Winder, P.O. Box 818, Minden, Louisiana 71055 Side-winder rotary cutters, tractor drawn rotary cutters, lift and pull models, 4 ft. to 16 ft. Side-winder flail mowers, tractor drawn flail mowers, 6 ft. and 7 ft. models

Fairmont Hydraulics, 332 S. Michigan (Suite 1818), Chicago, Ill. 60604

The Powerfuls, drills (hydraulic powered), pruners (hydraulic powered), saws (chain-hydraulic powered), saws (circular-hydraulic powered)

Fanno Saw Works, Box 628, Chico, Calif. 95926 Saws, pruning, manual

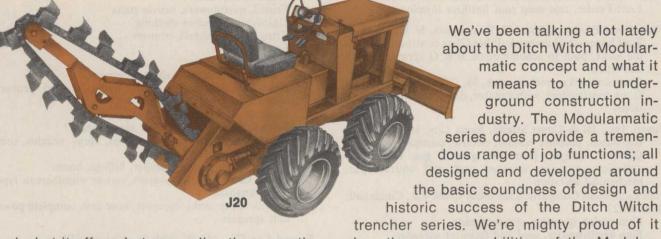
Fayette Division, Dayton-Walther Corporation, P.O. Box 8, Fayette, Ohio 43521

Haulette by Fayette, trailers, utility and light to medium heavy industrial

Ferrari Tractor, 6104 Avenida Encinas, Carlsbad Ca. 92008 Ferrari 4WD Tractor, 30 & 45 hp 4WD mowing tractors Mascio Rototillers, Commercial 40", 50", 60" & 90" rototillers for all 3 point hitch, catagory I trailers Ferrari Walkbehind rototillers, 7.5 hp & 14 hp diesel rototillers

Ferrari Lawn & Garden tractors and sprayers, 7.5 hp & 14 hp diesel power head tractors for mowing, snow blowing, "spraying", also has riding trailer

Ferrari Snow Plow, 7.5 hp & 14 hp diesel snow blower



and what it offers, but we realize there are times when the many capabilities of the Modularmatics are not needed. That's why we manufacture our standard line of trenchers.

DON'T FORGET OUR TRENCHERS!

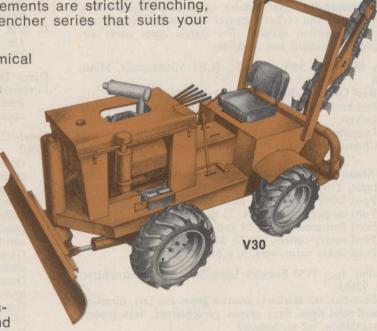
Ditch Witch designed and built the world's first service-line trencher more than 20 years ago. We've continued to build the world's best trenchers ever since. If your job requirements are strictly trenching, there's a model in the Ditch Witch trencher series that suits your needs exactly.

For example, we offer two economical handlebar models, the C and M. Both are self-propelled with power plants ranging from 7- to 12½ horsepower.

If you need a four-wheel-drive machine with full hydraulic control, including power steering, we have the 18-horsepower J20 and 30-horsepower V30.

Should you need a larger trencher, one of our Modularmatic models, equipped as a trencher, gives you the best machine in its class — plus the option of adding other capabilities later.

Whatever your underground construction needs, look first to Ditch Witch and "Don't forget our trenchers!"





Ditch Witch . . . equipment from 7 - to 195-HP.

CHARLES MACHINE WORKS, INC. P.O. Box 66 Perry, Oklahoma 73077

DITCHWITCH

Ferti-Feeder, 3973 Eastlay, Des Moines, Iowa 50306 Ferti-Feeder, tree deep root fertilizer injector

Fibre Glass Products, Box 147, Swannanoa, N. C. 28778

Tool boxes—pickup truck, Fibre Glass construction, paddle locks, built to accommodate B & G sprayer, fits all size trucks

Chemical tanks—pickup truck, 55, 110, 180 gallons, Fibre Glass construction, with agitator, drain, and hose connections

Fimco, Inc., 1st & Court Streets, Sioux City, Iowa 51101
Big Butch, pressure washer, electric, portable
Dobbins, sprayer, lawn and garden, gas, mechanical
agitation; sprayer, orchard and golf course, gas,
mechanical agitation

Finn Equipment Company, 2525 Duck Creek Rd., Cincinnati, Ohio 45227

Finn mulch spreader, straw spreader Finn Hydroseeder, seed and fertilizer spreader Finn Klodbuster, slope harrow

The Flintkote Co., Pipe Products Div., One Cascade Plaza, Suite 1402, Akron, Ohio 44308

Pipe, asbestos, cement Pipe, PVC Pipe, polyethylene

Flymo, P.O. Box 939, Elkhart, Ind. 46514 Flymo, air-cushion rotary mower

Foamspray Chemicals, Inc., 2623 Perth St., P.O. Box 20183, Dallas, Texas 75220

Foamspray® sprayer nozzles, aerial and ground boom, handgun, and orchard sprayer nozzles for Foamspray® drift reduction systems (five nozzle types cover air, ground, orchard and roadside)

Foley Mfg. Co., 3300 Fifth St. N.E., Minneapolis, Minn. 55418

Reel Grinder, sharpens, reel type, lawnmowers Bed knife grinder, sharpener, reeltype, lawn mower bed knives

Lapping machine, Back laps reel type lawnmowers Chain saw grinder, sharpen saw chains

Ford Motor Co., Tractor & Implement Operations (N.A.), 2500 E. Maple, Troy, Mich. 48084

Ford LCG Tractors, 37 to 63 hp Ford all-purpose tractors, 23 to 131 hp Ford flail mowers, 62, 74 and 88-inch widths Ford rotary cutters, 60, 72, 84 and 100-inch widths Ford sickle barmowers, 5, 6 or 7 ft. widths

Fore-Par, Inc., 7150 Fenwick Lane, Suite 106, Westminster, Calif. 92683

Fore-Par, tee markers, practice green markers, direction and rules signs, flags, greens, personalized, flags, greens, regulation, tee monuments

Fox Valley Marking Systems, 31W300 West Bartlett Rd., Bartlett, Ill. 60103

Easy Marker, aerosol paint cane type object to aide in layouts for landscapers, contractors, etc.

Friend Mfg. Corp., 4441 Prospect St., Gasport, N.Y. 14067
Tractor (hp); mower (reel, sickle, rotary, flail); saw (gas, hydraulic, electric, chain, circular); sprayer (type of agitation); irrigation (type of head, etc.)
Friend Airmaster, air blast applicator

Friend Orchardkraft, alternators, power brushcutter Friend Commander, chemical applicators, granular, chemical

Champion and Chapin, chemical applicators, dusters Friend Orchardkraft, generators, hose, hydraulic and airpowered tools

Friend Parkkraft, litter bags

Friend, mistblowers, nozzle parts
Uniroyal, protective clothing
Friend Orchardkraft, pruners
Friend, pumps
Hannay, reels, hose
Willson, respirators, safety equipment
New Draulics, saws, chain, hydraulic and pruners, hydraulic
Seymour Smith, saws, manual

Friend Orchardkraft, power saws, shears

Willson, dust masks

Friend, spray booms, spray guns, spray nozzles, complete, disk whirls

Friend, spray pumps, sprayer, bifluid, boom

Friend Orchardkraft, sprayers, cart or wheelbarrow type, hand, knapsack

Friend, spray tanks, sprayers, hose end, complete power unit sprayers

Fruend Can Co., 143 W. 84th St., Chicago, Ill. Gasoline cans to meet OSHA specifications

Fuerst Brothers, Inc., P.O. Box 271, Rhinebeck, New York 12572

Fuerst F-l-e-x-i-b-l-e tine harrows, turf maintenance equipment for seedbed preparations, scarifying, overseeding preparation, golf course construction, general turf area and bridle path maintenance

G

G. E. M. Products Inc., Box 845, Carol Stream, Ill. 60187 Snow Co "Power Kart", 3 wheel truck 8 hp Snow Co "Farm Skat", all terrain vehicle 8 hp

G. & H. Products, Inc., St. Paris, Ohio 43072 Uni-Lift, motorized all-position stand for riding mowers, lifts up to 80 inches, 1,000 lb. loads, in less than 30 sec.

Game Time, Inc., The Toro Company, 903 Anderson Rd., Litchfield, Michigan 49252

Park and playground equipment, half-way houses for golf courses

Gandy Company, 528 Gandrud Road, Owatonna, Minnesota 55060

Gandy Turf Tender, for fertilizer, seed or granular chemical; 24 or 42-inch width

Gandy spreader 600 Series, for fertilizer, seed or granular chemical; 3, 4, or 5-foot width

Gandy Spreader 10A Series, for fertilizer, seed or granular Chemical, 6, 8, 10 or 11-foot width, pull-type and tractor mounted

Gandy Spreader 1020A, for fertilizer, seed or granular chemical; 20 foot; folding

Gandy disk mount, granular applicator; 3 to 20 foot, hydraulic or mechanical drive

Gandy Ro-Hi, high clearance granular applicator; 5 to 28-inch band

Gandy Line Tender, granular applicator; 1 to 21-inch band, handle control

Gandy Super/Junior, Granular applicator; 1 to 21-inch band, implement-mounted

Gandy Measuring Wheel, one-man land measuring in feet or meters

Garber Seeders, Inc., St. Paris, Ohio Seeders, mounted and pull type

General Electric Co., Outdoor Power Equipment Operation, Corporations Park, Bldg. 702, Schnectady, N.Y. 12345 Tractors, electric/battery-powered, full line of at-

General Scientific Equipment Co., Limekiln Pike & Williams Ave., Philadelphia, Pa. 19150

Aprons

USE SOME SELF CONTROL



Ordinary slow release nitrogens just can't seem to control themselves. In fact, their behavior is as fickle as the weather.

Typical urea-formaldehyde nitrogens release very fast in hot weather and almost not at all in cold weather. They have very little self-control.

IBDU is a unique slow release nitrogen source. Its release rate is primarily dependent upon normal soil moisture and its own particle size.

And that means that IBDU gives the best feeding control. IBDU's release rate and availability won't drastically change when the weather or soil bacterial activity change.

By using IBDU, you can regulate your turf's response, because the rate at which your turf is fed is more closely controlled.

PROFESSIONAL PRODUCTS

IBDU"

Now that you know you can control your turf's response more closely by using IBDU, and that only Par Ex contains IBDU, it makes a lot of sense to buy only Par Ex products.

That's using self-control.

SWIFT CHEMICAL COMPANY
111 West Jackson Blvd. Chicago, Illinois 60604
Please send me more information on IBDU.

Name
Firm
Address
City State
Zip Code
Dept. #WTT

First aid kits Aerosol burn spray

Giant-Vac Mfg., Inc., Machine Shop Road, South Windham, Conn. 06266

Giant-Vac, heavy-duty commercial vacuums Giant-Blo, heavy-duty commercial blowers Giant-Truck Loader, heavy-duty truck loaders, front or trailer mount from 12 through 68 horsepower Giant-Thatcher, 5 and 7 hp—thatching machines

Ginther Equipment Corp., P.O. Box 311, Arcadia, Ca. 91006 Du-wiper, dew remover for greens

Clipping spreader, patented spreader-recycles grass clippings from green or tees

Turf drag, steel drag, breaks up grass or dirt lumps on fairways

Control stakes, steel stakes, types T & CP, with our golf course guide rope, controls flow of traffic

OB stakes, steel out of bounds stakes for controlling traffic

Golf course guide rope, plastics rope, ¼" hollow graided for use with our stakes in controlling traffic

Bag supports, for supporting golfers bags & clubs at driving ranges on earth or asphalt.

Custom signs, signs, steel, with customized messages. Mity hyd. dump trucks and trailers, utility and personnel trucks, 5000 lbs. capacity with low ground pressure

Glendale Optical Co., Inc., 130 Crossways Park Dr., Woodbury, L. I., N.Y. 11797

Glengard head protection, 9500 series safety hat.

Goodall Div., 1405 Bunton Rd., Louisville, Ky. 40213 Goodall, mower, rotary Goodall lawn-turf equipment

Gotham Chicago Corp., 2660 N. Clybourn, Chicago, Ill. 60614

Rose kones, winter protection for roses (foam plastic)

Granberg Industries, Inc., 200 So. Garrard, Richmond, California 94804

Clip-N-Trim, chainsaw pruning and hedge clipping attachment

Grind-R-Guide, electric grinder for saw chains Break-N-Mend, hand-tool for repairing saw chain Alaskan Mill, lumber making chain saw attachment Mini-Mill, lumber making chain saw attachment File-N-Guide, chain sharpening device File-N-Joint, chain sharpening device

Grass Growers, Inc., P.O. Box 584, Plainfield, New Jersey 07061

Terra Tack, for erosion control, straw / hay tack and mulch binder

Gravely, Division Clarke-Gravely Corp., One Gravely Lane, Clemmons, N.C. 27012

816 4-wheel tractor, 8-spd. trans., 16 hp, Onan 2-cylinder engine (rear mounted)

812 4-wheel tractor, 8-spd. trans., 12 hp Kohler single cylinder engine (rear mounted)

810 4-wheel tractor, 8-spd. trans., 10 hp Kohler single cylinder engine (rear mounted)

408 lawn tractor, 34-inch rotary mower—8 hp Kohler engine

7.6 hp custom 2-wheel tractor, 30" rotary mower, 40" rotary mower, 50" rotary mower

7.6 hp 2-wheel tractor, rotary tiller, rotary plow, rotary cultivator

C-10 hp commercial 2-wheel tractor, 44", 38", 36" snow-blowers, front mount 48" scraper

C-12 hp commercial 2-wheel tractor, blade, center-mount scraper blader, riding sulky for 2-wheel tractors

Greenlawn Sprinkler Co., 2200 South Lipan, Denver,

Colorado 80223

Greenlawn, adjustable riser sprinkler heads, automatic and manual sprinkler valves, adjustable risers, greenhouse bench nozzles

Griswold Controls, 124 E. Dyer Road, Santa Ana, Calif. 92707

System control module, irrigation controller Station control module, irrigation controller

Programmer, irrigation controller, check valve, flow control valve, solenoid control valve, pressure regulating valve, combination pressure regulating and solenoid control valve

Ground Hog, Inc., 25010 E. 5th St., San Bernardino, Calif. 92410

Ground Hog earth drills, 3 models (portable—gas powered)

Ground Hog trencher, Model T-3M (for sprinkler systems)

Grumman Aircraft Corp., S. Oyster Bay Rd., Bethpage, L.I., N.Y.

Aircraft, fixed wing

H

HMC, 22131 S. Vermont, Torrance, Calif. 90502
Jobber, utility vehicle—3-wheel
Jobmaster, utility vehicle—3-wheel
Diahatsu, utility vehicle—4-wheel
The Green Machine, weed & brush cutter, nylon blades

Hadfield Sod Roller Co., 6443 Sherwood, Oxford, Mich. 48051

Sod roller

Hahn, Inc., 1625 N. Garvin St., Evansville, Indiana 47717 Flex-A-Matic 140, five-gang reel mower TT-1200 & TT-1201, greens management system, greens mowers, verti-cuts, spikers & tee mowers Hyd. 5/7, 7 gang reel mower Gang mowers, reel type, 3, 5, 7, & 9 gang mowers Aerifiers, pull behind type

W. L. Hamilton Co., Lenter St., Bangor, Mich. Spray guns Pressure relief valves Spray nozzles

Hancor, Inc., P.O. Box 1047, Finlay, Ohio 45840 Turf-Flow, drainage tubing, two-inch Agri-Flow, drainage tubing, 4-inch, 6-inch, 8-inch, 10-inch, 12-inch

Clifford B. Hannay & Son, Inc., 422 Maple St., Westerlo, N.Y. 12193

Hannay Reels, reels to handle all kinds of hose and electric cable

Harbor Industries, Inc., P.O. Box 751, Beaver Falls, Pa. 15010 Harbor, soil moisture indicator

Harley-Davidson Motor Co., Inc., 3700 W. Juneau Ave., Milwaukee, Wisc. 53208

Golf cars and turf vehicles

Harvestall Industries, Inc., 3 North Walnut Ave., New Hampton, Iowa 50659

Truckler, combination forklift trailer

Hays Mfg. Div., Zurn Industries, Inc., 12th & Plum Sts., Erie, Pennsylvania 16501

Marfaid, automatic solonoid valves Select-O-Rain, industrial controller Safe-T-Rain, impact and pop-up sprinklers

Hemco Corporation, P.O. Box 210/111 N. Powell Rd., Independence, Missouri 64051

Tanks, fiberglass tanks for spraying or storage, 60 to 500 gallons

Travelite tool box, fits all wide bed pick-up trucks

Herd Seeder Company, Inc., P.O. Box 448, Logansport, Indiana 46947

Herd Sure-Feed, broadcast seeders (or broadcasters) for spreading seeds, fertilizer and granular chemicals, as herbicides and insecticides)

Hesston Corp., Lawn Equipment Division, 8640 Brookville Rd., Indianapolis, Ind. 46239

Hesston Front-Runner—grounds maintenance tractors, Model 200, 19.8 hp—Model 180, 18 hp—Model 160, 16 hp; 48", 60" mowers and 80" batwing mower head, self-contained vacuum pick-up (fits 48" & 60" mower heads only). Other attachments: rotary broom, dozer, snow thrower and tillage equipment; features hydrostatic drive, articulated steering, "up-front", roomy operator cockpit Hesston stump cutter, 8 hp Briggs & Stratton engine, portable, replaceable

Hesston, tractor, 16 hp, 18 hp, 19.8 hp; mower—rotary 48", 60", 80"; vacuum collector, snow-plow dozer blades, rotary broom, cultivators, 42" wide—disc harrow—29"-39" cutting width, aerator, 36" wide, stump cutter, stump removal to 8" below ground level

Litter Vacuum

V-Plow

Two-stage snow thrower

Highway Equipment Company, 616 D Ave. N.W., Cedar Rapids, Iowa 52405

Hi-Way Model P, utility, hopper-type spreader body that is simply set into a truck body to convert pickup, flatbed or dump body into spreader unit; spreads sand salt or cinders up to 40 ft; used too, to spread fertilizer and lime in landscape work

Hoffco, Inc., 25 Washington Ave., Richmond, Ind. 47374
Hoffco, P8—power Scythe, MP—brush cutter, 973—one-man post hole drill, 1000—2-man (2 cycle) post hole drill, 1100—2-man (4 cycle) post hole drill
Comet Jac-Lift, 2000 lb. winch hoist

Holsclaw Bros., Inc., 1325 E. Virginia St., Evansville, Indiana

Holsclaw flat bed trailers, flat bed trailer suitable for carrying golf carts, mowers and many other items

Homelite, 70 Riverdale Ave., Port Chester, N.Y. 10573 Saws, chain, 18 models; 8¾-26 lbs. weight; 12-60 inch bar length; manual, automatic and dual system chain oiler

Hortiscape, Inc., 7866 Second St., Dexter, Michigan Hortiscape Landscape Border Edging Hortiscape Tree Guying units

Howard Rotavator Co., Inc., 343 S. Division, Box 100 Harvard, Ill. 60033

Howard Turf Quakers, turf aerification machines Howard Rotavators, rotary tillage equipment Howard Power Arms, 3-pt. linkage backhoes Electrical generators Howard Magnates

Hub States Corporation, 2000 North Illinois Street, Indianapolis, Ind. 46202

520 sprayer, gas powered, high pressure 702 sprayer, electric powered, volume

730 sprayer, electric powered, high pressure

970 sprayer, gas powered, volume

810 sprayer, gas or electric, portable

H. D. Hudson Manufacturing Company, 154 E. Erie St., Chicago, Illinois 60611

Hudson manually-operated sprayers, compressed air, 1-1/3 to 4 gallons, steel and polyethylene tank; knapsack, 4½ to 5 gallons; slide-pump; wheelbarrow, 17½ gallons;

barrel and bucket spray-pumps; intermittent and continuous plunger-operated, 5 oz. to 2-2/3 qts.

