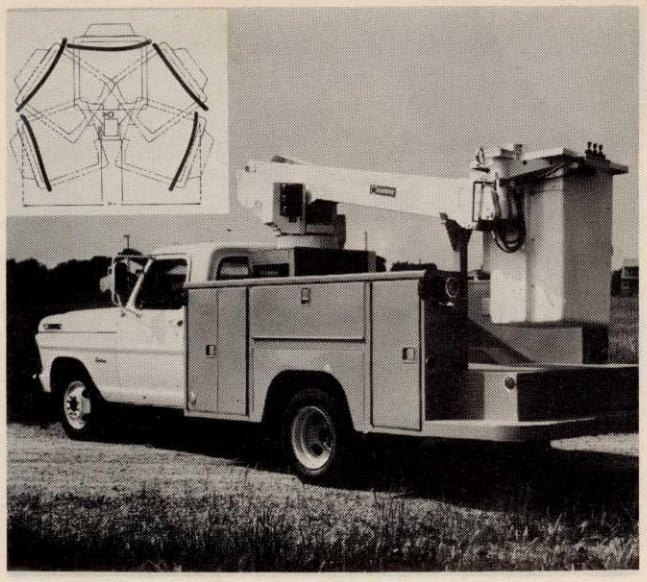
MULCH SPREADER: Venture Systems, Inc., Fresno, Calif.

Spreader designed with hopper that can be loaded from the top to spread fibrous material such as humus, redwood composition, steer manure and top soil. Insert may be added to distribution roller for even spreading of granular fertilizers, powdered lime, sand, and small grass seed. Also for sanding greens on golf courses, as the roller provides even distribution with low compaction, without rutting the green. Available in either push or pull type. For more details, circle (705) on the reply card.

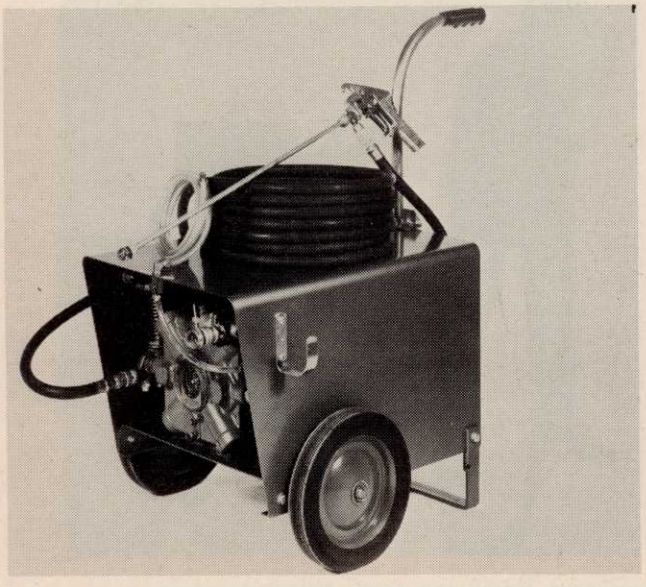


AERIAL LIFT: GAC Utility Products, Inc., Stoughton, Wis.

Aerial lift features wide range of bucket travel. Termed the Highway HLS-28A, the aerial lift has bucket mounting which permits the operator to swing 218° about the tip of the boom with easily-operated handwheel. Lateral travel of the bucket is 64 inches. The manufacturer states this feature, working in conjunction with continuous turret rotation and boom extension-retraction, provides infinite bucket positioning. As a result, the operator can work "square-on" to any job. Several work platforms and fiberglass buckets available, including all-weather type with heater. For more details, circle (706) on the reply card.

SELF-PROPELLED SPRAYER: Cushman Motors, Lincoln, Nebr.

Self-propelled, self-powered spray rig using Cushman Turf-Truckster, and a power take-off. Two types of sprayers, the Greens or Fairway. Greens Sprayer features a high-capacity centrifugal pump system designed especially to apply phenylmercuric fungicides directly on greens. Greens Sprayer with boom accessory will apply five gallons of liquid per 1,000 square feet of turf with standard nozzles. Higher capacity is available with special tips. For more details, circle (707) on the reply card.



HIGH PRESSURE WASHER: Dutton-Lainson Mfg. Co., Hastings, Nebr.

"Jet-Way" washer features 700 psi water pressure for farm, aircraft maintenance, oil field, automotive, industrial and marine equipment. A 24" trigger-action spray gun locks in spraying position and offers choice of solid stream or flat spray. Operates at 4 GPM from water hose supply. Automatic detergent metering adjusts from 1 to 18 ounces per minute. Washer is powered by a 2-horsepower, 155-230 volt motor. For more details, circle (708) on the reply card.

RUST-FREE TOOL CHEMICAL: WD-40 Company, San Diego, Calif.

WD-40, a liquid chemical product stops rust and corrosion by driving out moisture from pores of metals. Protects tools and equipment. Chemical is a non-conductor that may be used to dry out wet ignition systems, electric motors and wiring. Harmless to metal finishes, painted surfaces, rubber, plastics and fabrics, is non-greasy, doesn't stain and won't congeal in cold weather. Packaged in aerosol cans. Larger containers for bulk users. For more details, circle (709) on the reply card.

