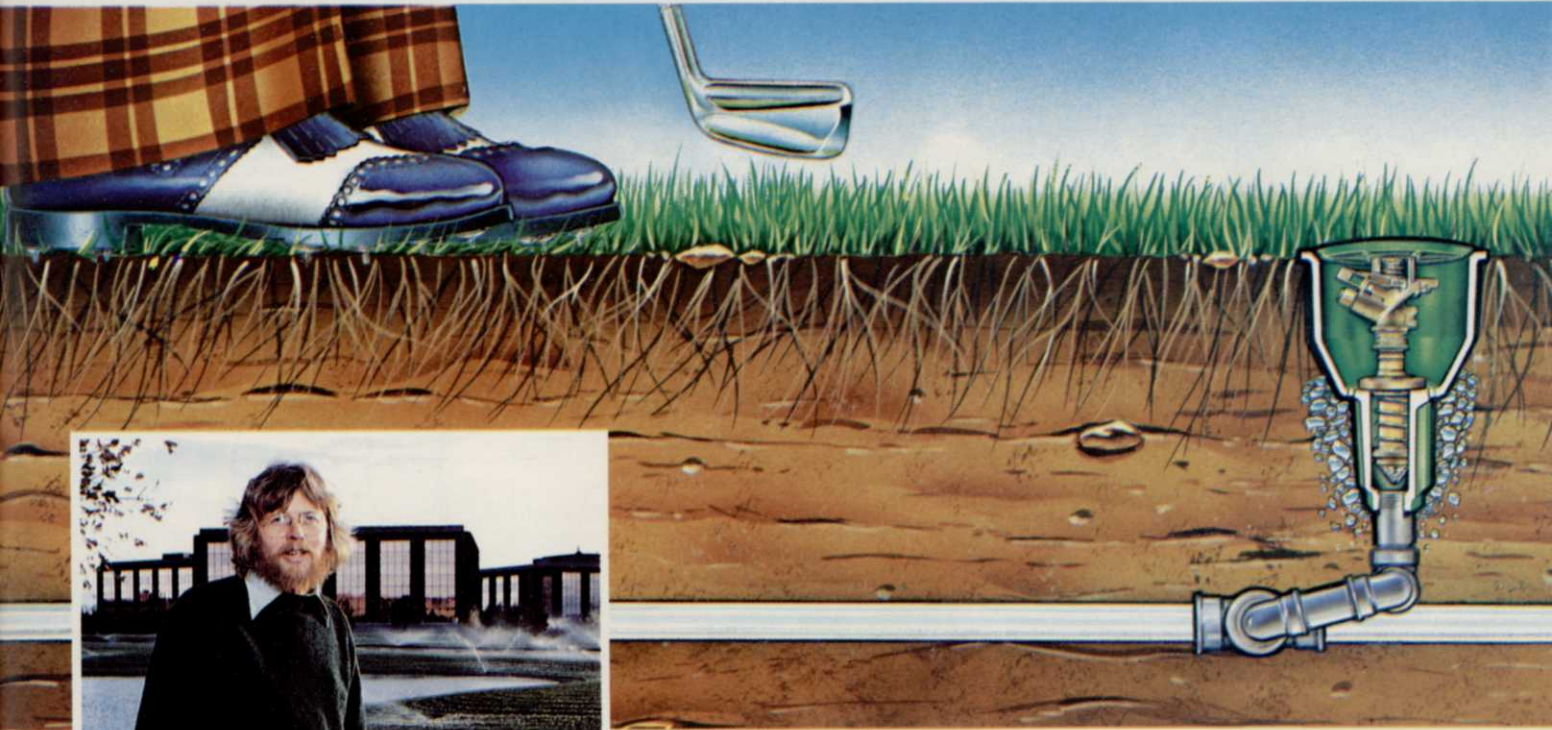


Underneath it all... Weather-matic®, the hidden secret of beautiful landscaping.



Greenwood Plaza Office Park
Englewood, Colorado

"We started with Weather-matic equipment 9 years ago with our first 3 properties and never had any reason to change. We'll soon have almost two million square feet of landscaping under irrigation. Weather-matic must be doing something right!"

Jake Frankhouser, Landscape Architect
Jake Frankhouser and Associates
Denver, Colorado

Weather-matic is doing something right! We are providing turf professionals all over the world with the right kind of equipment, specifically designed to water every type of grass, plant or shrub.