Hudson manually-operated dusters, plunger, 1-lb. capacity; crank-operated, 14-lb. capacity; knapsack, 17-lb.

Hudson power sprayers, 12½, 15, 30, 50, 100, 150, 200 and 300 gallons, 3, 5 and 10 GPM output, 100 to 300 lbs. pressure; on wheels and skids, PTO and self-powered, jet and mechanical agitation

Hudson power dusters, PTO and engine powered, 6, 4, 2 and 1 outlet; litter-types

Hudson power spray-pumps, 3, 5 and 10 GPM, piston pumps, 250 and 400 lbs. pressure

Hudson PTO pump kits, positive piston, roller

Hudson spray booms, 4, 20 and 30 feet long, for PTO and engine powered sprayers, fixed and adjustable nozzle, single nozzle broad-spray

Hudson spray guns, single, double, triple nozzle; adjustable

Hudson power sprayer accessories, guns, booms, trailers (fixed and adjustable tread), tanks, tractor barrel mounts, wheels, cab top, elevated operator platform, telescopic gun mast, nozzles, boom drops, boom control valves, hose, hose clamps, hose fittings, tank refiller, pressure gauges, hose reels, pressure regulators, root feeder, flower gun, 3-nozzle gun, lawn booms

Hudson flame sprayers, 11/2 pints, 11/2 to 4 gallons

Husqvarna, Inc., 151 New World Way, South Plainfield, New Jersey 07080

Chain saw, gasoline engine powered

Hydraulic Products Co., Inc., 501 East 42nd, Lubbock, Texas 79404

HPC submersible, vertical turbine and vertical can pumps for irrigation, homes, cities and industries

Hydroponic Chemical Co., Inc., Box 4300, Copley, Ohio 44321

Root feeding rods, sod testers

Hydro-Turf, P.O. Box 3, Elk Grove, Ill. 60007

Hydro Turf, spraying equipment, sprinkler systems—above ground, seeders, portable pumps, portable generators, flexible hose and pipe, Hydro seeders and mulchers

Hypro Division, Lear Siegler, Inc., 375 Fifth Ave. N.W., New Brighton, Minn. 55112

Hypro, sprayer pumps, sprayer pump accessories, transfer pumps

1

ITT Marlow, P.O. Box 200, Midland Park, N.J. 07432 Pumps, irrigation, portable, submersible

Ideal Crane Div., Bert Parkhurst, 15051 E. Admiral Pl., Tulsa, Okla. 74116

Ideal Crane, hydraulic truck crane (can be operated both electrically and by hand) very rugged; 3000 lb. capacity electrically-operated crane is \$513.00; 2500 lb. capacity hand-operated crane is \$215.00; barrel chain and nursery sling available

Imperial Underground Sprinkler, 705 E. 31st St., Kansas City, Mo. 64109

Irrigation, spray heads and controllers

Inject-O-Meter Mfg. Co., Inc., 820 Thornton, Clovis, New Mexico 88101

Fertilizer Injectors, for injection of fertilizer, herbicide or insecticide in irrigation stream (available with tanks)

International Harvester Co., 401 N. Michigan Ave., Chicago, Ill. 60611

International, tractors to 101 hp, crawlers 42 to 69 hp, mowers, rotary cutters; flail type; side mounted sickle;

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backhoes and loaders, all sizes 3-point hitch backhoe International 3200, compact loader, 30 hp

International Harvester (Consumer Products) 401 N. Michigan

Ave., Chicago, Ill. 60611

International, lawn and garden tractors, 8, 10 & 12 hp gear drive; 10, 12 & 14 hp hydrostatic drive Cub Cadet, Cadet 55 and 75, riding mower

Cadet 76, lawn and garden tractor

International 526, rotary tiller

International 95, electric riding mower plus 95 Cadet electric

International 265 & 268, snowblower International, rotary mowers 19 & 21-inch cuts

Irrigation Supply Co., 924 Baxter Avenue, Louisville, Kentucky 40204

Preassembled pumping stations for irrigation systems Buckner sprinklers

J-M pipe; ametek valve boxes; dresser gate valves; and complete stock of irrigation and utility fittings and supplies

Irrometer Company, Inc., P.O. Box 2424, Riverside Calif. 92506

Irrometer moisture measurement equipment, hermetically sealed pressure gauges for pumps & irrigation systems, automatic moisture sensing devices

J

JLM Products & Design, 6805 Boysenberry Way, Colorado, Springs, Colo. 80907

Soil moisture meter, tested to 12-inch depth, deeper depth units available

Jacobsen Manufacturing Co., 1721 Packard Ave., Racine, Wisconsin 54303

Mower, rotary, push, 20-inch; self-propelled, 21-inch; riding, 60-inch

Mower, reel, self-propelled, riding, tractor, 30-inch to 25 ft., mounted and pull behind gang

Mowing tractors, reel, 76-inch to 19 ft.

Mower, greens; 22-inch self-propelled, triplex riding, 62 inches

Aerators, self-propelled and tractor mounted, 18-inch to 7 ft.

Turf Sweeper, self-propelled and pull behind 48 inches and 60 inches

Seeders, self-propelled and tractor mounted, 21-inch and 48-inch

Top Dresser, self-propelled and truck mounted, 36-inch spreading width

Sod Cutter, 12-18 inch cutting width

Edgers

Utility truck, 12 and 14 hp

Trailer, 6 ft. wide and 10 ft. long, tilt bed, single axle Pipe Piper, 10, 14, 18 hp irrigation pipe pullers; bury the pipe without removing the earth, no trenching

Jameson Corporation, P.O. Box 15277, Charlotte, N.C. 28210
Fiberglass "Safe Stick", fiberglass pruner poles—single sections up to 12 ft. long; fiberglass pruner poles—sectional sections up to 12 ft. long which can be locked together for any desired combination of lengths. Poles will accommodate all pruner heads; "safety yellow"—color

Jeep Corporation, 14250 Plymouth Road, Detroit, Michigan 48232

Jeep 4-wheel drive vehicles, Jeep CJ-5/CJ-6 and Jeep Cherokee 4-wheel drive sport/utility vehicles, Jeep Wagoneer 4-wheel drive station wagons and Jeep 4-wheel drive pick-up trucks (light/medium duty)

Jobu Chain Saws, P.O. Box 6023, Texarkana, Texas 75501 Chain saws Johnson Hydraulic Equipment Co., Div. Arps Corp., 1711 Wisconsin Ave., New Holstein, Wisc. 53061

Work Horse Loader, for compact tractors and front-end loader

Work Horse Terra-blade, for compact tractors bellymount blade

Work Horse Terra-comb, for compact tractors, combination thatcher and power rake

Johnson's Industrial Supply Co. (Jisco) 1941 Karlin Dr., St. Louis, Mo. 63131

Jisco earth augers, the quick easy professional way for home owners to deep root feed their trees, bushes and shrubs

Jomac Products, Inc., 863 Easton Road, Warrington, Pa. 18976

Protective clothing, partial or complete protection Gloves, chemical and waterproof gloves for handling chemicals

K

K-D Manufacturing Company, P.O. Box 4547, Waco, Texas 76705

K-D Kurb Dresser, edges streets, curbs and walks; mounts on tractor equipped with category 1, 3-point hitch; can be used to edge along concrete or asphalt K-D Rough Terrain Lift Trucks, lift capacities, 5,000 to 8,000 lbs., lift heights to 30 feet, large flotation tires for soft ground and rough terrain, gas or diesel engines, manual or power reversing transmissions

F. D. Kees Mfg. Co., 700 Park Avenue, Beatrice, Nebraska 68310

Powerake®, thatcher, lawn Powerslice®, aerator, lawn Kom-pak, shredder

Kaster, spreader, broadcast, fertilizer, seed, lawn Krawler, sprinkler, traveling, lawn

Kemp Shredder Co., 1027 E. 26th St., Erie, Pa. 16505 Shredders

Kinco Mfg., 2368 Territorial Road, St. Paul, Minnesota 55114 Kinco KMG 38, sickle bar mower Henderson GPM, verti-cut and flail-type mower

King Bros. Industries, 251 Powell Rd., Fillmore, Calif. 93015 Flex-Riser®, flexible riser for sprinkler systems Sta-Stake®, sprinkler riser support

Knaack Manufacturing Co., 420 East Terra Cotta Ave., Crystal Lake, Ill. 60014

WeatherGuard, storage chests and ladder racks for pickup trucks (for equipment and tools).

Knaack, storage chests, work benches, and tool boxes

Kohler Co., High Street, Kohler, Wis. 53044 Kohler, 4-cycle, air-cooled engines, 4 hp to 24 hp

Kubota Tractors, Inc., 6245 Grand Ave., Los Angeles, Calif. 90014

Tractors, up to 40 hp

Karl Kuemmerling, Inc., 4536 Lincoln Way, E., Massillon, Ohio 44646

Willson, safety hats

Mitts & Merrill, brush chipper (territory Ohio, Ky., Western Pa., Western N.Y., W. Va., Md. from Hagerstown west)

Solo, sprayers

Hodges, stump router (territory E. of Mississippi) Seymour Smith, pruners

Fanno, saws

Greenlee, tools

Carhartt, uniforms

Nortec, log splitter
Little Wonder, pruners
Champion, pruners
Skod, saws and pruners
B.V.D., saws and pruners
Standard, brooms
Wall Rope Co., rope
Klein, tools
Whitlock—Plymouth, rope

L

Lakes Supply Co., Inc., P.O. Box 101 Dundee, Ill. 60118
Toro, landscape seeders and rollers
Lakes Supply Co., Inc. drip weed roller applicator
Western, snow plows
Toro, lawn mowers
Huffy, lawn mowers and riders
Hahn Eclipse, lawn mowers and riders
Jacobsen, lawn mowers and riders
Ariens, lawn mowers and riders
WD-40, lubs.
Hoists for pickup trucks & larger

Lakeshore Equipment & Supply Co., 10237 Berea Rd., Cleveland, Ohio 44102

Replacement parts, mowers Golf accessories, flags, cups, etc. Lesco sprayers Lesco karts

Lakeside Mfg. Company, Inc., 39 E. Main St., Honeoye, N.Y. 14471

Trailers, industrial, 6 to 15-ton rated capacity

Lancaster Pump & Mfg. Co., Inc., 1340 Manheim Pike, Lancaster, Pa. 17604

Saws, chain, five models, 8 ½-15 lbs. weight, 12-24-inch bar lengths, manual and dual system chain oiler

L. L. Larson Machine, Inc., 1017 N. Santa Fe, P.O. Box 308, Princeville, Illinois 61559

Sprayer pump, piston, roller & centrifugal
Portable water pumps, centrifugal, roller & piston
Sprayer nozzles, broadcast & hi pressure
Sprayers for ground coverage, broadcast & spot application
Sprayers for trees, 20 ft, x 50 ft, application

Sprayers for trees, 20 ft. x 50 ft. application Sprayers for turfs, broadcast & spot application Sprayers, fertilizer-mounted, broadcast & spot application

Spreaders, fertilizer, pull-type, broadcast 40 ft. pattern

Laval Separator Corp., 1899 N. Helm, Fresno, California 93727

Laval Separator, hydro-cyclone de-sanding device that eliminates 98% of +200 mesh sand and grit. Can be installed on pump discharge or suction. Available in flow rates from 3-4100 gpm. Has a low pressure loss; often used in place of filters or screens

Lawn-Boy, OMC-Lincoln, P.O. Box 82409, Lincoln, Nebraska 68501

Lawn-Boy, solid state ignition rotary mowers, deluxe model rotary mowers

Lawn Medic, Inc., Manufacturing & Research, 10 Gates Street, Bergen, New York 14416

Porto-Mixer, hand-operated small 1 c.y. portable tumbler

Lehara Equipment Co., Inc., Edgeboro Rd., East Brunswick N.J. 08816

Lehara Hy-Dro Flail, hydraulic extension mower—for mowing behind guard rails, up and down banks

Leigh Products, Inc., Coopersville, Michigan 49404 Universal-Spray Doc, sprayer—tank; sprayers—open top tank Universal, slide sprayer; flame sprayers; hose-end sprayers; power sprayers; continuous and intermittent hand sprayers; hand dusters; fogger—mineral base

The Lely Corporation, P.O. Box 1060, Route 301, Wilson, N.C. 27893

Lely Broadcaster/Seeder, P.T.O. driven, lift and pull-type spreads fertilizer, seed, sand or chemicals

Lely Roterra, P.T.O. driven power harrow, horizontally contro-rotating tines, prepares seedbed, incorporates chemicals, levels and firms land

Levco Manufacturers, Inc., P.O. Box 72, Wynne, Arkansas 72396

Model HD50 Stump Grinder, a one-man stump removal system offering unequalled maneuverability and speed; operates behind a standard pickup truck (½-ton) or small tractor; features include industrial, water-cooled power unit and self-contained hydraulic system

Fred A. Lewis Company, 40 Belknap Rd., Medford, Oregon 97501

Lewis "Mole", post hole digger powered by your chain saw

Lewis "Donkey" Winch, winch powered by your chain saw

Lewis Tractor "Mole", post hole digger attachment to small tractors (front end attachment)

Lifetime Career Schools, 2251 Barry Ave., Los Angeles, Calif. 90064

Landscape training. Complete home study training in landscaping and ground care; free booklet describes training in detail

Lift-Quik Mfg. Co., South Min St., Evans Mills, N. Y. 13637 Lift-Quik, garden, golf cart, lift

Limb-Lopper Co., Inc., Div. of Robinson Ind., 11845 Burke, Santa Fe Springs, Calif. 90670

Limb-lopper: hydraulic & air: pruners, saw. Hydraulic: pruner, chains saw, circular saw, impact wrench, drill, tamper. Electric: circular saw

Lindig Manufacturing Corporation, 1875 West County Rd. C, St. Paul, Minnesota 55113

Lindig, shredders (soil and compost)—manual and tractor fed, capacity up to 200 yards/hour; screeners (powered) for soil and sand; brush chippers, 7 to 160 hp, compact and full size for branches up to 8" in diameter, also PTO drive; soil treating (sterilization) systems; leaf shredders and compost pulverizer/mixers

Lindig Kajon, compact brush chippers 7 to 10 hp Lindig Concho, compost shredder/grinder

Locke Mfg. Div. Stellar Lawn Care, 1085 Connecticut Ave., Bridgeport, Conn. 06607

Mowers, reel, self-propelled and riding, 30 inches to 87 inches; rotary

Lockwood Corporation, Box 160, Gering, Nebr. 69341
Lockwood Hardie Sprayers, airblast sprayer, 300 or 500
gallon stainless steel tank, trailer mount; utility (general
purpose) 100 to 500 gallon stainless steel tanks. Truck
trailer or skid mounted; shade tree—600 gallon stainless
steel tank, truck mounted

Lombard Power Equipment, Sales Ave., Harrison, Ohio 45030 1500 electric, saw, chain, 12-inch bar; 12 amps Pony, saw, chain, gasoline, 12-inch bar, 6½ lbs.

Comango, saw, chain, gasoline, 16-inch bar Super comango, saw, chain, gasoline, ½ "anti-vibe,"

automatic oiler
Super Lightning, saw, chain, gasoline, ½ "anti-vibe,"

Super Lightning, saw, chain, gasoline, ½ "anti-vibe," automatic oiler, 20-inch bar; saw, chain, gasoline, full "anti-vibe," automatic oiler

London Fog Company, Crystal Bay, Minnesota 55323

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London Foggers, thermal foggers from 3 hp hand portable through 16 hp heavy-duty

London Aire, ULV insecticide dispersal equipment from 5 hp dolly mounted type through 9 hp extra heavy-duty for large area mosquito control

Lumenite Electric Co., 2331 N. 17th Ave., Franklin Park, Ill. 60131

Lumenite, lawn irrigation control and equipment

ELS-5 and 11; 5 station and 11 station economical lawn irrigation controls

LAS-6PC to 40PC; 6 station to 40 station deluxe lawn irrigation controls

RDC-1000 rain detector control with variable sensitivity RDP-1000 rain detector probe assembly

Lupton Enterprises, 32 Martha St., Tiffin, Ohio 44883 Log splitter, attachment to backhoe, replaces bucket in minutes

M

M-B Company, 1615 Wisconsin Ave., New Holstein, Wis. 53061

Brush Chippers, trailer mounted—12" and 15" sizes 120-158 hp gasoline engines

Orchard Chipper, tractor 3-point hitch attached PTO driven (540 RPM), 12" wide chipper with feed apron and 180° discharge chute

1-10, 3-10, 5-10, line marker, hand operated Fitchburg chipper, brush chipper 12 in. and 15 in.