AUTOMATIC WATER-TIMER: Melnor Industries, Moonachie, N.J.

Compact device can start and stop the filling of water flow automatically. Water-Timer measures flow and delivers up to 750 gallons at a single full setting. Designed to compensate for variations and fluctuations in water pressure. Can operate under high or low pressures. Unit carries one year guarantee. Pressure-proof and constructed of non-corroding heavy duty zinc. For more details, circle (710) on the reply card.

SHALLOW FLOODING LIQUID RECOVERY UNIT: Venture Associates, Paterson, N.J.

Designed to handle liquid recovery at minimum depths over large areas. Unit will recover virtually all unabsorbed liquid from floors, and then by reversing the air flow, force pump the recovered liquid out of the container up to a theoretical height of eight feet, depending upon the density of the liquid and the voltage available. Features 2 hp vacuum/blower unit, coupled with 55 gallon container on portable carriage. Where liquid is distributed to a depth of 1/32 of an inch, unit will recover liquid from an area in excess of 2500 sq. ft., before emptying is required. For more details, circle (711) on the reply card.

VIBRATION-POWERED HOUR METER: Engler Instrument Co., Jersey City, N.J.

Operates without electric power. Registers operating, production or process time whenever equipment is vibrating and operating. Tamperproof, accurate, requires no wiring to install. Registers up to 99,999 hours, then starts over. Large sweep hand makes one revolution every hour of operating time. For diesel vehicles, bull-dozers, fork-lifts, mixers, cranes, etc. For more details, circle (712) on the reply card.

SELF-PROPELLED MOWER: Bunton Company, Louisville, Ky.

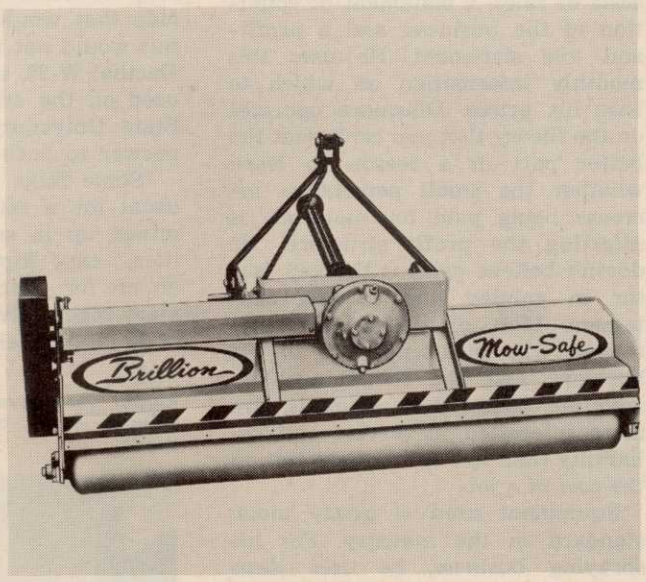
Operator of 32-inch self-propelled mower shows how optional grass catcher dumps clippings into piles or windrows for easy removal without stopping mower. Metal container may be lifted off for emptying and quickly installed or removed without tools. Option is rider attachment which allows the operator to ride open areas and medium grades; rider can be quickly detached without tools allowing operator to walk with safety on steep grades or uneven terrain. For more details, circle (713) on the reply card.

HEAVY DUTY BROOM: Broce Manufacturing Co., Inc., Dodge City, Kans.

A self propelled heavy duty broom. Economical one-man operation with operating speed of 1½ to 7 miles per hour; road speed, 30 mph. Automotive handling with maximum visibility, comfort, control, safety and operation. Designed for over the road sweeping of asphalt layers for highway construction projects, airport runways, streets, etc. Hydraulic system located for maximum efficiency and control of the broom height adjustment, broom revolution, and sweeping arc. Allows operator to control horizontal rotation of the broom up to 90°. For more details, circle (714) on the reply card.

HEAVY-DUTY TRIM TYPE MOWER: Goodall Division, Louisville, Ky.

Eighteen-inch commercial rotary power mower features a twelve-gauge steel frame designed to provide strength and durability with unbreakable handles. Heavy-gauge circular baffling adds strength and permits even discharge of grass clippings. For easy mobility and long-life, mower rolls on steel wheels with sealed ball-bearings and grease fittings, heavy-duty tires. Recessed wheels permit close trimming with either side. Cutting height adjustable from ½ to 3 inches. Adjustable steel blade driver that may be used as positive or slip-type and special crankshaft protection. Available in 18, 19, 20 and 22 inch cutting widths. For more details, circle (715) on the reply card.



FLAIL MOWER: Brillion Iron Works, Inc., Brillion, Wis.

A 72-inch-swath flail mower accenting safety. Incorporates a deflector bar into the hood to direct cuttings and debris down, not out. Design helps protect operator, passersby and buildings. Designated the Mow-Safe Ms-720. Combines features to optimize speed and smooth cutting. Uses six-inch roller with rounded ends to avoid rippling and gouging. Float-link permits the mower to follow ground contours and reduce scalping. For more details, circle (716) on the reply card.