When you specify Weather-matic for your irrigation system requirements, you can depend on us for quality, cost effectiveness and service that insures years of satisfaction.

Tough, dependable, field-proven Weather-matic products are available through a worldwide network of local distributors and dealers.

For the name of the Weather-matic distributor nearest you, or to get more information, send the coupon below or call us in Dallas at (214) 278-6131.

Weather  **matic**®

LAWN SPRINKLER SYSTEMS
BOX 18205 DALLAS, TEXAS 75218 (214) 278-6131

Circle **116** on free information card

Mail Coupon To: Weather-matic Division, Telsco Industries WTT
Box 18205 Dallas, Texas 75218

Please send the following:

- Information about Weather-matic products
- Weather-matic Distributor Directory
- Information about TURF IRRIGATION MANUAL
- Assistance for pending project

NAME _____

TITLE _____

ADDRESS _____

CITY _____ STATE _____

ZIP _____ TELEPHONE _____



**Lescosan, the name you remember for crabgrass control.
LESCO Sulfur-Coated Fertilizer,
the name to remember for greener turfs.** *Ron Giffen, Vice President of National Sales*

I've told you about our Lescosan (Betasan*), the best selling pre-emergence crabgrass control on the market. You've proven its effectiveness. I'm here to tell you now that Lakeshore Equipment & Supply produces an equally effective line of sulfur-coated fertilizers.

LESCO Sulfur-Coated Urea and 100% Sulfur-Coated Fertilizers provide the perfect ingredients for denser, greener turf. The sulfur coating, applied to the fertilizer components, provides controlled release of nutrients for prompt and sustained feeding for safe, efficient and economical fertilization of turf in all areas of the country.

As supplier of the most effective full-season crabgrass control on the market — Lescosan (Betasan*) — and of the latest in controlled-release (sulfur-coated) fertilizers, manufactured by our subsidiary, Ag Industries Manufacturing, we have a special interest in the turf care market. Lakeshore carries a complete line of turfgrass supplies made and distributed with you in mind. The full family of fine LESCO Products mean quality at affordable prices.

LESCO PRODUCTS

Division of Lakeshore Equipment & Supply Co.
300 South Abbe Road, Elyria, Ohio 44035
(216) 323-7544

1-800-321-5325—Nationwide

1-800-362-7413—In Ohio

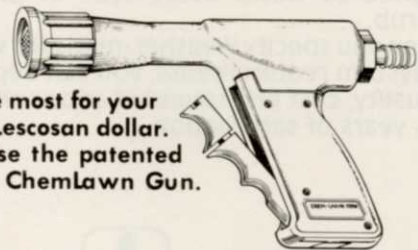
1-216-323-7544—Call Collect

A Family of Fine Products: Lescosan 12.5G—Lescorene—Lesco 4—Lescobor—Lescopar—Lescopex—Lesco Non-Selective Herbicide—Lesco MSMA—Lesco Thiram 75W—Lescozyme—Lakeshore Chinch Bug & Sod Webworm Control.

Call Lakeshore today and ask about Lescosan, Sulfur-Coated Fertilizers and our other turfgrass supplies. Ask for Barb — she'll have one of our turf specialists give you the full story and work out a complete program tailored to meet your specific needs.

Ask about our Lescopex (MCP) and LESCO 2,4-D.

*(Betasan—registered TM of the Stauffer Chemical Company.)