Tractor Brooms, sweepers

Maasdam Pow'r Pull, Inc., P.O. Box 6130, Burbank, Calif. 91510

Maasdam Pow'r Pull, winch-puller

Magline, Inc., 503 S. Mercer, Pinconning, Mich. 48650 Trailevator*, trailer, hydraulic elevating

Mars Industries, Inc., 5209 West Broadway, Minneapolis, Minn. 55429

Suburban Pick-up sweepers, tow-type for turf and hard surface sweeping

Martindale Electric Co., 1375 Hird Ave., Cleveland, Ohio 44107

Martindale Protective Mask, respiratory protection against non-toxic dusts

Martindale Protective Eyeshield, one-piece eyeshield

Massey-Ferguson, Inc., (Industrial Products) 1901 Bell Ave., Des Moines, Iowa 50315

MF 20, industrial tractor, 38 hp

MF 30, Industrial tractor, 52 hp

MF 31, industrial tractor, 70 hp

MF 40, industrial tractor, 38 hp

MF 20 Turf, industrial tractor, 38 hp

MF 30 Turf, industrial tractor, 52 hp

MF 20, 30, 40, 50A, 70, backhoe-loader; % cu. yd., % cu. yd., % cu. yd., 1 cu. yd. respectively; up to 16 ft. digging reach; all but MF 70 available separately

MF 711, skid steer loader

MF 40, forklift

MF 2500, forklift

Box scraper, landscape

Massey-Ferguson, Inc., (farm equipment), 1901 Bell Ave., Des Moines, Iowa 50315

MF 135, tractor, 38 hp (PTO)

MF 165, tractor, 50 hp (PTO)

MF 175, tractor, 63 hp (PTO)

MF 180, tractor, 63 hp (PTO)

MF 1080, tractor, 80 hp (PTO) MF 1105, tractor, 100 hp (PTO)

MF 1135, tractor, 120 hp (PTO)

MF 1155, tractor, 140 hp (PTO)

MF 1500, tractor, 150 hp (drawbar) MF 1800, tractor, 180 hp (drawbar)

Massey-Ferguson, Inc., (consumer products), 1901 Bell Ave., Des Moines, Iowa 50315

MF 14, garden tractor, 14 hp

MF 126, garden tractor, 12 hp

MF 10, garden tractor, 10 hp

MF 310, self-propelled rotary mower, 3.5 hp

MF 210, push rotary mower, 3.5 hp

MF 58, 68, 61, 71, rotary cutters, cutting widths up to six feet

Mathews Company, P.O. Box 70, Crystal Lake, Ill. 60014 Lawn Genie, flail mower-sweeper-mulcher, 3 ft. and 6 ft. models

Maxey Manufacturing Co., Inc., P.O Box 2001, Ft. Collins, Colo. 80521

Trailers, equipment trailers-medium duty

Truck Bodies, customized truck beds

Snow grooming, ski area and snowmobile trail grooming and snow moving equipment

McCabe-Powers Body Co., 8900 N. Frost, St. Louis, Mo. 63115

Buckets, aerial towers

McCulloch Corp., 6101 W. Century Blvd., Los Angeles, Calif. 90045

Chain saws, (15 models)

Hedge trimmer

Portable earth drill

Portable electric generators, 1500, 2000 and 3000 watt Brush cutter

McDonough Power Equipment, Inc., McDonough, Georgia 30253

Mower, rotary, push-type and riding; reel, self-propelled

Melnor, Industries, Turf Div., 1 Carol Place, Moonachie, New Jersey 07074

Shrub nozzle adapters

Stationary spray heads

Pop-up spray heads

Rotary spray heads

Pulsating spray heads

Solenoid valves

Time controls

Quick coupler valves

Pipe and fittings

Underground irrigation systems, stationary & pop-up

Melroe Division, Gwinner, North Dakota 58040 Bobcat, front-end skid steer loader

Metro-chiper, Vestor Div., Morbark Ind., Winn, Mich. 48996 Chippers, for large tree chipping

Miller Tilt top Trailer, Inc., 450 S. &2 St., Milwaukee, Wis. 53214

Tilt Top®, machinery hauling trailer, changes quickly from between the wheel to over the wheel trailer Ramp Champ®, over-the-wheel platform trailer; both trailers available with new gooseneck hitches

Mid-State Metal Casters & Mfg. Co., 2689 So. 10th St., Fresno, Cal. 93725

Sweep, vacuum; yard

Blower, leaf blower (wind-row)

Mine Safety Appliances

Masks, dust, gas

Protective clothing

Safety belts and equipment

Respirators

Mitts & Merrill, Inc., 109 McCoskry St., Saginaw, Michigan 48601

When you talk ROOTS, you're really talking about a combination of several important characteristics.

Density. Vigorous Growth. Rhizome and tiller development. Hardiness.

At E. F. Burlingham & Sons, we know. Because we've spent the last 70 years experimenting and developing higher quality grass seeds for your use.*

The results speak for themselves. Not long ago, we introduced a hardy Swedish Kentucky Bluegrass to the

United States. Its name: Sydsport.
One of the outstanding characteristics of this variety was its dense, rapid spreading root system. In this case, the

roots were primarily responsible for the important winter hardiness, disease and drought-resistant characteristics which mark this Swedish import.

As a result, Sydsport has more than earned the reputation of being "the first grass to green and the last green to go."

Sydsport from E. F. Burlingham & Sons. Just one of the many reasons why... when you talk about ROOTS, you talk about Burlingham.

E. F. Burlingham & Sons, P.O. Box 217, Forest Grove, OR 97116. Phone: (503) 357-2141; Telex 36-0274; Cable: Burlingham. E.F. BURLINGHAM & SONS



^{*} Bonnieblue, Majestic, Sydsport and Birka Kentucky Bluegrasses and Koket Chewings Fescue.

Chipper, brush, staggered knife pattern, swing away folding feed chute, positive safety lock pin

Mobile Aerial Towers, Inc., 2314 Bowser Avenue, Fort Wayne, Indiana 46803

Hi-Ranger, personnel platforms

Moody Sprinkler Co., Inc., 3020 Pullman St., Costa Mesa, Calif. 92627

Rainmaster, automatic valves, electric and hydraulic; automatic controllers, electric and hydraulic; sprinklers—pop-up and stationary heads

Morbark Industries, Inc., P.O. Box 1000, Winn, Michigan 48896

Morbark Total Chiparvestor's, portable disc type chipper reduces whole trees, limbs in tact to dimensional wood chips. Two models. One unit will reduce 21" diameter material, the other 18" diameter material in less than one minute.

Mott Corporation, 500 Shawmut Ave., LaGrange, Illinois 60525

Industrial, commercial, institutional grade flair type safety mowers, styles are walk behind or ride behind; tractor mounted & powered front, mid or rear; tractor drawn self powered used singly or in gangs; and side mounted (tractor) hydra-dynamically driven

MTD Products, Inc., 5389 W. 130 St., Cleveland, Ohio 44111 Rotary Vacuum Shredder Bagger, 5 hp, 3 stage cutting action blade

Mud Cat, Div. of National Car Rental, 5501 Green Valley Dr., Minneapolis, Minn. 55431 Weed harvester, aquatic

The F. E. Myers & Bro. Co., 400 Orange Street, Ashland, Ohio 44805

Turf Line, TL 10 E2 10 GPM-500 PSI 200 gallon — paddle agitator; TL 10 E2S 10 GPM-500 PSI 200 gallon—skid model; TL 35 E5 35 GPM-800 PSI 500 gallon—engine—rotary agitator; TL 29 100 GPM-29" fan—150 gallon—engine—mist sprayer

N

National Hydro-Ax, Inc., Box 568, Owatonna, Minnesota 55060

Model 500 hydro-ax brush cutter, 117 h.p., 4 wheel drive, articulate steering, front axle oscillation, 8 foot wide rotary cutter

Hydro-Ax's unique dual hydrostatic system insures full cutter power while maintaining maximum tractive effort . . . even during inching.

National Mower Co., 700 Raymond, St. Paul, Minn.55114 National, 84" National Triplex Reel, 10 hp riding Reel;



68" National Triplex Reel, 10 hp riding reel; 68" National Triplex Reel, 8 hp; 30" National Triplex Reel, 8 hp riding reel

L. R. Nelson Corporation, 7719 N. Pioneer Lane, Peoria, Illinois 61614

Rain Train, traveling sprinklers

Silver Rain, pop-up sprinklers, landscape and turf irrigation equipment

Nunes Manufacturing, 2006 Loquot Avenue, Patterson, California 95363

Nunes Sod Harvester, complete mechanical sod harvester; mounted on Ford Model 4110 tractor; front cutoff and cutter assembly; will eliminate sod cutter labor; available in styles to: fold, slab, roll, sod.

Nunes Vacuum Sweeper, turf sweeper designed for sod growers; available with PTO drive or motor driven

0

Oberdorfer Foundries, Inc., Agri. Pump Div., Thompson Rd., Syracuse, N.Y. 13201

Pumps, bronze and aluminum, rotary gear, rubber impeller, rubber cotlar, centrifugal, helical rotor

Olathe Mfg., Inc., 2nd and Mullberry, Paola, Kansas 66071
Olathe Model 800 Quiet Chipper, brush, limb and lumber chipper with new patent pending noise control features Model 8 Stump Cutter, portable stump remover, 8 hp Model 12 Chipper, 3-pt. hitch PTO powered brush chipper

Model 172 and 330 pers, trailer mounted engine powered brush chippers

Model 400 hydraulic power unit, 8 hp portable hydraulic power unit

Omark Industries, Inc., Oregon Saw Chain Division, 9701 S. E. McLoughlin Blvd., Portland, Oregon 97222

Oregon Saw Chain, saw chain and accessory items Oregon Power Mate and Super-tronic saw bars Oregon Power Mate, rim and drum sprockets

Onan Division of Onan Corp., 1400 73 rd Ave. N.E., Minneapolis, Minn. 55432

Engines, 12-25 hp

Generators, electric portable-15KW Battery chargers

Otis Elevator Company—Special Vehicle Division, P.O. Box 8600, Stockton, Calif. 95208

Otis Golf Car, electric, 4-wheel, 36 volt Otis Turf-Awl, gasoline, 3 and 4-wheel, 18 hp

Otis Materials Handling, Div. Otis Elevator Co., 8000 Baker, Cleveland, Ohio

Forklifts

P

Papec Machine Co., Shortsville, N.Y. 14548 Leaf blower

Par Aide Products Co., 296 No. Pascal Street, St. Paul, Minnesota 55104

Complete Line of Greens and Tee Accessories equipment including: golf ballwashers, flag poles and flags, tee towels, detergent for golf ballwashers, aluminum and plastic putting cups, hole cutters, cup setter, cup puller, rule signs, custom tee plaques, furniture for locker room and tee benches; spike rushes, sand trap rakes, etc.

Parco Products Co., Pottstown Ave. & Dotts St., Pennsburg, Pa. 18073

Dragon Model 180, backpack sprayer

Pargo, Inc., 4300 Raleigh St., Charlotte, N.C. 28205
Pargo golf carts, Models 803 & 804, 3 & 4 wheel electric golf carts

Empire, 4 wheel electric personnel carrier Bahama Bar Car, 4 wheel electric serving vehicle

Parker Sweeper Company, Box 720, Springfield, Ohio 45501 Estate Master, 3-gang sweeper for turf or large area cleanup

Hurricane Blowers, for windrowing leaves etc. for easy collection

Trail Thatch, a large three-gang Thatch-O-Matic for dethatching large areas

Partner Industries of America, Inc., 2733 W. Fulton, Chicago, Ill. 60612

Saws, chain, six models, 10½-17 lbs. weight, automatic chain oiler

Perma-Rain Irrigation, Inc., P.O. Box 880, Lindsay, Calif. 93247

Filter, sand, silt, etc. (irrigation)

Emitter, "El" for irrigation—trees/shrubs; "Perma-Flo El"

Fogger, Perma-Rain, for tree and shrub irrigation and plant cooling

R. E. Phelon Co., Inc., 70 Maple Street, East Longmeadow, Mass. 01028

Phelon, flywheel type ignition Repco, systems and repair parts

J. Pickrell Co., 734 E. Southern Pacific Dr., Phoenix, Ariz. 85034

Mogator Utility tractor, two-passenger, 25 hp gas, 3,000 lb. load capacity, four-wheel drive, center articulated steering; accessories; hydraulic dump bed, cab and windshield, hyd. blade

Pioneer, OMC-Lincoln, P.O. Box 82409, Lincoln, Nebraska 68501

Pioneer P 40, 4.0 cu. inch engine chain saw for

professional use

Pioneer P 20, 3.1 cu. inch displacement chain saw for casual use

Pioneer P25, 3.1 cu. inch displacement chain saw for casual use

Pioneer 1200 A, 3,546 cu. inch displacement chain saw

Piper Aircraft, Bald Eagle Street, Lock Haven, Pa. 17745 Aircraft, fixed wing

Piqua Engineering, Inc., 234 First St., Piqua, Ohio 45356

Lickity Log Splitters Lickity Brush Chippers Lickity Can Compactors Piqua Paper Balers

Pitman Manufacturing Co., Div. A. B. Chance Co., P.O. Box 120, Grandview, Mo. 64030

Aerial bucket, ML-28, ML-32 Digger/derrick PC 650 Hydraulic truck crane HL-140

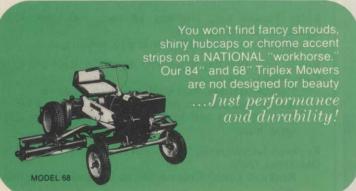
Plasti-Chain Corporation, P.O. Box 267, Hebron, Illinois 60034 (312) 272-5137

Plasti-Chain Polymer Chain and Steel re-inforced Ground Posts, for use around golf course tees, cart pathways, etc.; connecting links and S-hooks also available; each of 3 sizes in chain and all-purpose posts available in white and black; chain available also in blue, red, green, and yellow

Estate Fencing, plastic chain and steel re-inforced posts pre-packaged as follows: Corner Pack Kit, contains 3 posts and two 10-foot lengths of chain; available in black, white, or in combinations; perfect for fencing off restricted areas or to indicate danger areas

Guideline Lane Equipment, available in 40-inch high/2½-inch diameter, heavy duty "base" stanchion; in black, or white supplemented by two sizes of plastic chain





FAST! With an 84 and 68-inch cut, NATIONAL Triplex mowers cut grooming time in half around greens and traps.

EFFICIENT! National's Triplex maneuvers sharply, climbs banks and hillsides easily and safely. Three, power driven, free-floating reels follow ground contour. Reels do a precision job without skip or scalping. Handles the clubhouse lawn and practice areas, too!

DURABLE! Timken bearings; automotive-type transmissions; heavy duty, tubular steel tie rods and bed knife frame; and cutter lip bar...all add up to more years of use!

SERVICEABLE! No-nonsense design makes normal service faster than any mower on today's market!

NATIONAL...our reputation is your guarantee of quality! Our start in 1919 makes us one of the (if not the) oldest power mower manufacturers in the U.S.A.



available in black, white, red, blue, green, or yellow; connecting links and S-hooks also available by color; Guideline Lane Equipment is ideally suited for directing crowds at all indoor functions, outdoors in parking lots or at field events, or where ever people gather; easy to set up, move, remove, or store; permanently attractive, requires no maintenance. Stanchion can be weighted with sand or water via hollow base

Plastic Techniques, Inc., P.O. Box 197 New Boston, N.H. 03070

Plastic Techniques, aerial lift truck accessories

Plastiline, Inc., 1251 N.E. 48 St., Pompano Beach, Fla. 33061 Plastic pipe fittings Wedge-O-Flex gasket fittings

H. K. Porter, Inc., 74 Foley St., Somerville, Mass. 02143
 Cutters, bolt, rod, cable, chain, etc.
 Shears, lopping
 Trimmers, tree
 Shears, pruning
 Cutters, brush and root

Beaird-Poulan Division, Emerson Electric Co., 5020 Flournoy-Lucas Rd., Shreveport, La. 71109 Poulan, gasoline chain saws; electric chain saws

Power Spike Mfg. Co., Walters, Okla. 73572 Power Spike, spiker

Precision Chipper Corporation, Box 360, Leeds, Ala. 35094 Chipper, heavy-duty, industrial, feed through rate of about 125 feet per minute

The Prestolite Company, 511 Hamilton Street, Toledo, Ohio 43694

Batteries, spark plugs, ignition parts, magnito ignition systems, wire and cable

Princeton Manufacturing Co., 2625 Johnstown Road, Columbus, Ohio 43219

Princeton Sod Harvester, self-propelled harvester, cuts and stacks sod on pallets

Product Development International, Box 676 Liberty, S.C. 29657

Tree-Injectors, systemic tree injection kit Riggin'-Buddy, rigging device for tree workers Magic Knot, mechanical fastener for rope tying Quick Cablers, easy tree bracing system Tool Holders, for holding tree workers tools on belts Climber's Tie-In Strap, lightweight safety strap for tree climbers

Training Manuals, for all tree care people

Public Health Equipment & Supply Co., 1720 So. Presa St., San Antonio, Texas 78210



Swingfog SN 11 high performance fog generator (thermal)

Fontan knapsack sprayers

Fontan knapsack dusters
Fontan knapsack granular applicators

Fontan knapsack granular applicators Fontan knapsack flame throwers

Lownes enginineering "Leco" ULV cold fog generators Buffalo turbine sprayers, dusters and ULV equipment

Q

Quadra Mfg. Ltd., Box 491, Trail, B. C., Canada Frontier, super-light weight chain saws

Quality Marsh International, P.O. Box 406, Thibodaux, La. Quality, amphibious marsh and swamp equipment; amphibious draglines; amphibious personnel carriers; amphibious roto booms

H

R.A.M. Industries, Inc., 125 N. 10th. Street, Waukee, Iowa 50263

R.A.M. Industries, Inc., Schuster gooseneck trailer line: grain, livestock, flatbeds, machinery

RainBird Sprinkler Mfg. Corp., P.O. Box 37, Glendora, Calif. 91740

Impact sprinklers, spray heads, rotor pop-up sprinklers, electric valve-in-head sprinklers, hydraulic valve-in-head sprinklers, quick coupling valves, manual angle valves, electric remote control valves, hydraulic remote control valves, electric and hydraulic automatic controllers, specialty valves, valve markers, electric underground cable

Rain Jet Corporation, 301 S. Flower St., Burbank, Calif. 91503 Sprinkler heads for lawn & turf irrigation

Shower bath head — the only rotary massage shower head

Ornamental garden fountain — "Shower of Diamonds"

Rain-O-Mat Sprinklers, Inc., 12414 Whittier Blvd., Whittier, Calif. 90608

Sprinkler irrigation equipment

Raven Industries, Box 1107, Sioux Falls, South Dakota 57101 Fiberglass tanks Rhino polyethylene tanks

Reach-All Manufacturing and Engineering Co., 436 Calvary Road, Duluth, Minnesota 55803

Reach-All, hydraulically operated aerial baskets, truck mounted hydraulic cranes

Rego, 4201 W. Peterson, Chicago, Ill. 60646

Rego, valves (LP and compressed gas)

Rego, regulators (LP and compressed gas)

Rego, oil-less air compressors

Reinco, Inc., P.O. Box 584, Plainfield, New Jersey 07061 Reinco, Inc., hydrograssers, power mulchers

Republic Aviation Corp., Helicopter Div., Farmingdale, Long Island, N.Y. 11735

Aircraft, helicopter

Ridge Plastics Co., Highway 18 East, P.O. Box 2205, Jonesboro, Arkansas 72401

Biaxially oriented HD plastic pipe, sub-irrigation

Robco, Inc., 2800 Bay Road, P.O. Box 5326, Redwood City, Calif. 94063

Robco—Hatsuta, back-pack mist blower, duster Robco, high pressure piston pumps, 4 GPM to 28 GPM; Hand sprayers and hand dusters; High pressure vinyl spray hose

Rockwell International, 5001 North Rockwell Ave., Bethany, Oklahoma 73008

Rockwell Thrush Commander, agricultural aircraft, fixed wing

Rogers Bros., 100 Orchard St., Albion, Pa. 16401 Trailers

Roof Mfg., 1011 W. Howard St., Pontiac, Ill. 61764
Ranger, mower, self-propelled, tilt blade for heavy cutting, 5 hp or 7 hp, 24-inch or 26-inch cut
Roof 400, mower, push, blade clutch, 5 hp, 21-inch or 24-inch cut, belt driven blade

Root-Lowell Mfg. Corporation, 1000 Foreman Road, Lowell, Michigan 49331

Durapower, power sprayer: 10 gpm double piston pump @ 400 p.s.i., tanks 100, 200, 300 gallons
Spraycat, power sprayer: 3 gpm single piston pump @ 250 p.s.i., tanks 15, 30, 50 gallons
Duracyl "10", pump: double piston, 10 gpm @ 400 p.s.i.

Roper Corporation, 1905 W. Court St., Kankakee, Ill. 60901 Saws, chain; manual and automatic; dual system chain oiler

Rosco Manufacturing Co., 3118 Snelling Ave., So., Minneapolis, Minn. 55406
Rollpac, steel wheeled roller, lawn, asphalt paths, etc.