Lewis Dinsmore looks over tree plantings he has made at Northwest Shopping Center, St. Louis.

TREE CARE *(from page 14)*

hard core of his business. These men are hired on a full-time basis and guaranteed year-round labor. Part-time help is hired for seasonal work.

Probably more important than the productive hours saved by Dinsmore's management practices is business acumen. An auditor furnishes him a monthly report. This report, drawn by the auditor from bookkeeping entries supplied by Dinsmore's long-time secretary and receptionist, Charlotte Watson, gives costs of sales, a statement of condition of the business, and a profit-and loss statement. He uses this monthly information on which to base his prices. Dinsmore operates on the theory that you can't wait the better part of a season to learn whether the small percentage increase being paid for materials is affecting the profit structure. He doesn't believe price is the key factor in gaining and holding customers. Most of the private customers who make up 80% of his business, and the remaining 20% who are commercial accounts, are more interested in service and reliability than in a few dollars less on the cost of a job.

Equipment used is pretty much standard in the industry. For his spraying business, he uses jeeps with 60-gallon John Bean tanks and pumps. Vehicles are equipped with special dual tires so in many cases, especially larger jobs, they may drive over turfgrass during treatment. Hoses are used to reach areas where hand spraying is necessary. During the busy season, six qualified crews are on the job.

For the future, Dinsmore predicts an acceleration in business for the industry. More people with greater appreciation for tree beauty will continue to increase the demand. Dinsmore points to the growth of garden clubs, the moving of businesses from railroad sidings to highways where they are developed into showplaces, and general strength of the economy. These factors, he believes, are keys.

Dinsmore Shop Time Savers

1. **Zoning the area served to save backtracking by crews.**
2. **Annual service contracts for advance scheduling.**
3. **Direct mail to regular clients as reminders for coming seasonal work and to help increase advance scheduling.**
4. **General tree work handled during slow periods.**
5. **Company coffee to eliminate en:oute coffee stops.**
6. **Housing located at nursery site.**
7. **Maintaining hard core of year-round experienced men and supplementing with part-time labor.**

COMMERCIAL TURF *(from page 12)*

other kind of a problem. As summer progresses, and the ground dries, crab grass spreads over the markers and through the dormant blue grass. It takes extra mowing and even hand-trimming to control it. That's why he went searching for a herbicide that would get the crab grass but would not corrode the markers. Dacthal W-75, which he found being used on the athletic fields at Iowa State University, proved to be the answer to both problems.

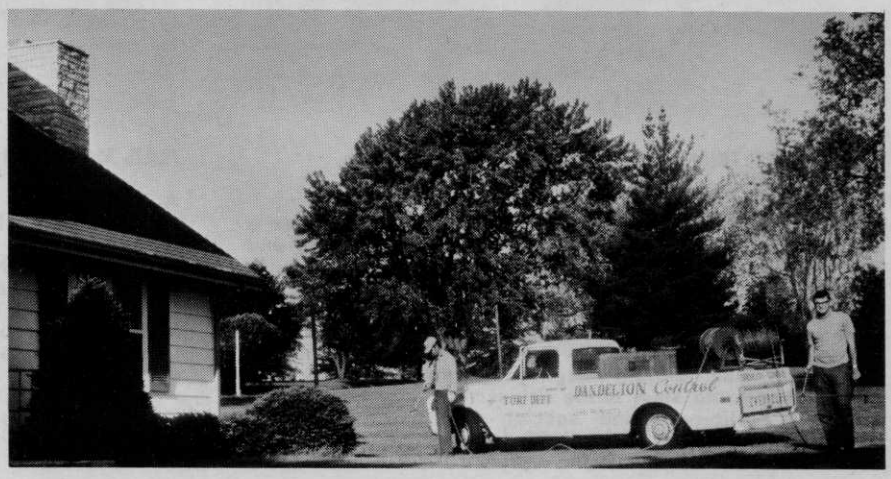
"Some folks may think it is unusual for a cemetery owner to be mixed up in so many other activities," says Ripper. "But you can't go on for ever making your cemetery bigger. Eventually you run out of land. You either start over in a new place, or be satisfied with what you have."

To Ripper, diversification proved to be the answer. He believes that lawn maintenance will continue to grow as a market. "I'm amazed at how much people will spend to have a good-looking lawn, and how little they know about what it takes to do it."

With labor difficult to get, he also likes the idea of having a permanent, experienced crew with him year in and year out.

Once the cemetery uses up the land he now has in Christmas trees, and, when the industrial park covers his sod farm, Ripper will probably have both operations going at another location.

Ripper uses seven 2-man crews such as this to serve 4500 customers including private lawns, apartment grounds, factory lawns, hospital grounds, and motel areas.



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American Sod Producers Announce Post-Meeting Report

Executive-Secretary Henry W. Indyk of the American Sod Producers Association has just released the official report of Board action at the summer meeting held last month in Michigan (See August WTT).