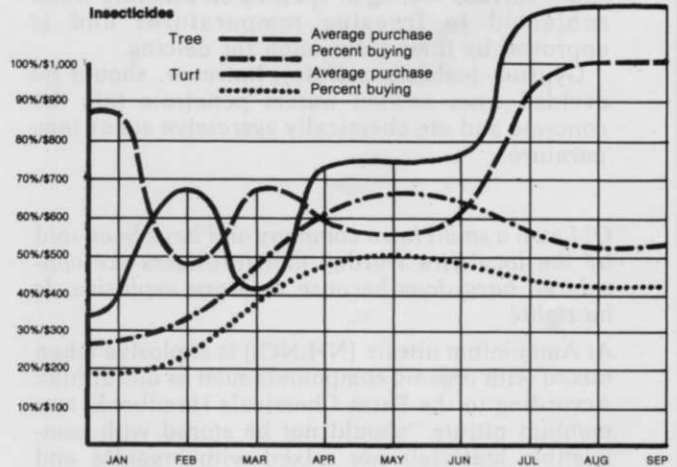
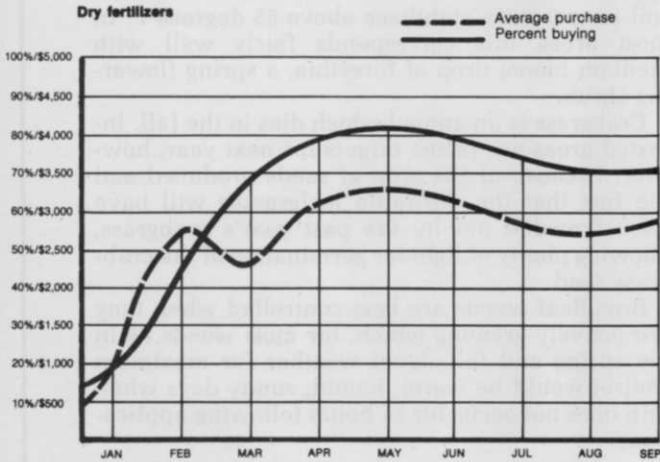
**Get the most for your
Lescosan dollar.
Use the patented
ChemLawn Gun.**

Circle 143 on free information card

The 10 to 20 h.p tractor pulled ahead of the 30 to 50 h.p. tractor in 1979. Of all the types of equipment surveyed, irrigation equipment was the most evenly purchased type of equipment throughout the year. In the first three quarters of 1979, Weeds Trees & Turf readers purchased nearly \$60 million in pumps, pipe, controls, and heads.

Seed was one item that consistently showed very

high percentage of purchase every month of the year. Seed buyers outnumbered sod buyers by two to one in winter and stayed ahead throughout the busy season. Trees and ornamentals also exceeded sod. Nevertheless, sod was purchased by nearly two thirds of landscape contractors in the second and third quarters for more than \$88 million in the first nine months of 1979.



SPRAYING SYSTEMS CO.

TeeJet®

SPRAY NOZZLES AND ACCESSORIES

SPRAY BOOM CONTROL VALVES

PRESSURE RELIEF VALVES

LINE and SUCTION STRAINERS

Vari-Spacing, Split-Eyelet and Hose Shank BODIES and NOZZLES

SPRAY GUNS

Over 800 INTERCHANGEABLE SPRAY TIP TYPES AND CAPACITIES... tapered edge, even and wide angle flat spray... hollow and full cone... disc type hollow and full cone... and flow regulators. The most complete line for spraying herbicides, insecticides, fungicides, liquid fertilizers and foam solutions. All materials. For complete information write for Catalog 36... and for foam spraying ask for Data Sheets 13602 and 13626.

SPRAYING SYSTEMS CO.
North Ave. at Schmale Rd., Wheaton, Ill. 60187
Telephone: 312 665-5000 / Telex No. 72-8409

PROMPT SHIPMENT FROM STOCK

Circle 133 on free information card

A Great New LABOR SAVER

ROSS TreeGARD™

Ross TreeGARD is a snap-on plastic tube that expands to fit any young tree. Snaps-off & on in seconds for bark inspection.

Protects trees from:

- Sun scald
- Rabbits and other rodents
- Mower bruises
- No taping, tying or gluing
- Allows proper ventilation

If your distributor doesn't stock ROSS TreeGARD™ order direct, freight pre-paid!

Ross Daniels, Inc., 1720 Fuller Rd., West Des Moines, Iowa 50265

Gentlemen please ship me:

#1687 24" TreeGARD 400/case	\$ _____
1-5 cases: _____ @ \$169.50/case	\$ _____
6-25 cases: _____ @ \$153.25/case	\$ _____
26 plus: _____ @ \$143.25/case	\$ _____
#1695 36" TreeGARD 200/case:	
1-5 cases: _____ @ 127.00/case	\$ _____
6-25 cases: _____ @ \$115.00/case	\$ _____
26 plus: _____ @ \$107.50/case	\$ _____
	Total: \$ _____

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Circle 144 on free information card

VEGETATION MANAGEMENT

By Roger Funk, Ph.D., Davey Tree Expert Co., Kent, Ohio

Q: I have recently been using urea to melt ice and snow on walkways. Is urea, or certain forms of it, harmful to cement? For grit, I also add pelleted gypsum. Would this damage the concrete?