Roseman Mower Corporation, 2300 Chestnut Avenue, Glenview, Illinois 60025

Roseman, mowers—gang reel, both mounted and hydraulic driven; tiller rake—landscape tiller rake

Rotary Power, Inc., P.O. Box 244, Centerville, Tennessee 37033

Kurb Kutter, tractor mounted curb edger for grass Hydrajust tractor seat, self leveling tractor seat

Roto-Hoe Co., Newberry, Ohio 44065 Cut 'N Shred, shredder, 3½ hp, interchangeable with tiller

Rowco Mfg. Co., Inc., 48 Emerald St., Keene, N.H. 03431 Brushking®, brushcutter, engine driven

Royer Foundry & Machine Co., 158 Pringle St., Kingston, Pa. 18704

Royer Shredders, Models 362, 262, 180, 120, 12, 10, and 8 Power Screens, Models 30 and 42 Royer Chipper, Model 2600 PTO & 2640 self-powered

Ryan, OMC-Lincoln, P.O. Box 82409, Lincoln, Nebraska 68512

Ryan turf equipment, full line of turf aerators, spikers, renovators

Joseph T. Ryerson & Son, Inc., P.O. Box 8000-A, Chicago, Ill. 60680

Landscape Edging, steel

S

S & H Industries, Inc., Cleveland, Ohio Tailgates, lifting

Sabre Saw Chain, Inc., Third Ave. and Sabre Drive, Niagara Falls, N.Y. 14304

Sabre, saw chain, guide bars, sprockets, wedges, files, accessories

Safeline Products, P.O. Box 550, Putnam, Conn. 06260 Respirators (all types), lung protection Safety Glasses and goggles, eye and face protection Hearing protectors, muff-type and ear plugs Hard hats and caps, plastic safety hats and caps

Safe-T-Lawn, Inc., 7800 N.W. 32nd St., Miami, Florida 33122
Safe-T-Rain, rotor pop-up (ball drive)
Safe-T-Rain, valve inhead type
Rise-N-Rain, impact type pop-up
GL-67, 2" pop-up spray type
GL-71, 6" pop-up spray type

Safety Test & Equipment Co., Inc., P.O. Drawer 400, Shelby, North Carolina 28150

Wood/Chuck, manufacturer of Wood/Chipper capable of chipping logs up to 8" in diameter Safety Test, manufacturer of complete line of tree trimming and linemen's equipment

Satoh Tractor c/o NEDA, P.O. Box 5025, Richmond, Va. 23220

S-650G, tractor, utility, 25 hp; water-cooled, 4-cylinder engine, category I—3-point linkage; 2-speed PTO, 540 and 1,000 rpm

S-550G, tractor, utility, 17 hp; water-cooled, 4-cylinder engine, Category I—3-point linkage; 540 PTO

Schutt's Equipment Co., P.O. Box 412, Birmingham, Mich. 48012

Schutt's Marvel Tree Diggers, front loader models from 18" to 60" ball sizes; Back hoe models from 18" to 36" ball sizes

Schutt's Root Pruners, 3-point hitch models from 16" to 22" ball sizes

Schwartz Mfg. Co., Box 248, Lester Prairie, Minn. 55354
Trailers, fifth wheel, Lo-Boy w/fold down rear section
Platforms, truck, hydraulic tilt bed
Crane, hydraulic, truck mtd.
Loaders, tractor, front end

Scott Aviation, Plant 4, 1201 Kalamazoo St., South Haven, Michigan 49090

Scott Duo-Seal Respirators, respirators Full vision gas masks, gas masks

M. J. Scott, Co., 721 W. 2nd, Hutchinson, Kansas 67501 Grasshopper, rotary riding mower

Selma Trailer & Mfg. Co., P.O. Box 120, Selma, Calif. 93662 Aerial buckets—articulated boom lifts 20 to 55 feet from ground; telescoping bucket from 20 to 55 feet

Seymour Smith & Son, Inc., 900 Main St., Oakville, Conn. 06779

Garden tools, pruning shears, grass shears, hedge shears, lopping shears, tree pruners, pruning saws

Sikorsky Aviation Div., United Aircraft Corp., Stratford, Connecticut 06497

Aircraft, helicopter

Simplex Mfg. Co., 5224 N.E. 42nd Ave., Portland, Oregon 97218

Greenhouses Simplicity Mfg. Co., 500 N. Spring St., Port Washington, Wisc. 53074

Lawn and garden tractors with wide range of hp tillers, turf rollers, mowers, rotary, reel, gang, sicklebar



Skaggs Turf Equip. Co. Rakes, all purpose

Skil Corporation, 5033 Elston Ave., Chicago, Ill. 60630 Skilsaw, chain saws

R. & G. Sloane Mfg. Co., 7606 N. Clybourne Ave., Sun Valley, Calif. 91352

GSR Color Guard, PVC fittings for pipelines, sizes include 34-inch through 2 inches class 315 and 21/2 inches through 8 inches; class 200, press rated

Slope Tractor, Inc., 106 W. 9th Ave., Harper, Kansas 67058 Slope Runner, tractor mower, rotary flail or sickle, adjustable angle hydraulic lever control adjusts wheels and tractor chassis to remain in level attitude on a slope

Smith & Co., Inc., D.B., 414 Main St., Utica, N.Y. 13503 Sprayers, complete power unit

Smith Precision Products Co., 1299 Lawrence Dr., Newbury Park, Calif. 91320

Measure-Mix, measures precise mixture of fertilizer to water when watering shrubs, lawns, etc.

Smithco, Inc., 11 West Ave., Wayne, Pa. 19087

Red Rider, 3-wheel turf vehicle

Top Rider, top dresser

Little Beaver Spiker, spiker

Easy Rider III, sand trap rake

Lark, 110-gallon fiberglass sprayer

Hawk 200, 200-gallon fiberglass sprayer w/Golden Eagle

Hawk 300, 300-gallon fiberglass sprayer w/Golden Eagle

Cardinal, 200-gallon stainless steel sprayer w/Golden Eagle pump

Little Red, 61/2 hp 3-wheel turf vehicle

The Snow Company, 4350 McKinley, Omaha, Nebraska 68112 Snowco, utility trailer, Power-Kart, umbrella/buggy top, Nomad/Tri-Scat/Super-Scat

Soilmoisture Equipment Corp., P.O. Box 30025, Santa Barbara, Calif. 93105

Jet Fill Tensiometer No. 2725, moisture measuring equipment for irrigation control, semi-permanent installation, sizes 6" through 60"

Quick Draw Tensiometer No. 2900, Moisture measuring equipment for irrigation control, portable, sizes 12" through 18"

Turf Probe No. 2950, double action tensiometer measuring moisture at 2" and 5", portable Soilmoisture Tensiometer No. 2710, moisturing measur-

ing equipment for irrigation control, semi-permanent installation, sizes 6" through 60"

Soil Water Sampler No. 1900, Obtains soil water for laboratory analysis and leaching determinations, perma-

nent installation, sizes 6", 11", 24", 36", and 48" Soil Sampling System No. 215, "Veihmeyer/King" soil sampling probes, sizes 4' through 16'

Soil Auger No. 230, auger equipment for strata identifica-tion, core sizes of 2", 3", 3½", and 4" Salinity Sensors & Bridge No. 5500, salinity sensing

equipment for field use, portable Plant water status console No. 3000, portable plant

moisture stress indicator

Solo Motors, Inc., P.O. Box 5030, 5100 Chestnut Ave., Newport News, Virginia 23605

Sprayer, Model 425 hand operated

Mistblower, Model 410 3 hp, Model 423 5 hp

Tractor Sprayer, 10 hp, Model 424 self-propelled; 18 hp, Model 450 self-propelled; Model 451 PTO mounted; Model 452 PTO mounted; 10 hp, Model 419 super custom mounted

Newport, blower Model 430 5 hp, mini Model 410 3 hp Chain Saw, Model 610 3 SAE hp, Model 620 4 SAE hp, Model 650 6 SAE hp, Model 635 8 SAE hp, Model 660 7

Mower, sickle bar, 6.5 SAE hp, Model 520 Water Pump, 6.5 SAE hp, Model 801 Garden Tractor, Model 527 tiller 6.5 hp Post Hole Digger, Model 812, 6.5 hp Snow Blower, Model 813, 6.5 hp Generator, Model 819, 110 volt Engine, Model 272, 6.5 hp

Speedex Tractor Co., 367 N. Freedom St., Ravenna, Ohio 44266

Lawn & garden tractor, 8hp, 10hp, 13hp Rotary mowers 36", 44", 50"

Spray Baby, Inc., 751 N. Edmonds Dr., Carson City, Nev. 89701

Seeders, hydraulic Mulchers, hydraulic Agricultural sprayers

Spraying Systems Co., North Avenue at Schmale Road, Wheaton, Illinois 60187

TeeJet, spray nozzles with interchangeable spray tips Foam Jet, spray nozzles with interchangeable spray tips Vee Jet, spray nozzles GunJet, spray guns FloodJet, spray nozzles

Sprinkler Irrigation Supply Co., Div. A. J. Miller, Inc., 1316 Campbell Rd., Royal Oak, Michigan 48067

Pipe, irrigation Irrigation systems, complete Sprinklers

Standard Mfg. Co., 220-E. 4th St., Cedar Falls, Iowa 50613 Standard, golf course equipment

Stanley Hydraulic Tools, Div. of the Stanley Works, 13770 S.E. Ambler Road, Clackamas, Oregon 97015

Pruners, hydraulic Pole pruning saws, chain & circle hydraulic Chain saws, hydraulic Alternator, hydraulic Sump pump, hydraulic

Stihl American, Inc., 107 Bauer Dr., Oakland, N.J. 07436

Chain Saws, electric and gasoline powered

Stihl SG-17, blower/sprayer, back-pack gasoline powered Stihl Cutquik, saw, circular cut-off for cement, stone, steel, pipes, etc.

Stihl earth auger and planting tool, gasoline powered Stihl Brush-Cutter, brush and weed cutter, gasoline

Stihl Hedge-Trimmer, hedge trimmer, gasoline powered, trim hedges and small brush/trees

Stone Construction Equipment, Inc., 32 Main, Honeoye, N.Y. 14471

Stone, digger—12 volt, operates off of 12 volt system; 2" to 7" digger dirt augers for digging post holes and holes for trees, shrubs, etc.

Sudbury Laboratory, Inc., 572 Dutton Rd., Sudbury, Mass. 01776

Sudbury Soil Test Kits, designed to make "on-the-spot" tests for nitrogen, phosphorus, potash and acidity/alkalinity; simple to use "as easy as reading a thermometer."

Sun-Mastr Corp., P.O. Box 31, Olathe, Kansas 66061 Safti-Shear, 74" and 90" flail mowers Sun Mastr, mid-mount mowers; rotary cutters 60"-72"-84"; 60" and 72" rear-mount mowers; 3-gang and 5-gang reel mowers

Swan Hose Div.-Amerace Corp., P.O. Box 509, Worthington, Ohio 43085

Swan, garden hose, Industrial and maintenance hose

Sweepster, 2810 Baker Road, Dexter, Michigan 48130

C-36, self-propelled Walk Behind, 3' wide, 5 hp

C-48, 4' wide front mounted compact tractor broom

B-60, 5' wide front and rear mounted broom for grounds

maintenance tractors

TR-48, 4' wide tow behind pick-up sweeper, 5 hp AH, 6' wide 32" diameter front mounted tractor broom, all hydrualic operation, hydraulic swing, run and lift HF, 6' wide 32" diameter front mounted tractor broom, mechanical drive

R-HF, 6' wide 32" diameter rear mounted on 3-point hitch, mechanical drive

HH-60, 5' wide loader mounted pick-up sweeper (for fork lifts also)

LH, 6' wide 32" diameter loader mounted sweeper C-72, compact truck mounted broom

Swenson Spreader & Mfg. Co., P.O. Box 127, Lindenwood, Illinois 61049

Spreader, gas, hydraulic

Thatcher, attachment for rotary mowers

Leaf Loader, trailer mounted

T

TCI, Inc., Box 249, Benson, Minn. 56215

Tyler, 2 to 8-ton pull type fertilizer spreaders; 15' to 45' anhydrous ammonia applicators

Herculift, 4-wheel drive rough terrain forklifts Super Challenger, 4-wheel drive, 1 yard bucket loader

Tallman Equipment Co., Inc., 3825 W. 31st St., Chicago, Illinois 60623

Shears

Tecumseh Products, Co., Engine Div., 900 North St., Grafton, Wis. 53024

Tecumseh Engines, 2 to 18 hp, 4-cycle + 2-cycle, air and liquid cooled, single + twin cylinder

Tecumseh genuine parts

Peerless Gear Drives, transmission, transaxles, hydrostatic gear drives, right angle + T drives

Taylor Mufflers

SnowKing Engines

Teledyne Wisconsin Motor, 1910 South 53rd St., Milwaukee, Wisconsin 53246

Wisconsin, Wisconsin-Robin, Wisconsin-Hatz Diesel, heavy-duty, air-cooled internal combustion engines, 3—80 hp, single, two, three and four-cylinder

Tennant Maintenance Systems, 721 North Lilac Dr., Minneapolis, Minn. 55490

Hydraulic heavy-duty power sweeper for driveways, walks and maintenance areas covered with cement

Terrain King Corp., 4444 Center, Houston, Texas 77007 Terrain King, rotary mowers—4'-25' Turner, flail mowers—(3-point and boom)

Slopemower, boom type mowers—31' reach

Thomas Equipment, Ltd., Centreville, New Brunswick, Canada

Mower, Sickle, attachment to front end loader

Thompson Manufacturing, 2251 E. 7th St., Los Angeles 90023
Turf Irrigation Sprinkler and Accessories, gear driven rotary turf irrigation sprinklers

Tork Time Controls, Inc., 1 Grove St., Mt. Vernon, N.Y. 10550

Tork, irrigation, automatic lawn sprinkler controls

The Toro Company, 8111 Lyndale Ave., So. Bloomington, Minn. 55420

Hevi-Duty, mower, rotary (hand or self-propelled) 21 inch and 25 inch

Whirlwind, mower, rotary, 31-inch

Trojan, 60-inch cut

Professional, mower, triplex reel, 70-inch, 76-inch and 84-inch cut

Greenmaster, mower, walk greensmower, 21-inch Greensmaster 3, mower, triplex greensmower, riding Spartan Gang, mower, 5, 7 or 9 bladed-formal and semiformal turf

Landscaper 4, multi-purpose landscaping tool for seedbed preparation, seeding, fertilizing, also Model 6 Pro.

Rake-O-Vac, turf and hard surface sweeper

Parkmaster, 5-7-9 unit hydraulic mowing tractor Roughmaster, 4 and 5 bladed rough area reel mowers

Toro Frames, reel mower transport and lift frames
Toro Turf Tractor, utility turf tractor

Sandpro, sand trap maintenance and grooming unit, all hydraulic

Groundsmaster 72 with 70½-inch cut, riding rotary mower and other implements

Workmaster, utility vehicle

Groundsmaster 50 with 50 inch cut, riding rotary mower and other implements

Toro Irrigation Division, P.O. Box 489, Riverside, Calif. 92502 Automatic Controller, irrigation equipment, hydraulic or electric; 4, 8, 11, 23 station control and satellites

Automatic Remote Control Valves, ¾-inch to 2-inch, hydraulic or electric

Pop Up Spray Sprinklers, 8-54 ft. diameter stream spray Pop Up Rotary Sprinklers, 65-235 ft. diameter, valve in head, hydraulic or electric, 2-speed, gear driven Shrub and Bubbler Sprinklers, adjustable, stream, flood,

low angle

Boring Machine, 10 ft. and 16 ft. models

Trenching Machines, residential, light commercial, 2 inches wide, 9 inches deep

Quick Coupling Valves, standard, vinyl or with lock cover, valve range \(\frac{3}{4} \)-inch to 1 \(\frac{1}{2} \) inches

Impact Sprinklers, ½-inch to 1 ¼ inches threaded connection, part of full circle

Towner Mfg. Co., P.O. Box 6096, Santa Ana, Calif. 92706 Harrows, disks

Harrows, springtooth

Tool box equipment

Ditchers; slopers

Tradewinds, Inc., P.O. Box 1191, Tacoma, Washington 98401
Holder, tractors, 4-wheel drive, diesel, 14 hp to 40 hp;
tractor mounted sprayers, PTO pumps, complete with
turbulator mistblowers, (all sizes from 22 gallons up);
knapsack power sprayers (for mist, dust, granules,
flamethrowers, etc.) world's only packsack sprayer with
centrifugal pump

Travelrain Power Sprinkler Co., 239 No. Robertson Blvd.,



Beverly Hills, Calif. 90211

Travelrain Power Sprinkler, (irrigation) traveling sprinkler

Sharpomatic, drill & Tool sharpener (electric)

Tree-ject Company, Box 396, Waycross, Ga. 31501 Sprayers, hose end, complete power unit

Triumph Machinery Co., Willow Grove St., Hackettstown, N.J. 07840

Rakes, landscape

Thatchers, mower, vertical

Mowers, sickle bar; rotary, heavy-duty

Trojan Battery Company, 9440 Ann St., Santa Fe Springs, Calif. 90670

Trojan, storage batteries—electric golf car, automotive, commercial, truck, bus, and industrial chargers

Turf Service Laboratory, Inc., P.O. Box 1001, Laguna Beach, California 92652

Moistureometer Model 50, protable 12" probe electronic measures soil moisture from 1 inch to one foot

Moistureometer Model 20, garden angel portable 6-inch probe designed for measuring moisture in pots

Moistureometer Model 75, one meter probe designed to measure moisture at depths of one meter, 75 CM, 50 CM, and 25 CM permanent installation; meter separate digital read out

Turf Vac Corporation, P.O. Box 4339, Long Beach, Calif. 90804

Turf Vac, self-propelled rider vacuum

Fairway Master, sweepers—18-25 hp with hydraulic drive systems, blower attachments, and hand pick-up hose attachments, and hydraulic lift dump available; towed units 41/2' to 10' wide, 101/2-25 hp or PTO; hydraulic lift dump and hand intake hoses available

Universal Motor Division, Medalist Industries, Box 2508, Oshkosh, Wisconsin 54901

Aquamaster Pumps, portable centrifugal pumps 11/2" or 2" suc/disch., 3 hp gas engine or ½, ¾, 1½, 2 hp electric motors, standard seal for water, corrosion resistant seal for fertilizer, herbicides, etc.

Universal electric generators and battery chargers. 1200-3500 watts and 12-32V. Portable

Up-Right Scaffolds, 1013 Pardee St., Berkeley, Calif. 94710 Scaffolds, portable, aluminum for tree trimming

Utility Body Co., 901 Gilmen, Berkeley, Calif. 94710 Buckets-aerial towers

Val-Jac Mfg. & Supply Co., Inc., 110 N. Park, Maize, Kansas

Small truck compactor for parks and recreational areas

Valley Products Corporation, Box 668, Valley, Nebr. 68064 VPC Stump Cutter, 8 hp one-man tree stump remover

Vandermolen Corp., 119 Dorsa Ave., Livingston, N.J. 07039 Blower KWH, for leaves and debris, wheeled, 2-cycle engine

KWH Mistblower, back pack

Diadem Brush Chipper, for branches up to 3", wheeled, PTO or skid models, 8 and 12 hp models

Bora KWH Mistblower, skid model, 110-gallon tank, 75-

80 ft., reach fan power by rotary engine Diadem Spreader/Seeder, broadcaster, PTO driven, 3-pt. hitch

Flykil, electric flykiller

Venable Sprinkler Sales, Inc., P.O. Box 1105, 3401 Conflans, Irving, Texas 75061

Pump-A-Matic, pre-built pump station for golf course, etc., irrigation

Pressure-Matic, booster pump unit to increase pressure of water in hydraulic system tubing to use potable water

Veri Products, P.O. Box 5129, Cardwell Station, Fresno, Calif.