Action of the Board of Trustees including appointing of new council chairmen is as follows: George Stewart (newly elected treasurer) chairman of administration and finance; Wily Miner, ecology; Dale Habenicht, legislative; Robert Daymon, management and industry; Ben Warren, membership; John Nunes, (newly elected director) mechanization; and William Latta, (newly elected director) public relations.

Indyk also reports that completion of the association's intensive effort to draft a set of sod specifications is in sight. The Board has approved a set of specifications and will shortly publish these. Copies will be made available to the ASPA membership for distribution.

The Board has approved development of a simple cost accounting chart of accounts and manual as a guide for the individual sod farm accounting system. This is being finalized by Robert Daymon and Don Juchartz. Juchartz is Wayne County, Mich., Extension Director. He has spent a number of years working closely with Michigan sod producers.

Printing of the first formal membership directory for the ASPA will be started shortly, according to Indyk. He has urged members and potential new members to remit dues promptly (dues are $50 yearly) in order to be included in the official directory. New members may submit checks directly to Indyk for processing (Dr. Henry W. Indyk, Exec.-Sec., ASPA, P.O. Box 231, New Brunswick, N.J. 08903).

The American Landscape Contractors Association has invited the ASPA to participate in the ALCA annual conference at Las Vegas, Nev., Feb. 9, 1972. Indyk reports the invitation was accepted and the ASPA will participate in a workshop on sodding. The Association will also provide an exhibit for this event. ASPA president, Tobias Grether, Cal Turf, will handle details on the workshop, and Parker Shirling, Princeton Turf at Centerville, Md., will assume responsibility for the booth.

The ALCA will reciprocate by participating in the upcoming winter ASPA annual meeting (Feb. 22-24, 1972) in California. Details for this winter meeting are being formulated.

Plans are also being made, Indyk states, for the ASPA '72 summer meeting to be held at Toronto, Ontario, Canada. Host will be the Nursery Sod Growers of Ontario.

Michigan Announces Turfgrass Ratings

Variety "blends" are recommended for most Michigan lawns, because no single variety has all the "ideal" characteristics of attractiveness, durability, and resistance to disease and adverse weather.

"A blend of two or three improved Kentucky bluegrasses is definitely preferred to the use of a single variety," according to Dr. James Beard, MSU turfgrass researcher.

"Since all available varieties have certain weaknesses, especially in terms of disease resistance, a blending of several improved varieties will result in a better overall turf."

Beard found no great differences among six different blends that contained Merion bluegrass.

Research showed that Merion, Fylking, Pennstar and Nuggett have the best general appearance throughout the season in trials comparing 66 bluegrass varieties.

For droughty, sandy soils and shaded areas, Beard recommends red fescue varieties. He said Pennlawn is generally considered to be the standard for red fescue quality, but Jamestown was equal or superior in appearance in last year's trials. Wintergreen, the new red fescue variety developed by MSU, had excellent color and quality until it and all varieties were attacked by leafspot in July.

Bentgrass varieties — which are best suited to high maintenance, closely mowed lawns or golf greens — were compared by Dr. Paul Rieke, MSU soil scientist. He found Toronto, Penncross and Cohansey to be superior in overall performance.

New Lawn Grass Now Available

A new lawn grass, developed at Michigan State University, should be widely available throughout the state this fall.

The new variety, Wintergreen, is a superior red fescue grass that is tailored to Michigan growing conditions, according to Drs. James Beard and Fred Elliott, the MSU crop scientists who developed it.

Beard and Elliott say that Wintergreen compares favorably to Pennlawn red fescue, and produces a very thick turf for lawns, parks, cemeteries, roadsides and industrial grounds.

Also, Wintergreen is much darker green, has superior uniformity, stays greener during the winter, and can be grown under shady conditions. Best of all, it produces good turf with a minimum of fertilizing and watering.

According to the scientists, the adaptation of Wintergreen to areas outside Michigan is not known. Wintergreen is designed specifically for use under the moderate climate and light soil conditions of the Wolverine State.

The best bet for home owners who want to get Wintergreen seed are commercial seed dealers who specialize in the production and sale of turfgrass seed.

Biological Control For Grubs In Turfgrass

Grub proofing by biological control is possible according to Entomologist Dr. Richard L. Miller, Ohio State University.

Miller says literature on milky

spore disease indicates that this bacterial disease causes the death of grubworms. It is most effective against Japanese beetle grubs but will also kill others. The disease, he reports, is sold as Doom or Japidemic. Cost is about $7 per pound, which will treat about 4000 square feet of lawn.

Milky spore disease is available from Fairfax Biological Laboratory, Clinton, Corners, N.Y. (For more information, circle Reader Card No. 717).

Insecticide Formulations Effective For Gypsy Mouth

Three new insecticide formulations have been tested recently for aerial application against gypsy moths at the Connecticut Experiment Station.

They are Dylox, a powder used with oil; Gardona in oil; and Sevin-4-Oil. All proved highly effective according to researchers doing the work.

Dr. Charles C. Doane and Paul W. Schaefer made the field tests in an area heavily infected with gypsy moths. Much of the area had been defoliated the previous year.