A: I contacted the Portland Cement Association in Skokie, IL, and was told that urea is not known to cause surface scaling or spalling on concrete when subjected to freezing temperatures and is approved by their association for deicing.

Gypsum (calcium sulfate), however, should be avoided since sulfate waters penetrate into the concrete and are chemically aggressive at any temperature.

Q: I own a small lawn company and have been told by the local fire warden that fertilizers are considered hazardous because they are explosive. Is he right?

A: Ammonium nitrate (NH_4NO_3) is explosive when mixed with organic compounds such as diesel fuel. According to the Farm Chemicals Handbook, ammonium nitrate "should not be stored with combustible materials nor mixed with organics and superphosphate unless the free acid has been neutralized first." However, this certainly does not apply to all fertilizers. Many, in fact, can be used as fire retardants.

Ask your fertilizer distributor for a Material Safety Data Sheet for each of the fertilizers in your program.

Q: Why do road salts cause plant injury? Aren't fertilizers salts?

A: The injury is primarily one of excess concentration. All salts, fertilizers included, will interfere with water absorption when salt concentration in the soil solution is greater than the salt concentration within the root cells. The resultant injury is known as "burn" or "physiological drought." In addition, sodium (a component of the common salt, sodium chloride NaCl) is toxic to plants in relatively low concentrations and breaks down the open structure of soils contributing to compaction.

Q: What fertilizers do you recommend for pines, spruce, hemlock, and other evergreens in the Pennsylvania area?

A: In general, we have obtained good results with the same 3:1:1 ratio recommended for hardwoods at rates varying from 75 to 200 lbs. nitrogen per acre. However, specific nutrient deficiencies do occur in certain soil types and locations, and identical treatments with the same plant species in different locations have not always given the same response. Have your soil analyzed at your state soil testing lab and follow recommendations.

Q: When is the best time of the season to apply pre-emergent crabgrass and broadleaf control? What about last year's crabgrass on the lawn for the upcoming spring?

A: Pre-emergent crabgrass herbicides control the germinating seedling only and, therefore, must be applied before germination which occurs after the soil temperature stabilizes above 55 degrees F. In most areas this corresponds fairly well with medium bloom drop of forsythia, a spring flowering shrub.

Crabgrass is an annual which dies in the fall. Infested areas are prime targets for next year, however, because of the crop of seeds produced and the fact that the desirable turfgrasses will have been crowded out by the past year's crabgrass, allowing plenty of light for germination of the crabgrass seed.

Broadleaf weeds are best controlled when they are actively growing which, for most weeds, is in the spring and fall. Ideal weather for maximum control would be warm, humid, sunny days when rain does not occur for 24 hours following applications.

Q: Can dormant oil be applied in the fall? We have a problem in applying at the proper time in the spring because of bad weather.

A: This subject was discussed at the recent meeting of the Entomological Society of America where the general feeling was that satisfactory control could be obtained by a fall application of dormant oil spray.

During the interval from dormant to delayed dormant stage of bud development, the weight of some scales increases between four and eight times, and the level of control is reduced.

On the other hand, mites become more susceptible to the dormant oil spray as bud break approaches and the eggs are about to hatch.

More research on this subject is planned for the near future and, hopefully, the overall effectiveness of fall applications will be answered.

Q: Are there any good herbicides other than 2,4-D or those that contain 2,4-D for broadleaf weed control in lawns?

A: We have not found any that are as effective on a wide spectrum of weeds.

A free problem solving service to Weeds Trees & Turf subscribers. Send your question to Dr. Funk by using the postpaid editor card in this issue. Think ahead where possible since it takes about two months to receive, answer and publish.

hydrostatic drive which protects the engine from shock loads at the rotor. A remote control panel mounts on the prime mover and provides the operator with convenient controls for starting, speed selection, rotor disengaging, and stopping.

Other features include adjustable skids, tree pushers, and a 60-inch wide rotor assembly. The skids permit cutting from ground level to 5 inches high and the tree pushers protect the operator and direct trees into the cutting path. The rotor assembly consists of 20 19-inch-diameter discs and 38 heat-treated, alloy steel cutters which are double-edged, freeswinging, and easily reversed or replaced.