Scabbards for chain saws

Vermeer Manufacturing Company, P.O. Box 200, Pella, Iowa 50219

Stump Cutters, 12-65 hp, four models Tree Spades, 4 models (trailer or mounted) Log Chippers, 2 models Log Splitter,

Vicon Farm Machinery, Inc., 5898 Poplar Hall Drive, Norfolk, Virginia 23502

Vicon, mower (disc), power harrow (recoplicatins) fertilizer spreader (pendulum), hay rake, (wheel type)

Viking Pump Co., 4th and Shutte Sts., Cedar Falls, Iowa Pumps

Village Blacksmith, McGraw Edison Portable Electric Tool Division, 1200 East State St., Geneva, Illinois 60134

Village Blacksmith, garden cutting tools, electric chain saws, electric hedge trimmers, electric edger trimmers, electric cultivator, Cord Reels, "Blitz Fog" insect fogging devices, gas engine fogger, electric tree surgeon, post hole diggers and augers

Vineland Laboratories, Inc., 2285 E. Landis Ave., Vineland, New Jersey 08360

Proportioning systems

Vogel Tool & Die Corp., Stone Park, Illinois Post hole drill

W

W-W Grinder, 2957 N. Market, Suite 169, Wichita, Kansas 67219

Shredder-Grinders, complete line of soil shreddergrinders for gardeners, nurseries, greenhouses, etc.; horsepowers ranging from 1 hp models to 30 hp models; available with gas engines, electric motors or less power; some models feature electric start gas engines

Waco Industries, Inc., P.O. Box 367, 749 Airways Blvd., Jackson, Tenn. 38301

Chain saws products

Windsor chain, bars, sprockets and accessories

Waldon, Inc., 201 W. Oklahoma Ave., Fairview, Okla. 73737 Tractor, hydraulic, 4-wheel drive, articulating and oscillating type frame plus utility air, may be used as a forklift or loader

Pickup Broom, attachment to Waldon 5000 tractor Forklift, boom type, attachment to Waldon 5000 tractor Scrap Grab, attachment, lift capacity 1300 to 1900 lbs. Backhoe, attachment to Waldon 5000 tractor

Walsh Manufacturing Co., 1200 Fisher Street, Charles City, Iowa 50616

Trailer Model Sprayer, exclusive sump trap, exclusive uni-stand, rear safety stand 200, 300, and 500-gallon cap.; built in nylon agitator

RA Side Mounted Sprayer, 400-gallon capacity; each tank valve controlled, 2-200 gallon tanks, custom fit mounting brackets, valve stand

3-Point Hitch Sprayer, 165, 200, or 300-gallon capacity, Cat. II hitch pins

Fiberglass Tanks (all above units), 10" x 20" fill hole;

bullet shaped ends; built in agitators built in steel outlets; 1 1/4" steel sump outlet; double protection inner lining; lid with snap-over lock; special sump trap and anti-swirl baffle; continuous flow pump; sprays evenly over all terrain; sprays to last drop

Index-O-Matic Washer, completely portable; semipneumatic tires; all-steel frame 5 or 25-gallon tank; 3 GPM pump; 1½ hp motor; fiberglass tank

Tri-Matic II, fiberglass tank; completely portable; allsteel frame 25-gallon tank; 3 GPM pump; 1 ½" hp motor; semi-pneumatic tires

Dutch Elm disease tree injector applicator, (3) gallonpressure tank, nozzle injector assemblies, 60 lb. gauge, length of hose, hose shut-off, and driving tool

Waymark, 44 River St., Cortland, N.Y. 13045 Spreaders, disc type Sprayers, boom; complete power unit

Wayne Engineering Corp., 1st & Iowa Sts., Cedar Falls, Iowa 50613

Honey B, lightweight refuse packer for parks highway rest stops, etc.

Pup, pickup refuse packer

Weather-matic Division/Telsco Industries, P.O. Box 18205, Dallas, Texas 75218

Weather-matic, controls, electric valves, solenoids, rotary heads, spray heads, nozzles, accessories (irrigation equipment)

H. N. Webster Mfg., P.O. Box 1628, Sebring, Florida 33870 Webstermatic, irrigation, quick coupling riser valves sizes ½" to 1¼"

Weed Eaters, Inc., 5146 Richmond Ave., Houston, Texas 77027

Weedy, for commercial use: 3 hp, 2-cycle Tecumseh engine powers patented cutting head which employs "fishing line" to trim, edge and cut grass and weeds along chain link fences, trees, ditches, cemetery markers, culverts, etc., wt. 28 lbs.

Needie, ¾ hp permanent magnet motor—wt. 6½ lbs.; performs the same tasks as above with less punch

Welsh Mfg. Co., 9 Magnolia St., Providence, R.I. 02909
Respirators, for use in pesticide application
Ammonia respirators
Dust respirators
Goggles
Safety caps

Western Products, 1234 N. 62nd St., Milwaukee, Wis. 53213
Western Snow Plow, truck mounted snowplow and controls

Westinghouse Electric Corp., P.O. Box 712, Redlands, Calif. 92373

Westinghouse, Electric golf cars

First aid equipment

Wet Mfg. Co., Inc., 955 Elm St., Orange, Calif. 92667
Sprinkler irrigation equipment
Sprinkler head, gear driven rotary pop-up
Automatic controller, 7, 14, and 21 station
Remote control valve, electric 34" thru 2" size
Boring tool, used for boring under walks, driveways etc.

Wheel Horse Products, Inc., 515 W. Ireland Rd., South Bend, Indiana 46614

Wheel Horse D-200 Automatic, 19.9 hp twin cylinder tractor; featuring—automatic transmission with "no belt" drive; front and rear 2,000 rpm PTO's; category "O" three point hitch; Super Seat; sealed beam head and taillights; dual hydraulic lifts; independent disc turning brakes; 8-gallon fuel tank; cluster dials; 3-way safety interlock system; and a choice of four tire options Wheel Horse D-180 Automatic, 18 hp twin cylinder trac-

tor: featuring—automatic transmission with "no belt" drive; sealed beam head and taillights; hydraulic lift; 5¾-gallon fuel tank; cluster dials; two piece adjustable seat; front PTO; optional splined rear PTO; optional category

"O" three point hitch; optional disc turning brakes; 3-way safety interlock system; and a choice of four tire options Wheel Horse D-160 Automatic, 16 hp tractor; featuring—automatic transmission with "no belt" drive; front PTO; polyfoam seat; hydraulic lift; 5¾-gallon fuel tank; ammeter; many options; 3-way safety interlock system; and a choice of four tire options

Wheel Horse C-160 Automatic, 16 hp tractor: featuring-automatic transmission (hydrostatic-oil drive); hydraulic attachment lift; arm rests; 2-piece adjustable seat; spring seat suspension; ammeter; hour meter; 2-gallon fuel tank; unitized steel frame; head and taillights; friction disc PTO clutch; soft feel steering wheel; turf saver tires; and a 3-way safety interlock system Wheel Horse C-160 8-speed, 16 hp tractor; featuring-heavy-duty all gear 8-speed transmission; two piece adjustable seat; ammeter; 2-gallon fuel tank; unitized steel frame; head and taillights; friction disc attachment clutch; soft feel steering wheel; turf saver tires; optional electric lift; and a 3-way safety interlock system Wheel Horse C-120 Automatic, 12 hp tractor; featuring-automatic transmission (hydrostatic-oil drive); two-piece adjustable seat; spring seat suspension; ammeter; 2-gallon fuel tank; unitized steel frame; head and taillights; friction disc attachment clutch; soft feel steering wheel; turf saver tires; optional hydraulic lift; and a 3-way safety interlock system

Wheel Horse C-100 8-speed, 10 hp tractor: featuring—heavy-duty all-gear 8-speed transmission; unitized steel frame; head and taillights; friction disc attachment clutch; turf saver tires; optional electric lift; and a 3-way safety interlock system

Wheel Horse B-100 automatic, 10 hp tractor featuring unitized steel frame; friction disc attachment clutch; turf saver tires; optional hydraulic lift; and a 3-way safety interlock system.



Right behind the spreader. . . or 20 feet to each side. . . your turf gets the same amount of fertilizer if you use a Vicon. Field tests have proven it.

Vicon uses an exclusive system. . .a spout oscillating at 540 times per minute. This gives a rectangular coverage pattern that eliminates the overlapping and missed spots you get with fan spreaders.

Vicon is quality constructed to last for years. Major parts are non-corroding polyester and stainless steel. Application rate is easily adjusted from 10 to 2500 pounds per acre.

Even lime is no problem for the Vicon. It handles lime, fertilizer, seed and chemicals. Six hopper capacities from 600 to 7000 pounds suit your course and budget.

Vicon has the accuracy that professional turf men are looking for. Write today.



the better idea from Holland Vicon Farm Machinery, Inc. 5898 Poplar Hall Drive • Norfolk, Virginia 23502 Wheel Horse B-80 4-speed, 8 hp tractor featuring unitized steel frame; friction disc attachment clutch; turf saver tires; optional electric attachment lift; and a 3-way safety

interlock system

Wheel Horse D-Series Attachments; 60" rear mount mower; 48" side discharge mid-mount mower; 56" snow/dozer blade; 50" grader blade; 50" tiller; 36" aerator; 38" or 31" lawn sweeper; 32" lawn roller; 4-wheel wagon; 2-wheel dump cart; and a 48" snowthrower

Wheel Horse C-Series Attachments, 48" side discharge mower; 42" side discharge mower; 36" side discharge mower; 36" rear discharge mower; 42" snow/hozer blade; 40" grader blade; 36" tiller; 36" aerator; 38" or 31" lawn sweeper; 32" roller; 2-section cultivator; harrow; 32" disc; lawn vacuum; 4-wheel wagon; and a 2-wheel dump cart

Wheel Horse B-Series Attachments, 36" side discharge mower; 36" rear discharge mower; 37" snowthrower; 42" snow/dozer blade; 40" grader blade; 36" aerator; 38" or 31" lawn sweeper; 32" lawn roller; 32" disc; 2-section cultivator; harrow; 36" tiller; 4-wheel wagon; and a 2-

wheel dump cart

Wheel Horse A-Series Attachments, for A-80 42" snow blade; 36" aerator; 38" or 31" lawn sweeper; 32" lawn roller; 4-wheel wagon; and a 2-wheel dump cart

Willmar Mfg. Co., Wilmar, Minn.

Spreader, pull-type, floatation tires, spreads up to $1\frac{1}{2}$ tons per load

Willson Products Div., Ray-O-Vac. Co., 2nd and Washington Aves., Reading, Pa.

Masks, gas; dust Respirators Safety Equipment Helmets Wisconsin Marine, Inc., P.O. Box 28, Lake Mills, Wisconsin 53551

Bob-Cat, model 520-1, snow thrower, self-prop. 5 hp 20" 2-speed

Bob-Cat, model 520-2 snow thrower, self-prop., 5 hp 20" single speed

Bob-Cat, model 724-1 snow thrower, self-prop., 7 hp 24"

Bob-Cat, model 724-2 snowthrower, self-prop., 7 hp 24" 2 speed

Bob-Cat, model 828-2 snow thrower, self-prop., 8 hp, 28" Bob-Cat, model t-16-61, riding twin hydro mower, 16 hp

Bob-Cat, model M-21 rotary lawn mower, 21 inch, engine options: 3.5 hp, 4 hp, 4 heavy duty, 5 H.D. Bob-Cat, model M12-3.5 lawn trimmer, 12 inch, 3.5 hp

Wood Brothers, Inc., Hwy. 2 So., Oregon, Ill. 61061 RM 59, rear mounted rotary lawn mower; three blades cut a 5-foot swath; adapts to any standard 3-point hitch

Y

Yardman, The Leisure Group, Inc., Jackson, Michigan Snow throwers, tractors, 8-20 hp

Yazoo Mfg. Co., 3607 Livingston Rd., Jackson, Miss. 39216 Yazoo Master Mowers, rotary 20"-76"; walking, riding tillers, edgers

Year-A-Round Cab Corp. (Jari Div.), P.O. Box 2075, Mankato, Minnesota 56001

Jari Chief, 3 hp, 32" sickle Jari Monarch, 4 hp, 36" sickle

York Modern Corporation, Mill and Watson St., Unadilla, N.Y. 13849

York, rakes; landscape and lawn grooming

Cross Reference Guide To Manufacturers by Items

AERATORS

Brinly Hardy Co. Hahn Inc. Howard Rotavator Co., Inc. Jacobsen Mfg. Co. F. D. Kees Mfg. Co. Ryan, OMC-Lincoln Simplicity Mfg. Co., Inc. Wheel-Horse Products

AERIAL BUCKET ACCESSORIES

Plastic Techniques, Inc.

AERIAL BUCKET LIFTS

Asplundh Chipper Co.
Baker Equipment Mfg. Co.
Correct Mfg.
McCabe-Powers Body Co.
Mobile Aerial Towers, Inc.
Pitman Mfg. Co., Div. A. B.
Chance Co.
Reach-All Manufacturing and
Engineering Co.
Selma Trailer & Mfg. Co.

AERIAL LADDERS
Adventure Line Mfg. Co.
Up-Right Scaffolds

AERIAL PLATFORMS Adventure Line Mfg. Co. Baker Equipment Mfg. Co. H. D. Hudson Mfg. Co. Lift-Quik Mfg. Co. (golf car lift) Up-Right Scaffolds Utility Body Co.

AIR COMPRESSORS Rego Div., Golconda Corp.

AIRCRAFT, FIXED WING Grumman Aircraft Corp. Piper Aircraft Rockwell International

AIRCRAFT, HELICOPTER Bell Helicopter Co. Republic Aviation Corp. Sikorsky Aviation Div.

ALTERNATORS

Friend Mfg. Co. Stanley Hydraulic Tools, Div. The Stanley Works

AMPHIBIOUS EQUIPMENT Quality Marsh International

AQUATIC WEED HARVESTER
A. O. A. Research & Development,
Inc.
Air-Lec Industries, Inc.
Aquamarine Corp.
Mud Cat Div. Of National Car Rental
Weed Eaters, Inc.

ARBORIST SUPPLIES

American Arborist Supplies
Bartlett Mfg. Company
Creative Sales, Inc.
Hortiscape, Inc.
Karl Kuemmerling, Inc.
Product Development International
Safety Test & Equipment Co.

AUGERS

Contree Sales, Inc. Ferti-Feeder Hoffco, Inc. Johnson's Industrial Supply Co. Pitman Mfg. Co. Village Blacksmith

AUGERS, EARTH
Allis-Chalmers Mfg. Co.
Baker Equipment Engineering Co.
Bartlett Mfg. Co.
Johnson's Industrial Supply Co.

AUXILIARY POWER UNITS (See Generators)

BACKHOES

Allis-Chalmers
Arps Corp.
Charles Machine Works
Ford Tractor Operations,
North America
Howard Rotavator Co., Inc.
International Harvester Co.
Massey-Ferguson, Inc.
(Industrial Products)
Schutt's Equipment Co.
Vermeer Mfg. Co.
Waldon, Inc.

BAGS

B. A. G. Corporation Bemis Company

BATTERIES

The Prestolite Co.

BATTERY CLAMPS

Dadco

BATTERIES, STORAGE

ESB Brands, Inc. Trojan Battery Company

BATTERY CHARGERS

ESB Brands, Inc. Onan Division of Onan Corp. Universal Motor Div. Medalist Ind.

BINS, PORTABLE

Royer Foundry & Machine Co.

BLADES, DOZER-SCRAPER (Also See Leveler)

Allis-Chalmers
Arps Corporation
Austin Products, Inc.
BMB Company, Inc.
Brillion Iron Works, Inc.
J. I. Case
Deere & Co.
DriAll, Inc.
Eversman Mfg. Co.
Ford Tractor Operations,
North America
Gravely, Div. Clarke-Gravely
Hesston Corp., Lawn Equipment Div.
International Harvester Co.
Johnson Hydraulic Equip. Co.,
Div. Arps Corp.
Massey-Ferguson, Inc.
Melroe Mfg. Co.
Simplicity Mfg. Co., Inc.
Walden, Inc.
Western Products
Wheel-Horse Products, Inc.

BLOWERS

Billy Goat
Conaway, Inc.
Echo Chain Saw Div., Kioritz Corp.
of America
Giant-Vac Mfg., Inc.
Hesston Corp., Lawn Equipment Div.
Mid-State Metal Casters & Mfg. Co.
Papec Machine Co.
Parker Sweeper Company
Robco, Inc.
Solo Motors, Inc.
Vandermolen Corp.

BOOM DYE MAKER

Contree Sales, Inc.

BORING UNIT Charles Machine Works, Inc. Toro Irrigation Division Wet Mfg. Co.

BRIDGES, PORTABLE Standard Mfg. Co.

BROOMS
(See Sweeper/Vacuums)
Clarke Div., Clarke-Gravely Corp.
FMC Corp., Sweeper Division
Parker Sweeper Company
Sweepster, Jenkins Equipment Co.
Waldon, Inc.

BRUSH CUTTERS
Asplundh Chipper Co.

Bombardier Ltd.
E. L. Caldwell & Sons, Inc.
Conaway, Inc.
Deere & Co.
Echo Chain Saw Div., Kioritz Corp.
of America
Friend Mfg. Corp.
Hoffco, Inc.
International Harvester Co.
McCulloch Corp.
National Hydro-Ax Inc.
H. K. Porter, Inc.
Rowco Mfg. Co., Inc.
Stihl American, Inc.
The Vandermolen Co.

BRUSH HOOKS

Asplundh Chipper Co. Bartlett Mfg. Co. Pitman Mfg. Co.

BUILDINGS (GOLF)

Game Time, Inc.

CARTS, SOIL TREATING Lindig Mfg. Corp.

CHAIN, DECORATIVE Ginther Equipment Corp. Plasti-Chain Corporation

> CHAIN SAWS (See Saws, Chain))

CHEMICAL APPLICATOR, DRIP Lakes Supply Co., Inc.