Oaks in 50-acre test plots showed about 10 percent defoliation when sprays were applied in late May. After treating, defoliation remained stable at the 10 percent damage level. But defoliation in untreated oaks in control areas sustained 70- to 90-percent defoliation.

Sevin-4-Oil residues proved highly toxic to gypsy moth larvae for at least eight weeks, the researchers said. Those of Dylox and Gardona were not toxic after the first rains.

Birds were not directly affected by the insecticides, according to the researchers, though they did note some normal changes as nesting and territory establishment proceeded following spray applications.

Details of the report are aavilable directly from the Connecticut Agriculutral Experiment Station, New Haven, Conn. 06504. Bulletin number of the report is 724.

Blackburn Reports On Aquatic Weed Symposium

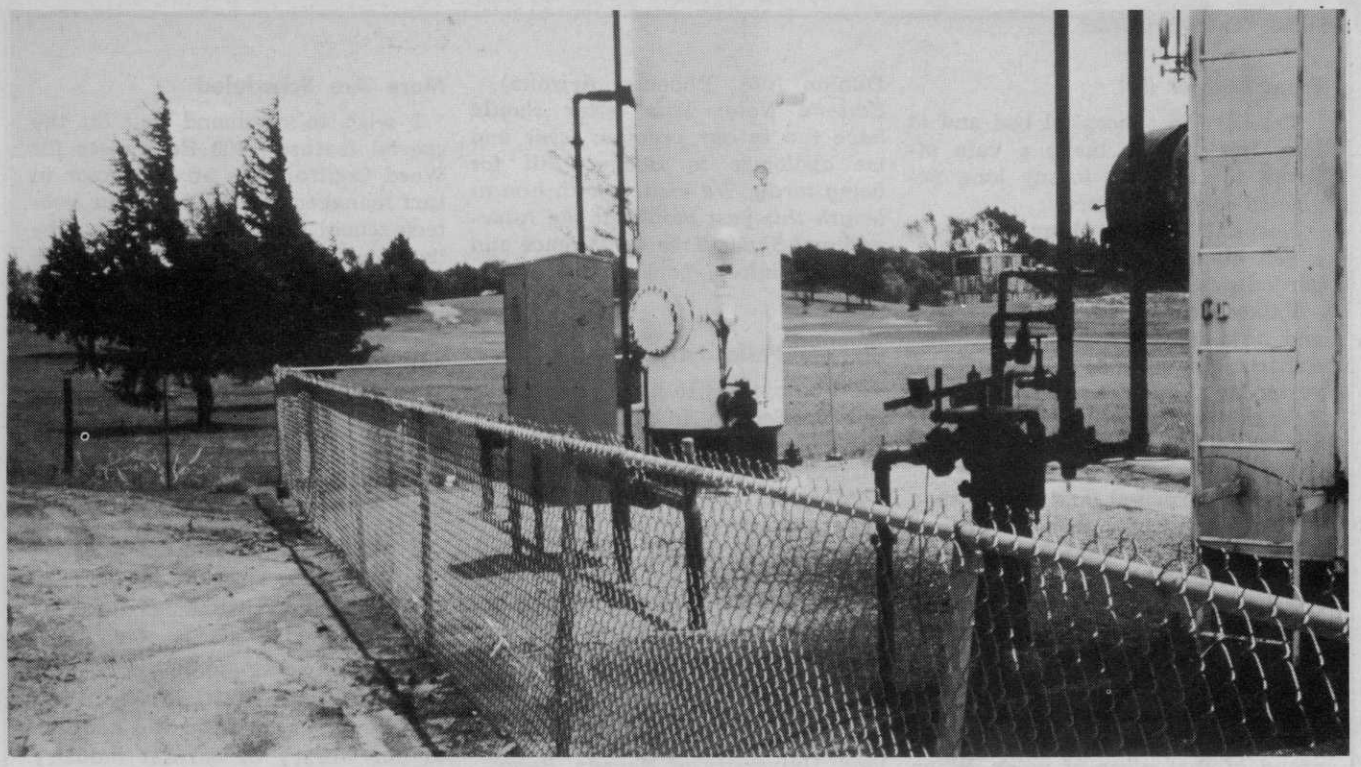
Robert Blackburn, a research specialist in aquatic weed control with the Agricultural Research Service, Ft. Lauderdale, Fla., has just returned from England after attending the Third International Symposium of the Control of Aquatic Weeds.

He reports that interest in this session focused on control of aquatic weeds by biological means and the effect of chemical control procedures on the aquatic environment.

Papers presented on the white amur *(Ctenopharyngodon idella* Val.) emphasized the need for more information on its rate of weed consumption as related to temperature, the conversion of aquatic weeds to fish flesh, and the factors necessary for natural spawning. Stock rates of the fish necessary for weed control will probably vary with the water temperatures. Effect of the white amur on native fish populations is not considered a problem in most areas of the world. Even in England where sport fishing is important, scientists believe the likelihood of the white amur spawning naturally is remote. Cost of producing fish large enough to use for stocking purposes appears the major problem because of the slower growth in the colder climates of the European countries.