The machine measures 7 inches long by 78 inches wide by 53 inches high. It attaches to front-end loaders and other equipment which can handle 6,000 pounds. A GM 4-53N, 4-cylinder, 117-horsepower diesel engine drives it. (Circle 214 on free information card).

Other manufacturers of right-of-way brush cutters are Bombardier Ltd. (215), FMC, Agricultural Machinery Div. (216), National Hydro-Ax, Inc. (217), NFI, Inc. (218), Pettibone Corp., Ala. Div. (219), Rhino by Athens & Servis, Austin Prod. (220), and Washington Industrial Resources (221).

Miscellaneous

To top trees, cut fence rows, and reach limbs that are too distant for most equipment, a ZZZ-CUT works well. It cuts and removes limbs with a boom-mounted cutter head that is hydraulically controlled from inside the cab.

The cab of this trimmer, made by Products for Energy Inc., is completely enclosed so an operator can work in rain, cold, or heat. It drives over ditches, up hills, and through mud to get to any site. No-spin axles add traction to the four-wheel drive.

The ZZZ-CUT can travel 40 to 45 mph on the open road and does not have to be hauled to a different work location. (Circle 222 on free information card).

Excel Industries, Inc. makes a Hustler 402 mower that cuts 72 inches out front and works on sloping terrain while the operator remains comfortably upright. The self-leveling cab maintains level operator station and engine platform even on slopes to 27 degrees. Weight distribution stays balanced on high and low drive wheels.

The four-wheel drive mower crawls in and out of ditches, climbs banks, and turns on slopes. Dual hydrostats operate the drive wheels independently and twin hand levers steer at a touch to control both direction and speed. With its low center of gravity, the mower climbs and turns a full circle while it continues to cut grass and weeds.

Continues on page 56

Hahn
THE TURF PROFESSIONALS
A complete line of Aerifiers for fairways, athletic fields, industrial and institutional lawns... at prices you will like!

Also available:
A precision Verti-Cut Thatcher specially designed for golf green maintenance

TM-140
6 ft. swath. Three-point hitch mount and weight rack. Also available with wheels and hydraulic lift.

AB-1 Aeri-Boy: 4 ft. swath.

Optional Spoons and Blades for double utility.

JR-3 Aerifier®
2 ft. swath. Self-propelled, fast and maneuverable.

DEALERS WANTED (812) 428-2025

Hahn 1625 N. Garvin St., Evansville, In. 47711

Circle 125 on free information card

NEW
ACECAP™
SYSTEMIC INSECTICIDE
IMPLANTS

ACECAPS are the modern way to control insect pests "in" ornamental trees. No need for expensive spray equipment; no danger of spray drift or runoff; and eliminates measuring and mixing of chemicals. Simply drill the tiny implant sites, insert the ACECAPS, and forget them. The insecticide will be translocated throughout the tree, killing targeted insects and providing continued protection. There is no need to return and remove applicators — the ACECAP Implants are left inside the tree where callous tissue will cover them in a short time.

ACECAPS contain ORTHENE® — a new generation insecticide which combines highly effective, broad spectrum control with a reduced hazard to humans, wildlife and the environment.

ACECAPS Systemic Insecticide Implants offer the ultimate in an environmentally acceptable insect control program. Any pesticide can be harmful if misused; **READ AND CAREFULLY FOLLOW LABEL DIRECTIONS.**

TREE SYSTEMS®
MEDICAP
SYSTEMIC TREE CARE

ACECAP™ Copyright: 1979 Creative Sales, Inc.
MEDICAP Registered Trademark.
Creative Sales, Inc.
(ORTHENE is the registered trademark of Chevron Chemical Company for acephate insecticide)

CSI creative sales inc.
222 Park Ave. • Fremont, NE 68025

Circle 115 on free information card

KEES

Better lawn care products to do the job easier & faster

Model 210356 illustrated
POWERMOW



New from F. D. Kees, this powerful 21" mower with heavy 12 gauge steel deck and frame is built to stand up under rough use and keep on working year after year.

- Choice of 4 cycle, 3.5 or 5 hp Briggs & Stratton I.C. commercial engine.
- Heavy gauge steel handle folds down without tools for easy transport and storage. Rigid "T" type handle also available.
- Special one-piece, suction-lift blade with tempered cutting edges. Adjustable cutting heights 1 to 3.5 inches.
- Heavy-duty steel wheels with grease fitting and sealed ball bearings. 8 x 1.75 tires.
- Special crankshaft protector.
- Extra large 1½ bushel nylon bag grass catcher available.
- Dual filter air cleaner.