CHEMICAL APPLICATORS, GRANULAR American Arborist Supplies Asplundh Tree Expert Co. Avco Ezee Flow
John Blue Co.
Buffalo Turbine Ag. Equip. Co.
Contree Sales, Inc.
Echo Chain Saw Div., Kioritz Corp.
of America
FMC Corp., Ag. Machinery Div.
Friend Mfg. Corp.
Gandy Co.
Herd Seeder Company, Inc.
Lakes Supply Co., Inc.
Larson Machine, Inc.
Lawn Medic, Inc.
Lely Corp.
Public Health Equip. & Supply Co.
Solo Motors, Inc.
Walsh Manufacturing Co.
Waymark

CHEMICAL APPLICATORS, LIQUID Amchem Products, Inc. Asplundh Chipper Co. Avco Ezee Flow Div. John Blue Co. The Broyhill Co. Buffalo Turbine Ag. Equip. Co. Century Engineering Corp. Contree Sales, Inc. Deere & Co. Echo Chain Saw Div., Kioritz Corp. of America Red Ewald, Inc. FMC Corp., Ag. Machinery Div. Friend Mfg. Corp. Great Lakes Chemical Div. H. D. Hudson Mfg. Co. Lakes Supply Co., Inc. Larson Machine, Inc. Leigh Products, Inc. Melnor Industries, Inc.



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F. E. Myers & Bro. Co. Root-Lowell Corp. Solo Motors, Inc. The Vandermolen Co. Walsh Manufacturing Co. Waymark

CHESTS, TOOL

Hemco Corporation Knaack Mfg. Co.

> CHIPPERS (Also See Shredders)

American Arborist Supplies
Asplundh Chipper Co.
Billy Goat
FMC Corp., Sweeper Div.
F. D. Kees Mfg. Co.
Karl Kuemmerling, Inc.
Lindig Manufacturing Corp.
M-B Company
Metro-Chipper, Vestar Div.,
Morbark Ind.
Mitts & Merrill Inc.
Morbark Industries, Inc.
Olathe Mfg., Inc.
Piqua Engineering Inc.
Precision Chipper Corporation
Royer Foundry & Machine Co.
Safety Test & Equipment Co.
Vandermolen Corp.
Vermeer Manufacturing Co.

COMBS, TURF

Blue Bird International, Inc.
Johnson Hydraulic Equip. Co.,
Div. Arps Corp.
Parker Sweeper Co.
Ryan, OMC-Lincoln

COMPACTORS

B.A.G. Corporation Gotham Chicago Corp. M-B Company Val-Jac Mfg. & Supply Co., Inc. Wayne Engineering Corp.

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Eagle Mfg. Co. Fruend Can Co.



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CRANES

Adventure Line Mfg. Co.
Baker Equipment Mfg. Co.
Blue Bird International, Inc.
Cascade Corporation
Dico Co., Inc.
Ideal Crane Div., Bert Parkhurst
Pitman Mfg. Co.
Reach-All Manufacturing &
Engineering Co.
Rental Equip. Mfg. Co.
Schwartz Mfg. Co.

DISCS, CULTIVATING

Allis-Chalmers Mfg. Co.
Deere & Co.
Engineering Products Co.
Ford Motor Co., Tractor Div.
International Harvester Co.
Massey-Ferguson, Inc.
Wheel-Horse Products, Inc.

DRAINAGE TUBING

ADS-Advanced Drainage Systems Amoco Chemicals Corp. Certain-Teed Daymond Co. Hancor, Inc.

DRILLS (FIELD)
(Also See Earth Augers & Post Hole Diggers)

Deere & Co.
Gandy Co.
Ground Hog, Inc.
Hoffco, Inc.
International Harvester Co.
Massey-Ferguson, Inc.
McCulloch Corp.

DRILLS (HAND & POWER TOOL)
Bartlett Mfg. Co.
Black & Decker Mfg. Co.
Fairmont Hydraulies
Hoffco, Inc.
Limb-Lopper Co., Inc.
Skil Corp.
Solo Motors, Inc.

DUMP CARTS

J. I. Case Co., Outdoor Power Equipment Div.

DUSTERS, HAND

Leigh Products, Inc.
Public Health Equip. & Supply Co.
Robco, Inc.

DUSTERS, POWER

John Blue Co., Inc.
Buffalo Turbine Ag. Equip. Co.
Curtis Dyna Products Corporation
Echo Chain Saw Div., Kioritz Corp.
of America
FMC Corp., Ag. Machinery Div.
H. D. Hudson Mfg. Co.
Leigh Products, Inc.
Robco, Inc.
Robco, Inc.
Rot-Lowell Corp.
Solo Motors, Inc.
The Vandermolen Co.

EARTH AUGERS
(Also See Post Hole Diggers)

Ground Hog, Inc.
Hoffco, Inc.
Johnson's Industrial Supply Co.
McCulloch Corp.
Stihl American
Stone Construction Equipment Inc.

EDGERS

Black & Decker

Cooper Mfg. Co.
Gandy Company
Jacobsen Mfg. Co.
K-D Manufacturing Co.
Rotary Power, Inc.
Ryan, OMC-Lincoln
Village Blacksmith
Yazoo Mfg. Co.

EDGING, LAWN

Hortiscape, Inc. Rotary Power, Inc. Joseph T. Ryerson & Son, Inc.

ENGINES, DIESEL

Teledyne Wisconsin Motor

ENGINES, GASOLINE

Briggs & Stratton Corp.
Clinton Engines Corporation
Kohler Company
Onan Div. of Onan Corp.
Solo Motors, Inc.
Tecumseh Products Co., Engine Div.
Teledyne Wisconsin Motor

ENGINE STAND

Blue Bird International, Inc.

EROSION CONTROL MATERIALS

American Excelsior Corp. Conwed Corporation Grass Growers, Inc.

FERTILIZER APPLICATORS

Gandy Company

FERTILIZER INJECTION EQUIPMENT (Also See Injection Equipment)

Agresults, Inc. Andrasko Engineering Co.

FITTINGS, PIPE

Melnor Industries, Turf Div. Plastiline Inc. R. & G. Sloane Mfg. Co.

FLAMETHROWERS (SPRAYERS)

R. E. Chapin Mfg. Works, Inc.
Echo Chain Saw Div., Kioritz Corp.
of America
FMC Corp., Ag. Machinery Div.
H. D. Hudson Mfg. Co.
Leigh Products, Inc.
Public Health Equip. & Supply Co.
Solo Motors, Inc.
Tree-Ject Co.
The Vandermolen Co.

FOGGERS

Curtis Dyna Products Corp.
Echo Chain Saw Div., Kioritz Corp.
of America
London Fog Company
Leigh Products, Inc.
Public Health Equip. & Supply Co.
The Vandermolen Co.
Village Blacksmith

FORK LIFTS

Allis-Chalmers Mfg. Co. Badger-Dynamics, Inc. Brouwer Turf Equip. Ltd. Clark Equipment Co. International Harvester Co. Massey-Ferguson, Inc. (Industrial Products) Otis Materials Handling TCI, Inc. Waldon, Inc.

FORK LIFT (ATTACHMENT)
Century Engineering Corp.
Harvestall Industries, Inc.
Waldon, Inc.

FUMIGANT APPLICATORS
John Blue Co., Inc.
Red Ewald, Inc.

GENERATORS

Conaway, Inc.
Friend Mfg. Corp.
Howard Rotavator Co., Inc.
Hydro Turf
McCulloch Corporation
Olathe Mfg. Inc.
Onan Div. of Onan Corp.
Solo Motors, Inc.
Universal Motor Div. Medalist Ind.

GOGGLES (Also see Masks, Face) American Optical Corp. Martindale Electric Co.

GOLF ACCESSORIES
Container Development Corp.
Coursigns Inc.
Fore-Par, Inc.
Ginther Equipment Corp.
Lakeshore Equipment & Supply Co.
Par Aide Products Co.
Plasti-Chain Corporation
Standard Mfg. Co.

GOLF CARS
(Also See Turf Vehicles)
Club Car, Inc.
Cushman, OMC-Lincoln
E-Z Go Car, Div. of Textron
G. E. M. Products, Inc.
Harley-Davidson Motor Co., Inc.
Otis Elevator Company, Special
Vehicle Div.
Pargo, Inc.
Westinghouse, Electric Vehicles

GRADERS
Allis-Chalmers Mfg. Co.
E. L. Caldwell & Sons, Inc.
Deere & Co.
Engineering Products Co.
Ford Motor Co., Tractor Div.
Simplicity Mfg. Co., Inc.
Wheel-Horse Products, Inc.

GREENHOUSES Simplex Mfg. Co.

HARD HATS, HELMETS
Americal Optical Company
Glendale Optical Company
Jomac Products Co. Inc.
Safeline Products
Welsh Mfg. Co.
Wilson Products Div., RayO-Vac Co.

HARROW, SPIKE-TOOTHED
Allis-Chalmers Mfg. Co.
Brillion Iron Works, Inc.
The Broyhill Co.
Clark Equipment Co.
Deere & Co.
Engineering Products Co.
Finn Equipment Co.
Ford Motor Co., Tractor Div.
Fuerst Brothers
International Harvester Co.
Lely Corporation
Simplicity Mfg. Co., Inc.

Vicon Farm Machinery, Inc.
Wheel Horse Products, Inc.

HARROW, SPRING-TOOTHED
Allis-Chalmers
Brillion Iron Works, Inc.
The Broyhill Co.
Deere & Co.
Engineering Products Co.
Finn Equipment Co.
Ford Motor Co., Tractor Div.
Fuerst Brothers, Inc.
International Harvester Co.
Lely Corporation
Towner Mfg. Co.
Vicon Farm Mach. Co.
Wheel-Horse Products, Inc.

HEARING PROTECTORS American Optical Corp. Safeline Products

HEATERS
Century Engineering Corp.

HOISTS
Adventure Line Mfg.
Blue Bird International, Inc.
Dico Co., Inc.
Energy Mfg. Co.
Hoffco, Inc.
Ideal Crane Div., Bert Parkhurst
Lakes Supply Co., Inc.
Fred A. Lewis Company

HOSE
Aeroquip Corporation
American Hose & Reel Co.
Asplundh Tree Expert Co.
Black & Decker
Brighton By-Products
The Broyhill Co.
Century Engineering Corp.
Contree Sales, Inc.
Friend Manufacturing Corp.
Hydro-Turf
Larson Machine, Inc.
F. E. Myers & Bro. Co.
Robco, Inc.
Swan Hose Div., Amerace Corp.

HOSE, SPRAY, IRRIGATION
Aeroquip Corporation
American Hose & Reel Co.
Hydro-Turf
Public Health Equip. & Supply Co.
Robco, Inc.
Swan Hose Div., Amerace Corp.

HYDRAULIC & AIR POWERED TOOLS
Fairmont Hydraulics
Stanley Hydraulic Tools Div., The
Stanley Works

HYDRAULIC LIFTS
G & H Products, Inc.
Howard Rotavator Co., Inc.
Magline, Inc.
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INJECTION EQUIPMENT

Agresults, Inc. Rue R. Elston Co., Inc. Walsh Mfg. Co.

INSECT KILLER

Vandermolen Corp. Village Blacksmith

IRRIGATION, INJECTION EQUIPMENT

Agresults, Inc.
Andrasko Engineering Co.
Inject-O-Meter Mfg. Co., Inc.
Smith Precision Products Co.

IRRIGATION CONTROLLER/PROGRAMMERS

Aqua-Dial
Buckner/Johns Manville
Griswold Controls
Hays Mfg. Div., Zurn Industries
Imperial Underground Sprinkler
Lumenite Electronic Co.
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Mfg. Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain-O-Mat Sprinklers, Inc.
Tork Time Controls, Inc.
The Toro Company
Toro Irrigation Div.
Weather-Matic Div., Telsco
Industries
Wet Mfg. Co.

IRRIGATION, COMPONENTS

Aqua-Mech
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Champion Brass Mfg.
Greenlawn Sprinkler Co.
Griswold Controls
Hays Mfg., Div. Zurn Industries
King Bros. Industries
Lumenite Electric Co.
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Mfg. Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Toro Irrigation Div.
Weather-matic Div., Telsco
Industries
Wet Mfg. Co., Inc.

IRRIGATION FITTINGS (See Pipe Fittings)

IRRIGATION, PIPE PULLER Greenlawn Sprinkler Co. Jacobsen Manufacturing Co.

IRRIGATION PIPE, RISERS

Alcoa Aluminum
Amoco Chemicals Corp.
Buckner/Johns Manville
Cast Iron Pipe Res. Assoc.
Certain-Teed/Daymond Co.
Certain-Teed Products Corp.
Cresline Plastic Pipe Co., Inc.
Flintkote Co., The Pipe Products
Div.
Greenlawn Sprinkler Co.
King Bros. Industries
Melnor, Turf Irrigation Div.
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Ridge Plastics Co.
Sprinkler Irrigation Supply Co.
Toro Irrigation Division

IRRIGATION, PUMPING STATIONS, COMPLETE

Irrigation Supply Co., Inc. Venable Sprinkler Sales, Inc.

IRRIGATION SPRINKLERS, ABOVE GROUND

Aqua-Dial
Boss Irrigation
Champion Brass Mfg.
Greenlawn Sprinkler Co.
Hydro-Turf
F. D. Kees Mfg. Co.
Melnor, Turf Irrigation Div.
L. R. Nelson Corporation
Travelrain Power Sprinkler Co.
Weather-matic Div., Telsco Ind.

IRRIGATION SPRINKLERS, IMPACT Buckner/Johns Manville
Hays Mfg. Div., Zurn Industries, Inc.
Moody Sprinkler Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain-O-Mat Sprinklers, Inc.
Safe-T-Lawn, Inc.
Sprinkler Irrigation Supply Co.
Toro Irrigation Division
Weather-matic Div., Telsco Ind.

IRRIGATION SPRINKLERS, IMPULSE, POP-UP, HEADS

Aqua-Dial
Buckner/Johns Manville
Champion Brass Mfg.
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Corporation
RainBird Sprinkler Mfg. Corp.
Rain Ject Corporation
Safe-T-Lawn, Inc.
Sprinkler Irrigation Supply Co.
Thompson Manufacturing
Toro Irrigation Division
Weather-matic Div., Telsco Ind.
Wet Mfg. Co., Inc.

IRRIGATION SPRINKLERS, SHRUB AND BUBBLER

Buckner/Johns Manville Champion Brass Mfg. Melnor, Turf Irrigation Div. Moody Sprinkler Co., Inc. L. R. Nelson Mfg. Co., Inc. Perma-Rain Irrigation, Inc. Rain Bird Sprinkler Mfg. Corp. Rain-O-Mat Sprinklers, Inc. Sprinkler Irrigation Supply Co. Toro Irrigation Division Weather-matic Div., Telsco Ind. Wet Mfg. Co., Inc.

> IRRIGATION SPRINKLERS, SPRAY, POP-UP, HEADS

Aqua-Dial
Buckner/Johns Manville
Champion Brass Mfg.
Hays Mfg. Div., Zurn Industries, Inc.
Imperial Underground Sprinkler
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Corporation
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Safe-T-Lawn, Inc.
Sprinkler Irrigation Supply Co.
Thompson Manufacturing
Toro Irrigation Division
Weather-matic Div., Telsco Ind.
Wet Mfg. Co., Inc.

IRRIGATION SPRINKLERS ROTARY, POP-UP, HEADS

Aqua-Dial
Buckner/Johns Manville
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Corporation
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Rain-O-Mat Sprinklers, Inc.
Safe-T-Lawn, Inc.
Sprinkler Irrigation Supply Co.
Thompson Manufacturing
Toro Irrigation Division
Weather-matic Div., Telsco Ind.

IRRIGATION SPRINKLERS, STATIONARY

Aqua-Dial
Buckner/Johns Manville
Champion Brass Mfg.
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Rain-O-Mat Sprinklers, Inc.
Sprinkler Irrigation Supply Co.
Toro Irrigation Division
Weather-matic Div., Telsco Ind.

IRRIGATION SPRINKLERS, VALVE IN HEAD

Buckner/Johns Manville RainBird Sprinkler Mfg. Corp. Safe-T-Lawn, Inc.

IRRIGATION SYSTEMS, COMPLETE
Buckner/Johns Manville
Greenlawn Sprinkler Co.
Moody Sprinkler Co., Inc.
L. R. Nelson Mfg. Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Sprinkler Irrigation Supply Co.
Toro Irrigation Division
Weather-matic Div., Telsco Ind.
Wet Mfg. Co., Inc.

IRRIGATION, SWITCHES Buckner/Johns Manville L. R. Nelson Mfg. Co., Inc. RainBird Sprinkler Mfg. Corp.

IRRIGATION, SAND SEPARATORS
Laval Separator Corp.
Moody Sprinkler Co., Inc.
Perma-Rain Irrigation, Inc.
Rain-O-Mat Sprinklers, Inc.

IRRIGATION, MISCELLANEOUS ACCESSORIES

Buckner/Johns Manville
Certain-Teed Products Corp.
Champion Brass Mfg.
Cresline Plastic Pipe Co., Inc.
Greenlawn Sprinkler Co.
Irrigation Supply Co., Inc.
King Bros. Industries
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Mfg. Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain Jet Corporation
Rain-O-Mat Sprinklers, Inc.
Safe-T-Lawn, Inc.
Thompson Manufacturing
Toro Irrigation Division
Weather-matic Div., Telsco Ind.

IRRIGATION VALVES, AUTOMATIC Aqua-Dial Buckner/Johns Manville Champion Brass Mfg. Greenlawn Sprinkler Co. W. L. Hamilton Co. Hays Mfg. Div., Zurn Industries
Melnor, Turf Irrigation Div.
Moody Sprinkler Co., Inc.
L. R. Nelson Mfg. Co., Inc.
RainBird Sprinkler Mfg. Corp.
Rain-O-Mat Sprinklers Inc. Rain-O-Mat Sprinklers, Inc. Toro Irrigation Division Weather-matic Div., Telsco Ind.

IRRIGATION VALVES, FLOW CONTROL Griswold Controls Moody Sprinkler Co., Inc. Toro Irrigation Division

IRRIGATION VALVES, MANUAL Greenlawn Sprinkler Co.

IRRIGATION VALVES PRESSURE ACTIVATED

Griswold Controls W. L. Hamilton Co. Moody Sprinkler Co., Inc. RainBird Sprinkler Mfg. Corp. Toro Irrigation Division

IRRIGATION, QUICK COUPLING VALVES

Buckner/Johns Manville Melnor, Turf Irrigation Div. Moody Sprinkler Co., Inc. L. R. Nelson Mfg. Co., Inc. Rain-O-Mat Sprinkler Mfg. Corp. Rain-O-Mat Sprinklers, Inc. Sprinkler Irrigation Supply Co. Toro Irrigation Division Weather-matic Div., Telsco Ind. H. N. Webster Mfg.

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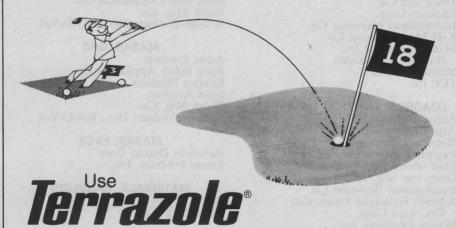
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Flymo Div., Keltec Inc.
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Roof Manufacturing Co.
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A low-cost trencher with Davis quality that's easy to move on the job and that trenches by itself without manhandling!