Blackburn also reports that considerable interest was shown in the snail marisa *(Marisa cornuarietis)* as a biological control for aquatic vegetation. Effect of low temperatures on survival of the snail and its appetite for rice and watercress would limit its use in many areas of the world. The possibility of breeding a more cold tolerant snail was discussed since the snail can be used for human consumption.

Scientists from Holland, Blackburn says, expressed considerable interest in diuron, ametryne, atrazine, and terbutryn as aquatic herbicides. They have collected considerable information on the residue of these herbicides in soil, water, and fish. Information has also been collected on their effect on plankton, benthos, water quality and fish toxicity. Diuron and terbutryn are the most promising for aquatic weed control in irrigation ditches. Diuron showed large accumulations in fish and bottom muds. For this reason, they are placing greater emphasis on terbutryn.



Clean area around liquid petroleum gas storage area show the effectiveness of chemical weed control.

INDUSTRIAL WEED CONTROL

(from page 13)

The company's four applicators are provided with especially designed trucks equipped with John Bean spray equipment. The use of 600-gallon, two-compartment tanks allows the applicator to select the proper chemical for the job while on location.

"This ability to change formulas is quite a savings in a day's work when you are 50 to 150 miles away from your base station," Price says.

Kem-Weed also uses an added disappearing marking agent when spraying. Of two-fold benefit, the green dye helps the applicator obtain even distribution and shows the customer where the chemical has been applied.

Inspection is also a big part of the game. "In the summertime, we go back to each area we have serviced to make sure the chemical is working properly. We honestly try to provide the type of service we would want if a purchaser," Price says.

The future of the industry, Price believes, lies in building greater confidence between companies to aid in the exchange of new ideas, methods, and in performing experimental work.

President of the Mid-Continent Weed Control Association, he would like to see chemical rates, chemical types, and equitable application standards established for greater safety throughout the industry.

Alvin Price, above, and Dusty O'Hair, below. All Kem-Weed applicator trucks are equipped with automatic hose take-up reels and normally carry 300 feet of hose. Manifold system allows drainage of either or both truck tanks.

From Badger Bill

I'm here in a hospital bed and at long last able to make a vain attempt to catch up to my long neglected correspondence.

Hospital? Oh, nothing really if a gall bladder operation can be regarded as such.

Talked to an old arborist friend and now president of our National Arborist Assoication, Bill Lamphear, yesterday. Your friend too. Happily he informed me we are to have our winter NAA meting in Phoenix again in '73. Great! . . .

I was surprised and more than delighted at the April issue of WEEDS TREES AND TURF. That was a tree (How to Trim a Tree Artistically, p. 24) I had brought back to its full beauty over a five-year period after it had been stubbed back years previous to that. Stubbed and mutilated as you know such trees are. So, you see, I'm quite proud of that piece of work. When I can do things like that I feel being a dedicated arborist is ever so much worthwhile. Sincerely, BADGER BILL (William K. Johnson, 744 E. Dunlop Ave., Phoenix, Arizona).

Editor's Note: This letter should have ran in our previous issue and we apologize to Badger Bill for being tardy. We visited with him at length this past month at the International Shade Tree Conference and he is definitely back in the swing. A.E.

Ecology Philosophy

I'd be pleased to have you use my talk on Ecology in your September issue. It created quite a bit of discussion at the California Landscape Contractors' Convention. Most members seemed to agree, though admittedly a bit reluctantly, that business would never be as free of legal restraints and liabilities in the future. But as I concluded, business will be the stronger because of the changes. My only plea is that thought be given now to avoid rash decisions later. Dr. Joseph E. Howland, University of Nevada, Reno.

Editor's Note: This letter is a response to our request to print this speech material as an article. See page 39.

More Are Scheduled

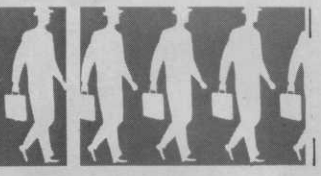
I wish to commend you on the special feature, "400 References for Weed Control." As an instructor in turf management school in our voc-tech school I have found these publications well used by our students. . . . If you have added this information index as a new feature to your magazine, I am hopeful that you will continue to expand the subject areas for such an index. Thank you. Robert I. Feser, Technical Education Center, Anoka, Minn.

Our Privilege

This is a short thank you letter for the subscription of WEEDS TREES AND TURF magazine. . . .

The magazine has been received and is now being circulated through our office and staff. We feel this will be a very worthwhile addition to our library of current industry publications. Thank you again. William L. Irvine, Jr., Nursery Specialist, California Department of Agriculture, Sacramento.

industry people on the move



Sarah Wood, appointed manager of public relations for Velsicol Chemical Corporation, Chicago. Prior to joining Velsicol in 1965, she was managing editor of Package Engineering.

* * *

Archie C. Pittman, named district sales manager for Olin Corporation's Gulf Coast agricultural division. Previously was regional nitrogen product specialist for southern region.

* * *

E. J. (Ed) Molaskey, to national sales manager for Pioneer Chain Saws, Galesburg, Ill. Served at factory level and as salesman and branch manager for 22 years prior to new position.