Model 100528

POWERAKE®

(THATCHER)

Fold-over handle



- Rakes out thatch ■ Cleans 20" swath
- Powerful 5 hp engine with dual filter air cleaner
- 28 hardened steel plate, self-cleaning fingers
- Improved heavy-duty wheels
- Raking assemblies interchangeable with aerator assembly
- 2" single-action raking height adjustment
- Semi self-propelled



Since 1874

Write P.O. Box 938

F. D. KEES MFG. CO.
Beatrice, Nebraska 68310

Circle 113 on free information card

Workhorses from page 55

A choice of mowing decks includes the heavy-duty 72-inch rotary and a 60-inch flail mower, both with rear discharge that is effective for places debris is concealed by heavy grass and weeds. (Circle 223 on free information card).

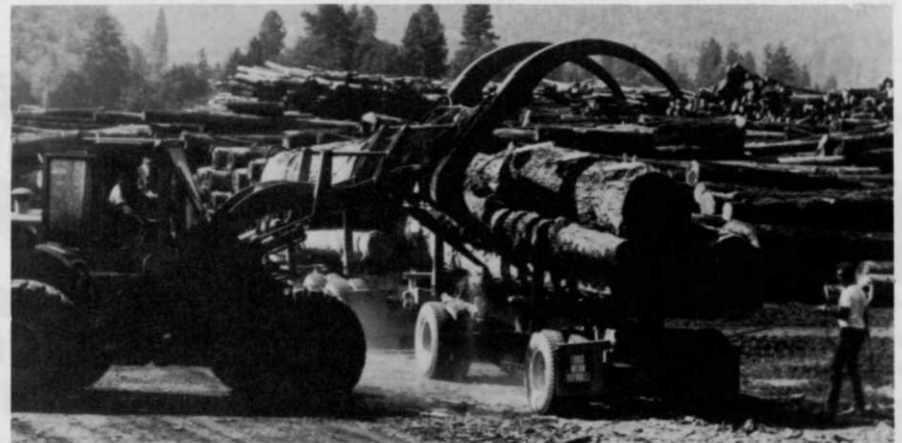
After all the cutting is done, a log fork from Tube-Lok Products may be used to carry out loads. Every log fork is box-welded for increased carrying strength to handle large single or multiple-log loads in one

pass. The manufacturer claims that carrying capacity meets or exceeds the actual lifting capacity of all lift vehicles.

Log forks are constructed of high-strength alloy steel, with extra large heat-treated pins and hardened steel bushings. Wear bars are hard faced to extend tine life. The spacing of fork cross-members gives the operator good visibility for productivity and safety. (Circle 224 on free information card).



Hustler highway rotary mower.
Log fork from Tube-Lok Products.



Alternatives from page 47

over weeds. If a few weeds do appear, removal by hand can help keep the problem from becoming serious by preventing spread of weed seed.

These basic principles of good management to reduce weed encroachment are not new, but need to be re-emphasized. Too much dependence has been placed on using herbicides to cover up what may be the result of bad management. When a chemical such as silvex is lost, we can be faced with a weed problem which may only be solved by complete renovation of the area.

Also, a weed problem which is solved temporarily by herbicides is certain to return if bad management continues. Good management will certainly not eliminate the need for herbicide applications, but it will greatly reduce the seriousness of weed problems that could eventually occur.

Reprinted from *The Agronomist*, University of Maryland, College Park

A WORD TO THOSE WHO THINK IT TAKES A FORTUNE TO MAKE BIG MONEY IN LAWN CARE.

ANNOUNCING THE LOW-INVESTMENT, NO-FEE, NO-ROYALTY, NO-ADD-ON PROFIT PROGRAM FROM AGRO-CHEM.

For as little as \$5000, you can become part of the fastest growing field in the great outdoors. As an independent dealer of Agro-Chem, a leader in lawn care products and training.

Agro-Chem will supply you with everything you'll need to grow along with the incredibly profitable lawn-spraying industry that has seen sales increase more than 20% in the past year alone.

As manufacturers, we ship directly to you from our modern plant in Franklin Park, Illinois.

There are no profit-picking middle-men involved. (Our profit comes from the products you buy.)

And best of all, you remain your own boss. Free to grow with the rising demand in your own area.