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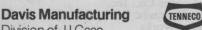
The new Fleetline 10+2 is the first new design in a compact 2-wheel drive trencher in over a decade! It gives you superior quality that you've come to expect from Davis. Its 10 hp Kohler air-cooled engine is forward so its weight keeps the digging boom in the ground – even in tough digging! No manhandling. The four-speed transaxle delivers equal torque to both wheels for straight trenches, and lets you select just the right digging speed for the soil conditions. The rigid guide

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FL10-2-574



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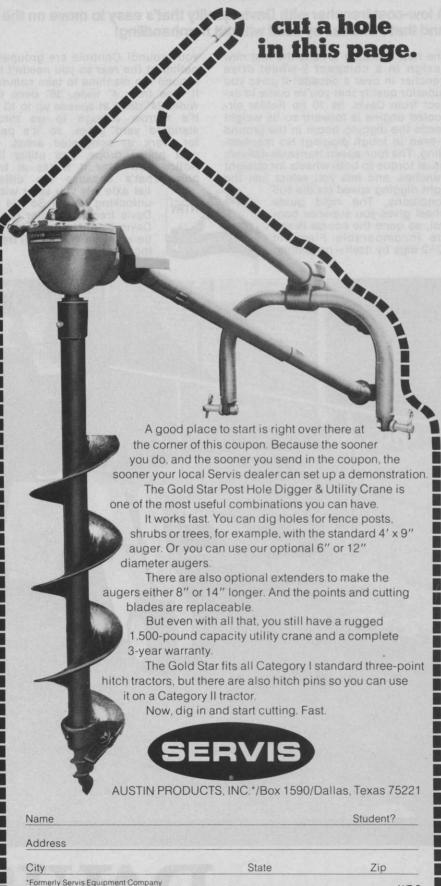












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Walsh Mfg. Co.

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Friend Mfg. Corp.
Hub States Corporation
H. D. Hudson Mfg. Co. Hydro Turf Hypro Div., Lear Siegler, Inc. L. L. Larson Machine, Inc. Lawn Medic, Inc. Leigh Products, Inc. Lockwood Corporation London Fog Company F. E. Myers & Bro. Co. Parco Products Co. Public Health Equip. & Supply Co. Robco, Inc. Root-Lowell Corporation Smith & Co., Inc. D. B. Smithco, Inc. Solo Motors, Inc. Spray Baby, Inc. Tradewinds, Inc. Tree Ject Company
The Vandermolen Co. Walsh Mfg. Co. Waymark Wayne Engineering Corp.

SPRAYERS, COMPRESSED AIR
R. E. Chapin Mfg. Works, Inc.
Curtis-Dyna Products Corp.
Red Ewald, Inc.
H. D. Hudson Mfg. Co.
L. L. Larson Machine, Inc.
Parco Products Co.
Public Health Equip. & Supply Co.
Root-Lowell Corp.

SPRAYERS, HAND

Bartlett Mfg. Co. Broyhill Co. Buffalo Turbine Ag. Equip. Co. Century Engineering R. E. Chapin Mfg. Works, Inc. Contree Sales, Inc. Deere & Co. Friend Mfg. Co. H. D. Hudson Mfg. Co. L. L. Larson Machine, Inc. Leigh Products, Inc Melnor Industries, Inc. Parco Products Co. Root-Lowell Corp. Solo Motors, Inc. Tradewinds, Inc. The Vandermolen Co. Walsh Mfg. Co.

IT'S A FACT...

OVER A MILLION
EARTHWORMS CAN
INHABIT AN ACRE OF
SOIL... DARWIN ESTIMATED
THAT IN ONE ACRE, UP TO
10 TONS OF SOIL PASSES
THROUGH THE BODIES OF
EARTHWORMS EACH YEAR.



- TERRA TACK HELPS PREVENT EROSION WHEN USED AS AN OVERSPRAY BY HOLDING STRAW OR HAY IN PLACE.
- •TERRA TACK, IN A SLURRY OF SEED, FERTILIZER, AND FIBER, FORMS AN ADHESIVE TO HELP PREVENT EROSION.
- . TERRA TACK'S COST? ...





NOTHING CAN MATCH



...AND THAT'S A FACT!
Terra Tack as a spray helps control soil erosion.





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Quality Service

Grom Asplundh
engineering and quality

Lift trucks, backed by innovative engineering and quality control, assure you of extra years of satisfactory service performance. Both Forestry and General Service bodies are on regular production schedules. LR Series Models come in 40-, 42-, 45- and 50-feet. All booms are fully insulated and operated by a high pressure hydraulic system with controls mounted on the Pylon Mast and in the basket for maximum safety and efficiency. When you invest in one or a fleet of our aerial lift trucks, you are assured of good service from the aerial device and from the people who build it. ASPLUNDH CHIPPER CO., a division of

Asplundh Tree Expert Co., 50 E. Hamilton St., Chalfont, Pa. 18914.

ASPLUNDH

The famous Asplundh chipper is available with all our aerial device units if so desired.

12 inch or 16 inch models are in continuous production.



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SIGNED

Asplundh Chipper Co. 50 E. Hamilton Street Chalfont, Pa. 18914

- ☐ Please send specification sheet
- ☐ Please contact me, I'm interested

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SPRAYERS, HOSE END

Amchem Products, Inc. Bar-Way Mfg. Company Broyhill Co. Century Engineering Corp.
R. E. Chapin Mfg. Works, Inc.
FMC Corp., Ag. Machinery Div.
Friend Mfg. Co.
Hub States Corporation
H. D. Hudson Mfg. Co. L. L. Larson Machine, Inc. Leigh Products, Inc. Melnor Industries, Inc. F. E. Myers & Bro. Co. Tree Ject Company Walsh Mfg. Co. Wayne Engineering Corp.

SPRAYERS, KNAPSACK

Bartlett Mfg. Co. Buffalo Turbine Ag. Equip. Co. R. E. Chapin Mfg. Works, Inc. Echo Chain Saw Div., Kioritz Corp. of America Friend Mfg. Co. H. D. Hudson Mfg. Co. Parco Products Co. Public Health Equip. & Supply Co. Robco, Inc. Root-Lowell Corp. Solo Motors, Inc. Stihl American, Inc. Tradewinds, Inc. Vandermolen Co.

SPREADERS, DISC-TYPE L. L. Larson Machine, Inc. The Vandermolen Co.

Waymark

SPREADERS, HOPPER-TYPE

Arctic Mizer Avco Ezee Flow Div. John Blue Co Cushman, OMC-Lincoln Deere & Co. Ford Tractor Operations, North America Gandy Co.



Regal Chemical bags it!

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organic nitrogen



The nitrogen that pampers delicate turf. Feeds slowly instead of causing surges of growth that can cause

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For More Details Circle (142) on Reply Card

Great Lakes Chemical Div. Herd Seeder Co., Inc. Highway Equipment Co. International Harvester Co. F. D. Kees Mfg. Co. L. L. Larson Machine, Inc. Lely Corp Ryan, OMC-Lincoln Simplex Mfg. Co. Swenson Spreader & MFG. Co. TCI, Inc. Vandermolen Corp. Vicon Farm Machinery, Inc. Willmar Mfg. Co.

SPREADER, LIQUID

Amchem Products, Inc. TCI, Inc.

SPRIGGERS

Beck Mfg. Co. Bermuda King Co. Bowie Machine Works

> **SPRINKLERS** (See Irrigation)

STENCILS, MARKING Fox Valley Marking Systems M-B Company

STONE PICKER (Also See Rock Picker)

Armor Metal Products William Bergman Company Bridgeport Imple. Works, Inc. Lockwood Corp.

STRAINERS

Hypro Division, Lear Siegler, Inc.

STRAINERS, SUCTION Bar-Way Mfg. Co.

STUMP CUTTER/REMOVER

Arps Corp. FMC Corp., Sweeper Div. Hesston Corp., Lawn Equipment International Harvester Co. Karl Kuemmerling, Inc. Levco Mfg., Inc. Olathe Mfg., Inc. Valley Products Corp. Vermeer Mfg. Co.

> SWEEPERS, LAWN (Also See Broom, Vacuum)

Billy Goat Industries, Inc. BlueBird International, Inc. Clark Div., Clarke-Gravely Corp. Deere & Co. FMC Corp., Sweeper Div. International Harvester Co. Jacobsen Mfg. Co. M-B Company Mars Industries, Inc. Mathews Company Melroe Mfg. Co. Mid-State Metal Casters & Mfg. Co. Nunes Mfg. Parker Sweeper Co. Ryan, OMC-Lincoln Sweepster, Jenkins Equip. Co. Tennant Maintenance Systems The Toro Company Turf Vac Corp. Wheel Horse Products, Inc.

TAILGATES, LIFTING Adventure Line Mfg. Co. S & H Industries, Inc.

TANKS, SPRAY

John Blue Co. The Broyhill Co. Century Engineering Corp. Contree Sales Edwards Mfg. Co. Red Ewald, Inc. FMC Corp., Ag. Machinery Div. Fibre Glass Products Friend Mfg. Corp. Hemco Corporation H. D. Hudson Mfg. Co. Inject-O-Meter Mfg. Co. L. L. Larson Machine, Inc. Leigh Products, Inc. F. E. Myers & Bro. Co. Papec Machine Co. Raven Industries Root-Lowell Corporation Walsh Mfg. Co.

THATCHERS (See Mowers, Vertical)

Arctic Mizer Arps Corporation BlueBird International, Inc. E-Z Rake, Inc. Giant-Vac Mfg., Inc. Johnson Hydraulic Equip., Div. Arps Corp. F. D. Kees Mfg. Co. Parker Sweeper Company Ryan, OMC-Lincoln Swenson Spreader & Mfg. Co. Triumph Machinery Co.

TILLERS

Allis-Chalmers Ariens Co. Auto Hoe, Inc. J. I. Case, Outdoor Power Equip. Div. Conaway, Inc. Contree Sales, Inc. Deere & Co. Engineering Products Co. FMC Corp., Ag. Machinery Div. FMC Corp., Outdoor Power Equip. Div. FMC Corp., Side-Winder Ferrari Tractors Ford Motor Co., Tractor Div. Gravely Corp., Div. Clarke-Gravely Howard Rotavator Co., Inc. International Harvester Co. Jacobsen Mfg. Co. Lakes Supply Co., Inc. Lely Corp. Massey-Ferguson, Inc. MTD Products, Inc. Roseman Mower Corp. Roto-Hoe Co. Simplicity Mfg. Co. Solo Industries, Inc. Village Blacksmith Wheel-Horse Products Yazoo Mfg. Co., Inc. TIRES

Dunlop Tire & Rubber Corp.

TOOLS, HAND, HYDRAULIC, **PNEUMATIC**

Black & Decker Co. Deere & Co. Friend Mfg. Corp. F. D. Kees Mfg. Co. Limb Lopper Co., Inc. H. K. Porter, Inc. Seymour Smith & Son, Inc. Village Blacksmith

> TOOL BOXES, PICKUP (See Chests, Tool)

Hemco Corporation Knaack Mfg. Co.

TOP DRESSERS

Cushman, OMC-Lincoln Jabobsen Mfg. Co. Lely Corp. Ryan, OMC-Lincoln Smithco, Inc.

TRACTORS, 8-12 HP

AMF Western Tool Division Allis-Chalmers Corp. Ariens Company Avco New Idea
J. I. Case, Outdoor Power Equip Div. Deere & Co. FMC Corp., Outdoor Power Equip. Div. Ferrari Tractors Ford Tractor Operations, North America Gravely, Div. Clarke-Gravely International Harvester Co. Massey-Ferguson, Inc. Simplicity Mfg. Co. Smithco, Inc. Speedex Tractor Co. Wheel-Horse Products Yardman, The Leisure Group, Inc.

TRACTORS, 13-20 HP

Allis-Chalmers Corp., Outdoor and Leisure Products Avco New Idea John Blue Co. J. I. Case, Outdoor Power Equip Div. Conaway, Inc. Deere & Co. **Economy Tractor** Engineering Products Co. FMC Corp., Outdoor Power Equip. Div. Ferrari Tractors Ford Tractor Operations, North General Electric, Outdoor Power Equip. Operations Gravely, Div. Clarke-Gravely Corp. Hesston Corporation, Ind. Div. International Harvester Co. Kubota Tractors, Inc. Massey-Ferguson, Inc Satoh Tractor c/o NEDA Simplicity Mfg. Co. Speedex Tractor Co. Tradewinds, Inc. Wheel-Horse Products Yardman, The Leisure Group, Inc.

TRACTORS, 21-60 HP

Allis-Chalmers
Deere & Co.
Ferrari Tractor
Ford Tractor Operations, North
America
International Harvester Co.
Kubota Tractors, Inc.
Massey-Ferguson, Inc.
J. Pickrell Co.
Satoh Tractor c/o NEDA
Slope Tractor, Inc.
Tradewinds, Inc.
Waldon, Inc.

TRACTORS, 61-150 HP

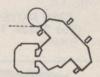
Allis-Chalmers
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Massey-Ferguson, Inc.



Hesston Front Runner® GMT... really ahead of the times!

Made-over or make-do equipment just won't do the professional job of groundskeeping you want the year around. This one performs in all seasons: mowing grass...vacuuming lawns...clearing snow...moving earth. And it performs far more efficiently than a scaled-down farm tractor.

The Front Runner, built specifically for grounds maintenance, is a tough, gutsy tractor with front-wheel hydrostatic drive and hydraulically controlled front-mounted attachments. Its top features? Articulated steering and vacuum pickup. The center pivot lets you mow easily around trees and shrubs, along curving walks and drives—usually in a single pass. An integrated vacuum pickup attachment to mower heads is self contained—it deposits trimmings in the tractor's built-in carryall. If you do need to stop and back up, there's no bulky trailer in the way! Your speed is infinitely variable from 0 to 11 mph.



Hesston Front Runner with exclusive articulated steering bends in the middle for easy maneuverability around obstacles in close quarters.



Conventional solid frame garden tractor with bellymounted mowers can't match the easy maneuverability and up-close cut of the Front Rupper

The Front Runner GMT is available in three models—16, 18 and 19.8 hp. Choose from 48", 60" and giant 80" batwing mower heads. All attachments fit all models so you can get the capabilities and power most efficient for you. Send for color literature that includes specifications on all three models.

Runner.	
HESSTON	FR-1-174C
CORPORATION	8640 Brookville Road Indianapolis, Indiana 46239
Lawn Equipment Division	
Please send me more info	ormation on the Hesston Front Runner
GMT and the name of n	
GMT and the name of n	
NAME	

Waldon, Inc.

TRACTORS, 151 and up HP Deere & Co. Ford Tractor Operations International Harvester Co. Massey-Ferguson, Inc. Waldon, Inc.

TRACTORS, CRAWLERS Allis-Chalmers Deere & Co. International Harvester Co.

TRAILERS

Beatty Trailers John Blue Co. The Champion Co. Clark Equipment Trailer Div. Deere & Co. Fayette Division, Dayton-Walther Corp. Ginther Equipment Corp. Harvestall Industries, Inc. Jacobsen Mfg. Co. Lakeside Mfg. Corp. Lawn Medic, Inc. Magline, Inc. Maxey Mfg. Co., Inc. Miller Tilt-Top Trailers, Inc. R.A.M. Industries, Inc. Rogers Bros. E. R. Schwartz Mfg. Co. Selma Trailer and Mfg. Co. The Snow Company Wheel Horse Products, Inc.

TRASH COMPACTORS Piqua Engineering, Inc.

TREE INJECTORS

Creative Sales Ferti-Feeder Tree-Ject Company Walsh Mfg. Co.

TREE MOVERS (See Spade, Tree) CareTree Systems



Lawn King bags it! **NITROFORM***

organic nitrogen



The concentrated organic that takes up less storage space. Pathogen-free and space. Path odorless, too.

Turf and Horticultural Products, Synthetics Dept. Wilmington, Delaware 19899

Registered trademark of Hercules Incorporated. STH74-11

Davey Tree Expert Co. Ideal Crane Div. Schutt's Equipment Co. Vermeer Mfg. Co.

TREE WRAPPINGS

Bartlett Mfg. Co. Bemis Mfg. Co. American Excelsior Corp.

TRENCHER

Arps Corp. Charles Machine Works Davis Mfg.
Digz-All Trencher Co.
Ground Hog, Inc. Moody Sprinkler Co., Inc. Toro Irrigation Division Towner Mfg. Co. Vermeer Mfg. Co.

TRIMMERS, HEDGE AND GRASS, PARTS

Barlett Mfg. Co. The Black & Decker Mfg. Co. Bunton Co. Conaway, Inc. Gandy Company Goodall Div. Grandberg Industries Jacobsen Mfg. Co. K-D Mfg. Co. Melnor Industries, Inc. H. K. Porter, Inc. Rowco Mfg. Co., Inc. Seymour Smith & Son, Inc. Stihl American, Inc. Tallman Equip. Co., Inc. Village Blacksmith Wisconsin Marine, Inc. Yazoo Mfg. Co., Inc.

TRUCK, ACCESSORIES Maxey Mfg. Co., Inc.

TRUCK, FORESTRY

Asplundh Chipper Co. Mobile Aerial Towers, Inc.

TRUCK, LIGHT-HAULING, UTILITY Cushman, OMC-Lincoln Ginther Equipment Corp. **HMC** Jacobsen Mfg. Co. Wayne Engineering Corp.

TRUCK, UTILITY BODIES Fibre Glass Products

TUBING (Also See Hose)

American Hose & Reel Co.

TURF VEHICLES

Club Car, Inc. Cushman, OMC-Lincoln E-Z Go Car, Div. Textron, Inc. G.E.M. Products, Inc. Harley-Davidson Motor Co., Inc. Jacobsen Mfg. Co. Jeep Corporation Otis Elevator Co., Special Vehicle Div. Pargo, Inc. J. Pickrell Co. Ryan, OMC-Lincoln Smithco The Snow Company The Toro Company Westinghouse Electric Corp.

UNDERWATER WEED HARVESTER (See Aquatic Weed Harvester) A.O.A. Research & Development, Inc.

Air-Lec Industries, Inc. Aquamarine Corporation Mud Cat, Div. of National Car Rental The Vandermolen Co.

UNDERWATER WEED RAKE A.O.A. Research & Development Inc. Air-Lec Industries, Inc.

UNLOADERS

Dico Co., Inc.

UTILITY TRAILERS

Beck Mfg. Co. Magline, Inc.
Miller Tilt-Top Trailers, Inc.

VACUUMS

Allis-Chalmers Mfg. Co. Arctic Mizer Ariens Co. Billy Goat Industries, Inc.
The Black & Decker Mfg. Co. Clarke Div., Clarke-Gravely Corp. Conaway, Inc. Deere & Co. E-Z Rake, Inc. Giant-Vac Mfg., Inc. Hesston Corp., Lawn Equipment Jacobsen Mfg. Co. MTD Products, Inc. Nunes Mfg. Parker Sweeper Co. Rego Div. Golconda Corp. Ryan, OMC-Lincoln Simplicity Mfg. Co., Inc. Sweepster, Jenkins Equip. Co. Swenson Spreader & Mig. Co. Tennant Maintenance Systems Turf Vac Corp. Wheel-Horse Products

VALVES (Also See Irrigation Valves) Aqua-Dial

Hypro Division, Lear Siegler, Inc. Inject-O-Meter Mfg. Co.

VALVE BOXES Ametek, Plymouth Plastics Div.

VERTICAL SLITTER, TURF BlueBird International, Inc. Ryan, OMC-Lincoln

VIBRATORY PLOWS Charles Machine Works Davis Mfg.

WASHERS, HIGH PRESSURE Century Engineering Corp. Fimco, Inc. Walsh Mfg. Co. Wayne Engineering Corp.