* * *

Thomas C. Zinninger, elected vice-president and general manager for agriculture, Velsicol. At one time was marketing vp for Elanco.

* * *

Neil Gustafson, industrial marketing manager for Hesston Corp., Hesston, Kans., named a winner of the American Forage and Grassland Council's merit award for excellence to Grassland Agriculture, USA.

* * *

Stewart Young, to district manager of new West Coast office opened by Precision Chipper Corporation. West Coast outlet location is Eugene, Ore. Precision headquarters at Birmingham and markets heavy chipping units worldwide.

* * *

Dr. Marinus Los, to group leader, organic synthesis, R&D, for American Cyanamid's agricultural division, Princeton, N.J. Formerly senior research chemist for Cyanamid; a native of Yorkshire, England, who joined the company in 1960.

* * *

Dr. Arnold P. Appleby, Oregon State University, named one of Geigy Recognition Award winners for '71. Presentations are made to organization representatives, in this case, Appleby received the honor via the Weed Science Society of America. He joins seven other winners for 10-day tour of research in Europe.

* * *

A. M. MacKinnon, corporate vp for CIBA-GEIGY assumes responsibility for all U.S. agricultural chemicals operations. He continues responsibility for controller's department.

* * *

William A. Groening, Jr., general counsel, named vice-president of Dow Chemical Company. Also serves as assistant secretary of company. Has been with legal department of Dow since 1937.

* * *

Riley E. Wilkinson, appointed western region manager for Allis-Chalmers Credit Corporation, Milwaukee. Will be responsible for sales, industrial, and field financing.

* * *

Herbert A. Holman, named manager of construction at Blaw-Knox Chemical Plants, Inc., Pittsburgh.

FORESIGHT FOR LANDSCAPERS

ECOLOGY — It Won't Go Away

By JOSEPH E. HOWLAND
Turfgrass Specialist, University of Nevada, Reno

WEBSTER devotes nine lines to ecology. Plus six more lines for ecologist. In shirt-sleeve English, ecology means living in harmony with nature. The press and TV have tried to make ecology a synonym for pollution.

Complacency won't solve pollution, or make ecology a forgotten word. (In 1958 Doubleday published my book *Gardens & Outdoor Living:* When asked what they could say about me on the book jacket, and told that I called myself a landscape ecologist, Doubleday's sales manager commented, "That'll never sell any books — what else can we call you other than an ecologist?" And that was only a dozen years ago.)

Americans have changed — and America will, which means that every landscape contractor must drastically change his business methods. For every time he does a job he sets in motion a long train of events. Not of his dong — but happening because of what he started.

Have you ever taken the time to think through the likely consequences of what you start on a specific job? You will. Or your firm will die. For you will be held accountable in the future for whatever happens after you leave the scene under moral pressure in '72, and legal restraint after the 1970's. This will be local first, then nation-wide. It is both good and sound politics.

Some specific predictions are:

1. The legal concept of "attractive nuisance" will be extended to cover situations way beyond Nader's dreams.

2. Every job will be sold under an implied guarantee of safety and value — difficult as the latter may be for you to "swallow" today!

3. Cut & fill permits will be tightly controlled — down to changes of 1-2 feet (with ruinous litigation bringing violators to bankruptcy).

4. Swimming pool installation will be costly (has the home swimming pool outlived its time; a horrifying thought, but a question worth pondering).

5. Density regulations will get universal and strict enforcement — such as families per acre, of course; but of even more interest to us today, visual pollution will be barred — when and where you can build a fence — or plant a tree! And noise will be recognized for what it is — harmful, avoidable wasted energy which can be easily controlled legally.

You may think it won't happen! Not to you. But consider the changes forced on P&G, Ford Motor Company, Boise Cascade, Union Oil Company and others.

There are five important actions each contractor ought to take, and right now:

1. Think through and write down the practical alternates open to your firm as each of these changes comes to your town. (Many people find it speeds up their thinking if they write down the alternates in the form of a chart.)

2. Estimate the consequences; can your firm survive?

3. Decide which risks are worth taking — and for how long. (Your goal as a manager of a business is to have thought out ahead of time what you will do — and when you will do it — before circumstances force you to make an instant or even a hasty decision.)

4. Recognize that political expediency will bring nasty surprises (like the hasty DDT ban); look every risk over for its political attractiveness.

5. Keep alert — read! My choice is SUNSET. It is not 100% infallible, of course. But management has full-time "alerters" poking around the homes of Californians every day in the week. They do spot trends.

And equally as important as SUNSET is SATURDAY REVIEW.

To keep yourself alert to changes in how people live; what people want from life today; and what they expect from you, consider the following:

a) Services not products — henceforth they want to know the upkeep cost per month, not just the landscape installation contract.

b) Chance to be proud of the way they use their time, not pride in an accumulation of "symbols of success" like a fancy house and garden, two big cars, a swimming pool, etc.

c) Instant landscaping — for average home occupancy, i.e. how often the family moves (now averaging less than three years).

d) Minimum demands on family labor for upkeep; teenagers are "unavailable" for yard work — and the average family now goes on for 16 or more years after youngest in the family reaches 18.

e) Willingness to supply whatever is wanted — for people today are conditioned to know that "it is possible" if the landscape contractor cares enough to want to supply.