WE HELP YOU ALL THE WAY.

We'll teach you the very latest in organic, scientific lawn care. And we'll supply you with super-effective sales tools.

Newspaper ads. Radio commercials. Brochures, door-sellers, publicity and advertising.

You supply the desire to make big money in this growing field.

A UNIQUE, ORGANIC LAWN CARE PRODUCT LINE SUPERIOR TO OTHERS.

Agro-Chem lawn nutrients are totally organic. Natural. And specially formulated by us according to soil tests in your area.

There are no harsh chemicals that can lead to weakened, disease-ridden lawns. Instead Agro-Chem nutrients create a natural, deep-root growth that assures green lawns and turns undesirable thatch into humus. And all Agro-Chem products have been proven effective, and profitable, after thousands of residential, commercial and institutional applications.

IT DOESN'T COST A FORTUNE TO START IN BUSINESS NOW!

The return investment is substantial, from the start.

For instance, an initial product order costing you \$5000 can bring you a gross profit of about \$10,000. Even if you begin with a small truck and only a 300-gallon product tank.

IT ONLY TAKES A PHONE CALL. OR A STAMP.

Call us collect today, or fill out and return the attached coupon to receive our no-obligation booklet describing your incredible profit potential as an Agro-Chem dealer. But act now, and be ready for the big profit season ahead.

**CALL MR. THOMAS GREENE, COLLECT
312-455-6900**

BUNK!



**AGRO-CHEM, INC.**

Where the grass is always greener.

11150 W. Addison, Franklin Park, Illinois 60131

OK. Send me your book that shows me how I can make big money as an Agro-Chem dealer. I understand there's no obligation.

Name _____

Address _____

City/Town _____ State _____ Zip _____

**MAIL THIS COUPON TO: Agro-Chem, Inc.
11150 W. Addison
Franklin Park, Illinois 60131**

ENKAMAT WILL HELP KEEP THE ORANGE BOWL GREEN.

And the stadiums of Purdue and New Mexico State, the playing fields of Lovett, T.C. Roberson High and Coral Gables Park, Fore Lakes Golf Club, Wellington's landing strip and more.



Dr. William H. Daniel of Purdue University, turf grass specialist and developer of the PAT (Prescription Athletic Turf) system, said after extensive greenhouse testing and outdoor field observation of Enkamat: "I think Enkamat is resilient and durable, and will substantially increase sod stability."

Enkamat, a 3-dimensional webbing made of nylon monofilament fused at the intersections, is being installed on major playing fields and parks across the country. As such, it will help scarred turfgrass heal itself, reduce

compaction and wear and promote a strong root system. Enkamat should also provide a resilient but firm footing so players' injuries may be greatly reduced.

Enkamat will also hold turf together so damage from tearing and divots is minimized. And because Enkamat is an *open* webbing, it will maintain grass on high-traffic areas without the constant need for aeration. It has been tested and used successfully on playing fields in Europe for 10 years.

It was to prevent tear-

ing and compaction on heavily trafficked areas that Dale Sandin, Grounds and Turf Manager of the Orange Bowl, had Enkamat webbing installed. Now, 6 months later, he's pleased with how the turf is holding up.

Other success stories keep coming in. Purdue, of course,

THE ORANGE BOWL, MIAMI, FL.



FORE LAKES GOLF CLUB, SALT LAKE CITY, UT



AGGIE STADIUM, N.M. STATE U., LAS CRUCES, NM



T.C. ROBERSON H.S. FIELD, ARDEN, NC



ENKAMAT IS A REG. TM. OF AMERICAN ENKA CO., ENKA, INC. A PART OF **Alzonia** INC., AND IS THE SUBJECT OF A NUMBER OF U.S. PATENTS.

Circle 118 on free information card

had over 22,000 square feet of Enkamat installed along with its PAT system and they're "tickled pink" by the results. T.C. Roberson High and the Lovett School, Atlanta, GA, installed Enkamat because it increases playing time on their fields so they can schedule more events. New Mexico State University installed 22,500 square feet of Enkamat to restore the field and reduce their maintenance hours at Aggie Stadium.