WEED HARVESTER Weed Eaters, Inc.

WELDERS American Lincoln Corp.

(Also See Hoist)

Fairmont Hydraulics Hoffco, Inc. Ideal Crane Div. International Harvester Co. Fred A. Lewis Company Maasdam Pow'r Pull, Inc.



Six New BANVEL® Pre-Mix Combinations Added To The BANVEL® Herbicide Line.

Banvel pre-mix combinations containing 2,4-D and 2,4,5-T are available in either oil or water soluble formations, lets you eliminate selectively tough brush, vines and broadleaf weeds that other herbicides often miss.

With this choice, the herbicide can be matched to type of vegetation, season, location, soil type, topography, environment, and other considerations. See your Velsicol representative or herbicide applicator for details.

Why Banvel is the 3 E's Herbicide

EFFICACY—BANVEL herbicide is systemic—it translocates throughout the entire plant killing leaves, stems and roots. Broad-spectrum BANVEL gets the hard-to-kill vegetation.

ECONOMY—Long-lasting BANVEL herbicide offers low cost. Often one application per season is all that is required for weed and vine control. Brush can be controlled for several

growing seasons, with a 3- to 5-year root kill.

ECOLOGY—BANVEL has relatively short persistence in the soil. It has established tolerances for many food crops and milk. BANVEL is not harmful to animals eating foliage.

For information, fill in blanks below.

I am interested in controlling	MARINE STREET	n a state and west all
	(vegetation)	(place)
Please send sample labels and information to:		di lilter, edjusi cerovita
Name	VE	LSICOL
Title		
Company	Interested in Y A Subsidiary of	our Success f Northwest Industries, Inc.

A Subsidiary of Northwest Industries, Inc Velsicol Chemical Corporation 341 East Ohio Street Chicago, Illinois 60611

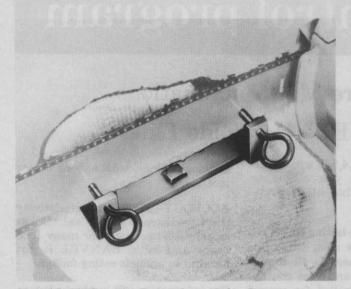
For More Details Circle (104) on Reply Card

Street or Box



ALGAETROL-76: Thompson-Hayward Chemical Co., Kansas City, Kan.

This algaecide is registered for use in swimming pools, lakes and fish hatcheries, rivers, irrigation ditches, and potable and waste water reservoirs. Treated areas may be used immediately for fishing, swimming, watering or irrigation. The algaecide comes concentrated, in quarts or gallons, and is applied by using hand or power sprayer. Initial treatment should be made when algae first becomes visible and water temperature is above 60 degrees F. Subsequent doses will prevent regrowth, according to the manufacturer. For more details, circle (705) on the reply card.



CLAMP-TITE: Zip-Penn, Inc., Erle, Pa.

This new vise holds chain saw firmly and securely; frees both hands, allows you to sharpen chain, clean air filter, adjust carburetor or perform other service requirements. Vise screws into a tree stump; the jaws clamp the guidebar and hold the saw in such a position that the chain can be moved freely around the bar. Made of welded steel, the Clamp-tite weighs 2¾ pounds. The vise can also be used to fasten an axe for two-handed sharpening. For more details, circle (707) on the reply card.



T-300A ROOT CUTTER: Vermeer Manufacturing Co., Pella, Iowa

New root cutter attachment for Vermeer's T-300A trencher features replaceable, carbide-tipped cutting teeth, mounted on 40-inch diameter wheel. Severs roots down to 18 inches below the surface. The unit's compact design — only 46 inches wide — permits operator to travel down sidewalks on rubberized 10-inch crawler tracks with independent hydraulic track drive. Offset design, along with an 18-inch cutting wheel clearance, permits the machine to cut roots along curbing while operating at roadway level. For more details, circle (706) on the reply card.



ATROPEN AUTO-INJECTOR: Survival Technology, Inc., Betheseda, Md.

This insecticide poison treatment kit has been developed for use wherever organophosphorus or carbamate insecticides are stored, transported, or used. The treatment kit has five prefilled automatic syringes (Atropens) containing the antidote atropine (2 mg. atropine each), plus complete instructions and a training syringe. The kit permits immediate painless treatment without seeing a needle. For more details, circle (708) on the reply card.

people on the move

ROBERT D. BLACKBURN, appointed president of Florida Aquatic Weed Control, Inc. He was formerly in charge of the Aquatic Plant Management Laboratory, USDA. ELROY TIMMER, also formerly with USDA, appointed vice president of operations of Florida Aquatic Weed Control, Inc.

C. M. GRAU, promoted to senior vice president of Agrico Chemical Co.

PAUL G. REGAN, named general manager of Lawn-Boy/Pioneer Distributors, Inc., a subsidiary of Outboard Marine Corp. (OMC).

DOUGLAS H. CREECY, appointed division advertising manager for the agricultural chemical division of Diamond Shamrock Chemical Co. Creecy will be responsible for the advertising and sales promotion activities of the division.

HAROLD R. RICHARD, selected to direct the Navy's soil and water conservation (land management) program, Alexandria, Va.

GEORGE F. STOVER, appointed railroad vegetation control specialist, Velsicol Chemical Corp.

JAMES H. KELLER, promoted to vice president, operations, of Hahn, Inc. Keller will be in charge of the entire manufacturing operation as well as information systems and corporate planning. WAYNE POKORNEY, promoted to director of operations planning and information systems for Hahn, Inc.

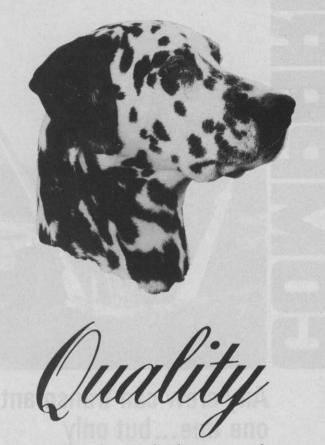
BUEL J. RODGERS, appointed agricultural marketing manager of the agricultural machinery division, FMC Corp.

JERRY L. FRAGNOLI, appointed regional sales manager for Telsco's Weather-matic Division Pacific Northwest territory.

RALPH D. RIPLEY, appointed vice president/regional manager of the North Central Region of Thompson-Hayward Chemical Co. In another company move, CHARLES P. JENSEN, named new branch manager at The Atlanta distribution center.

FRED SCALZO, joined Thompson Sorinkler Co. and has marketing responsibility primarily in the western states.

JOHN M. POPE, appointed as director, corporate marketing, of The Toro Co. Pope will be responsible for overall corporate marketing strategy, distribution planning and corporate communication. N. M. (BUDDY) ELLISON, appointed southeastern sales manager for Toro.



in looks, ability and performance in the field.

And, Jacklin Seed Company built its reputation for quality with top performance in the field year after year. Jacklin is your reliable answer to seed performance. When you order seed, specify JACKLIN SEED.

JACKLIN PRODUCES:

Merion, 0217[®] Fylking, Glade, Cheri, Nugget, S-21, Newport, Delta, Geary, Park, Six, and Troy Kentucky bluegrass; Rathdrum and Reubens Canada bluegrass; Norlea Perennial ryegrass, Public and private varieties of Creeping Red, Nova rubra, Chewings, and Hard fescues.

And has produced on a contract basis: Pennfine, N.K. 100, N.K. 200 and Pelo Perennial ryegrass. For these quality Jacklin seeds see your local wholesale seed distributor. Jacklin is also a prime* contract producer of: Warren's A-34, O.M. Scott's Windsor and Adelphi Kentucky bluegrass. Jacklin has built a reputation of fine quality and service for over 30 years. You can count on purity of content, high quality and sure germination.

*Available only through breeder and owner outlets.

Jacklin Seed Company

Division of the Vaughan-Jacklin Corporation



Any crew can transplant one tree...but only Vermeer Tree Spades transplant a forest

You're looking at the profit end of a low-cost, high-production tree transplanting program—with "The Diggin' Dutchman's" TS-44A Tree Spade from Vermeer. Compare it with a whole crew of laborers and you'll see what we mean. The TS-44A requires no coffee breaks... no lunch hours... no overtime wages... just an occasional tank of gas to keep its hydraulically-operated spades digging, balling and transplanting a forest of trees up to 4" in diameter. Saves you thousands of dollars annually because one man can handle the entire job

in minutes. Interested? Write "The Diggin' Dutchman" for all the facts.





Our 25th Year

THE DIGGIN' DUTCHMAN

VERMEER TREE EQUIPMENT DIVISION 7209 NEW SHARON RD. • PELLA, IOWA 50219

insect report

TURF INSECTS

FALL ARMYWORM

(SPODOPTERA frugiperda)

ARKANSAS: First economic infestation of season reported on Coastal Bermuda grass at Magnolia, Columbia County.

TREE INSECTS

SPRUCE BUDWORM

(Choristoneura fumiferana)

MAINE: Moth flights occurred as expected but much heavier than anticipated. Moths very heavy; gathered near roads and lights where "piles" found. Road from Allagash to Fort Kent literally "paved" with moths. Also reported heavy at Portage, Caribou, and Presque Isle. Moth flight appeared to precede storm from northwest. Moths heavy in central and northcentral areas of State. Egg masses observed everywhere; minimfestations may appear in 1975. Several minor flights also observed. PENNSYLVANIA: Adults found on hemlock and spruce. Thus pest appeared in heavy numbers in Centre, Armstrong, Butler, Green, Allegheny, Venango, Beaver, Mercer, Lawrence, Crawford, Clarion, Forest, Warren, McKean, Erie, and Washington Counties. Larvae seen this year in Clearfield and Jefferson Counties on hemlock.

YELLOWHEADED SPRUCE SAWFLY

(Pikonema alaskensis)

MAINE: Seems heavy although infestations light. Species can be very damaging, especially in spruce plantations. Cocoons noted in some infestations.

FALL WEBWORM

(Hyphantria cunea)

VERMONT: Webs expected soon. NEW HAMPSHIRE: Larvae in second instar. Webs noted on lilac and other hosts at Lee, Strafford County.

WHITEMARKED TUSSOCK MOTH

(Hemerocampa leucostigma)

MAINE: Second and third-instar larvae noticeable on several tree species, especially willows, at Old Twon, Penobscot County.

BENEFICIAL INSECTS

CHRYSOMELID BEETLE

(Agasicles hygrophila)

FLORIDA: Adults and larvae heavily infested leaves of all 30 plants of alligator weed, *Alternanthera philoxeroides*, examined at aquatic nursery in Tampa, Hillsborough County. This species introduced from Argentina to control alligator weed.

ALKALI BEE

(Nomia melanderi)

WASHINGTON: Sampling of 7 bee beds at Touchet, Walla Walla County, showed average of 6 percent eggs, 20 percent larvae, and 74 percent prepupae. Average of molded pollen balls 20 percent (range 10-43 percent).

classifieds

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

Rates: All classifications 50¢ per word. Box number, \$1. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment.

FOR SALE

DOUBLE EDGE sod cutter blades. Will fit any Ryan sod cutter. Works like double edge razor blade. Cuts much more sod per blade. Made to bolt on both ways. \$24.00 plus postage. New automatic sod loaders for direct loading to pallets, trucks or trailers. No workers needed on ground. Both products developed and designed by Hadfield. Write or call Glen Hadfield, 4643 Sherwood, Oxford, Michigan 48051. Phone 313 628-2000.

ARPS stump cutter teeth, top quality and best price in U.S.A., D. J. Andrews, Inc., 17 Silver St., Rochester, New York 14611. Call 716 235-1230.

USED EQUIPMENT

FOR SALE: Sprayers: used and new; hydraulic and mist, all makes; Royal 20, 35, and 55 pumps. Used rotomist parts, big discount! Phone 313 665-5338 or 313 994-3110. Write: Ralph McFarland, 209 Pleasant Place, Ann Arbor, Michigan 48103.

FOR SALE: 1965 GMC 4000 Asplundh splitdump truck in good condition. Also Williams and Harvey tree mover mounted on 1964 Ford F600. Funk Bros. Tree Service, Inc., P.O. Box 226, Ashland, Ohio 44805. Phone Ashland 325-2113; Mansfield, 589-2619.

FOR SALE: 1 John Bean 35 GPM sprayer with 400 gallon tank, 300 ft. high pressure spray hose, and hose reel. For more information write or call B. M. Fry, Co., 8636 Mulberry Rd., Chesterland, Ohio 44026. Phone 216 729-7480.

5 GANG ROSEMAN MOWERS, \$500. Also 7 gang, 4 Toro mowers, \$200; Ryan sod cutter, \$500, with roller attachment, \$900; Cushman golf truck, \$200; Fruehauf 32' flat \$1,300; rebuilt Lima Crane diesel, \$7,500. Phone 414 326-5267.

RECONDITIONED brush chippers, trucks with dump chip bodies, bucket trucks, backhoes, Case uniloader, Truco reel trailer and other miscellaneous construction and tree equipment. Trees of Houston, P.O. Box 94151, Houston, Texas 77018. Phone 713 692-6371

VERMEER 630 stump cutter with about 250 hours working time. Operates perfect in every way. Less than two years old. \$3,000 is cost. If interested call Richard Crouch, 804 638-8383

LOG CHIPPER — Vermeer 1971, model 604, 650 total hours, diesel engine, make offer. Bob Calloway, 5148 North Flora, Kansas City, Missouri 64118. Phone 816 454-2242

VERMEER TM700T tree transplanter on 1966 Chevy truck, excellent shape, moves trees 40 feet tall. Call or write RR6, Warsaw, Indiana 46580. 219 267-3970.

PRINCETON SOD HARVESTER, excellent condition, low hours, 3 men harvest around 1 acre per day. Maryland Turfgrass Industries, Inc., P.O. Box 878, Elkton, Maryland 21921

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Chevrolet, excellent condition. Phone 303 392-9324.

1969 HYDRO-SEEDER, Finn 800 gallons, Phone Richfield, Ohio. 216 659-9444

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MISCELLANEOUS

TREE APPRAISALS, Surveys, loss evaluations and expert consultation services. For names of members of the American Society of Consulting Arborists, Inc., throughout the country, contact: Executive Director ASCA, 12 Lakeview Ave., Milltown, New Jersey 08850.

BUSINESS OPPORTUNITIES

RIGHT-OF-WAY brush control business, netting \$35,000 to \$45,000 annually, total investment \$125,000.00. Located in midwest. Write Box 122, Weeds, Trees, and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

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TREE CARE — **MANAGEMENT OR SALES.** Age 42. Founder and builder of one of the east coast's most prestigious tree care companies. Retired 3 years ago and am now

anxious to get back into the tree care field either directly or with an allied industry. Will work for you, share in ownership with you or buy you out. Am looking for a challenging, high income potential situation where my sales ability can be combined with my extensive business management background. Am a dynamic, self assertive, positive thinking individual with proven leadership capabilities. Box 123, Weed, Trees & Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

Pressure Injection Method Used to Combat Oak Wilt

Members of the Plant Pest Control Division of West Virginia's Department of Agriculture were out in full force to fight oak wilt disease this summer.

Oak wilt, a vascular wilt disease, threatens all oak forests in West Virginia. The disease was discovered in 1951 and control measures were initiated shortly afterwards.

This year, 50 summer workers and five low-flying aircraft were employed to locate and treat the dy-

Ave., Cleveland, Ohio 44102.

ing trees to prevent the disease from spreading.

The U.S. Forest Service is conducting a pilot project in five eastern West Virginia counties to evaluate new control measures against oak wilt. The 700-square-mile area of diseased trees is being pressure injected with pesticides to kill the fungus disease and its insect carriers.

Agriculture Commissioner Gus R. Douglass said present control measures are effective, but the use of the new pressure injected apparatus and the proper pesticides promises to be a major breakthrough in the fight against the oak wilt disease.

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trimmings

Antabuse, a product used to curb drinking by making you sick if you drink, is chemically related to the fungicide thiram, reports the Canadian Department of Agriculture. Pesticide experts state it's possible to take in enough thiram while working with it to make you sick to your stomach if you drink a cold beer after a hard day's work.

Hans Schabel, forestry professor at the University of Wisconsin, predicts a strong spread of Dutch elm disease throughout Wisconsin this fall. He says there is a particularly large population of elm bark beetles this year. Schabel suggests that Benlate might be used even this late in the season if transmittal of the disease has been by beetle and if there is less than five percent crown damage to the tree.

The National Fire Protection Association recently published in pamphlet form the "Tentative Code for Storage of Pesticides in Portable Containers." The code was developed to minimize involvement of pesticides in fires and to reduce the hazards to fire fighters and the public when fires involve buildings in which pesticides are stored. Code provisions apply to both inside and outside storage of all forms of pesticides in individual containers with a maximum capacity of 660 gallons. Copies of the code are available from the National Fire Protection Association, Publications Sales Department, 470 Atlantic Ave.. Boston, MA., 02210. Cost is two

National Football League (NFL) players are expressing their dissatisfaction with artificial turf. At a recent NFL Players Association conference on the subject, Ed Garvey, the players group's executive director, said the NFL has taken "an ostrich-like approach" to the dispute over artificial surfaces. In addition, several players recited a litany of complaints about artificial turf. One player said he preferred the material be used for "doormats" and "outdoor patios."

"Aggregating pheromone," a powerful attractant bouquet released by virgin female European elm bark beetles for breeding and feeding purposes, has been successfully isolated by scientists. In recent field tests the artificial chemical has lured millions of the insect pests to their deaths. Aside from the control potential, the attractive chemical will find other important uses. Of particular importance is the ability to delineate the distribution of the beetle, detect its presence in new locations and monitor its emergence through varying weather conditions.

The Sprinkler Irrigation Association has a new publication entitled "Recommended Installation Specifications for Sprinkler Irrigation Systems for Turf and Landscaping." It is designed to serve as a national standard for the installation of turf and landscaping systems and to establish the lines of authority and responsibility between the irrigation contractor/installer and the owner. It forms a guide for complete installation for an irrigation system and is divided into sections covering general requirements, material specifications, installation procedures and owners responsibility. Copies can be obtained for one dollar each from the Sprinkler Irrigation Association, 13975 Connecticut Ave., Suite 310, Silver Spring, Maryland 20906.

The National Arborist Association is taking a pesticide survey. They want to inform the basic manufacturers of pesticides and the Environmental Protection Agency of their industry's needs and hopefully not be excluded from the re-registration of some pesticides in some states. Interested arborists should contact the National Arborist Association, Inc., 3537 Stratford Rd., Wantagh, N.Y. 11793.

GREEN INDUSTRY ASSOCIATIONS:

WEEDS TREES and TURF will be polling leading organizations in the Green industry next month. We would like to know what your organization has accomplished in 1974 and what your goals are for 1975. Reports will appear in the December issue of WEEDS TREES and TURF.

The three top dressers in the business.

Bob Scobee of Riley Lawn & Golf Equipment Corporation in Indianapolis, Ind. is one of them even though he denies it.

He'd rather have you look at the other two. They're Jacobsen's Mete-R-Matic Top Dressers that reduce the dragging and raking of top dressing. And give you the fast, even, deep-turf dressing you'd rather have.

The F8 is the walking model. It spreads up to 225 feet per

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