Changes made for good reasons are good for business. Ecology can be the best thing that ever happened to the landscape contractor. For it is forcing him to get ready for change, by thinking thru what are the best alternatives open to him when change comes.

Dr. Howland's presentation is based on his appearance before the recent annual meeting of the California Landscape Contractors Association. He was sponsored by Nunes Turfgrass Nurseries, Inc., Patterson, Calif.

Chipman of Rhodia Buys Missouri Plant

Chipman Division of Rhodia, Inc., is moving production of herbicides, fungicides, and insecticides of a St. Joseph, Mo., site. The company has purchased the former facilities of Swift & Company and plans to develop the site for both manufacture and distribution of its pesticide line.

Rhodia Vice-President Dr. E. L. Clark has announced that existing plant operations at North Kansas City, Mo., and at St. Paul, Minn., will be closed out.

James Toner, currently plant manager at the North Kansas City branch will become plant manager of the new facility, Clark said.

Company headquarters for Chipman is New Brunswick, N.J.

Chevron Gets Tree Label For Dibrom 8 Emulsive

The Environmental Protection Agency has awarded label registration to the Ortho Division of Chevron Chemical Company, San Francisco, Calif., for use of the insecticide Dibrom 8 Emulsive as an insect control for ornamental, shade, and forest trees.

Various formulations have previously been labeled for field and truck crops. The new label permits use in urban areas. The company especially recommends Dibrom for Douglas fir, fir, hemlock, juniper, pine, spruce, elm, maple, oak, and others.

Chevron reports that Dibrom is environmentally desirable because it is biodegradable and breaks down rapidly into harmless compounds after application.

It is effective for red spider mites, Sierra fir and Western hemlock bark borers, aphids, leaf miners, and other pests.

GAC Utility Products, Inc. New Name For Highway Line

GAC Utility Products Inc., is the new name for the Highway line of utility, construction, and maintenance equipment being manufactured by the previously known Utility Division of Highway Industries, Inc.

The utility line, acquired by GAC Corporation in 1965 has been producing products at Stoughton, Wis., and at Oliver, British Columbia, Canada. Production facilities at both locations are being moved and combined in a new plant at Edgerton, Wis. Ron E. Hull, vice-president and general manager, reports that the new plant should be in operation by October 1.

The firm which produces heavy-duty diggers, cable equipment, telescoping aerial devices, articulated aerial platforms, and other associated equipment will continue to carry the Highway brand name. The new location at Edgerton is at 405 E. Fulton St.

Jim Beard Honored As Fellow in ASA

James B. Beard, professor of crop and soil science, at Michigan State University, was elected a Fellow in the American Society of Agronomy (ASA) at the society's recent annual meeting at N.Y.C.

Beard was cited for his contributions to the knowledge of turfgrass management. His research includes environmental physiology, ecology and culture of turfgrasses with emphasis on heat stress, winter injury, adaptation to shade, thatch, the ecology of turfgrass communities, roadside establishment and sod production.

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insect report

TURF INSECTS

A BILLBUG

(Sphenophorus phoeniciensis)

CALIFORNIA: Adults 100 per square yard of Bermudagrass turf in El Centro, Imperial County.

GRASSHOPPERS

(Melanoplus spp.*)*

MARYLAND: Nymphs ranged 3-15 per square yard of grass and legume mixture planted along many State and Interstate highways in Baltimore, Frederick, Washington, and Carroll Counties. May move into adjacent croplands within next few weeks. ARKANSAS: Primarily *M. differentialis* and *M. femurrubrum* continue troublesome in extreme northwest area. About 1,500 acres treated in Washington County.

A LEAFHOPPER

(Dikraneura carneola)

OREGON: Severely damaged Alta fescue, pubescent wheatgrass, and orchard grass on 350-acre range revegetation project on Aldrich Mountain, Malheur National Forest. No controls undertaken this year.

INSECTS OF ORNAMENTALS

AN EARWIG

(Labidura riparia)

CALIFORNIA: Adults infesting soil around residence in Bakersfield, Kern County. This is a new county record.

HOLLYHOCK WEEVIL

(Apion longirostre)

VIRGINIA: Adults on hollyhock in Giles County. This is a new county record. KANSAS: Found on hollyhock in nursery in Wallace County. This is a new county record.

TREE INSECTS

EASTERN SPRUCE GALL APHID

(Adelges abietis)

WEST VIRGINIA: Galls on 20 percent of trees in one-acre block of Norway spruce in Greenbrier County and 70 percent of trees in 2-acre block in Pocahontas County.

ELM LEAF BEETLE

(Pyrrhalta luteola)

KANSAS: Second generation mostly pupated at Topeka, Shawnee County; many Chinese elms show severe damage. COLORADO: Damage becoming heavy; defoliation 100 percent on untreated trees. NEW MEXICO: Larvae heavy, 2-3 per leaf, on Siberian elms scattered throughout Las Cruces, Dona Ana County.