Both the soccer field and playground of Coral Gables Park had Enkamat installed and they report greener-looking grass. The Mel Reese Golf Club, Miami, FL, installed Enkamat on its tees, Fore Lakes Golf Club put 10,000 square feet of it on their driving range, and Biltmore Forest Country Club, Asheville, NC, installed Enkamat on the golf cart path. The Wellington landing



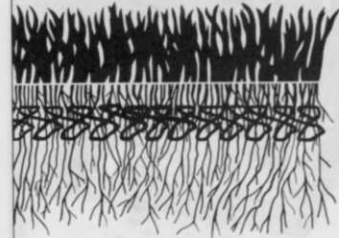
ROSS ADE FOOTBALL STADIUM, PURDUE U., W. LAFAYETTE, IN

strip in West Palm Beach, FL, and the David B. Oliver High School, Pittsburgh, PA, are both in the process of installing Enkamat. As time passes, there will be a lot more success stories.

Life, and your turf, will have fewer problems if you install Enkamat. For more information, contact Turfibre Products, 1934 N.E. 151 Street, North Miami, Florida 33162, (305) 947-4649, Tom Mascaro, Manager.

ENKAMAT[®] BY ENKA

The innovative webbing used in a sub-soil system that increases grass growth and decreases maintenance costs.



TURF
SOIL
ENKAMAT
SUBSOIL

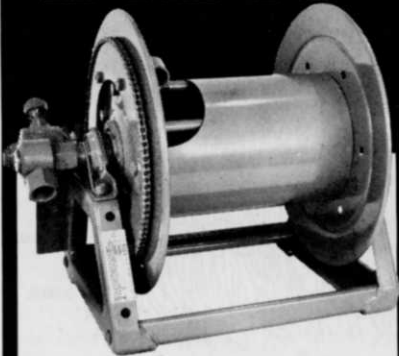


TURFIBRE PRODUCTS

1934 N.E. 151 STREET
NORTH MIAMI, FLORIDA 33162

TOM MASCARO, MGR.

HOSE WITHOUT A REEL IS A DRAG



There's No Messing Around With Hannay Reels

Eliminate hose mess with Hannay Reels!

- Pull out smooth & easy. Wind up straight & fast.
- Store hose neatly, ready to go when you are.
- Less wear and tear on you and the hose.
- Fertilizers. Pesticides. Herbicides. Whatever you spray, rely on Hannay!

Free fact-packed Reel Guide! Ask for your copy today.

Buy Hannay Reels and
Wind Up With The Best



HANNAY REELS

Clifford B. Hannay & Son, Inc., Westerlo, New York 12193

Circle 108 on free information card

News from page 50

SOIL EROSION

Builder receives laboratory contract

Geupel DeMars, Inc., Indianapolis, IN, has been awarded a contract for construction of the U.S. Department of Agriculture's National Soil Erosion Laboratory. The Laboratory will be on land made available to the U.S. government by Purdue University in West Lafayette, IN.

The \$3,930,000 contract, which provides for construction of a one-story building and basement, was awarded by the department's Science and Education Administration (SEA). Plans call for the addition of a second floor as funds and authorization become available.

With about 21,000 square feet of usable floor space, the one-story laboratory is designed for multidisciplinary studies by about eight SEA Agricultural Research scientists and 10 support staff. The second floor could provide enough space for an additional seven scientists and 12 support staff. There also will be accommodations for cooperative studies with Purdue researchers and graduate students.

PESTS

U.S., Canada seek spruce budworm cure

The Canada/United States Spruce Budworm Program (East) is accepting proposals for research contributing to the protection of eastern spruce-fir forests from damage by the eastern spruce budworm (*Choristoneura fumiferana*). Limited funds for grants have been provided for 1980, 1981, and 1982.

CANUSA is an international research and development program sponsored by the USDA Forest Service and the Canadian Forestry Service to promote the development of integrated management techniques for minimizing the impact of spruce budworm infestations. For more information, contact: Melvin E. McKnight, Program Leader, Spruce Budworm Research and Development Program, USDA Forest Service, Rosslyn Plaza E, 1627 No. Kent Street, Rosslyn, VA 22209 or Daniel M. Schmitt, Program Manager (East), Canada/United States Spruce Bud-

worms Program, USDA Forest Service, 370 Reed Road, Broomall, PA 19008.

SEEDS

Punch planting helps establish seeds

In experiments to establish grass from seed under drying conditions in the Southern Great Plains, punch planting produced a satisfactory number of seedlings when there were very few from conventional planting.

Plant punching, a method of placing seeds in small diameter holes punched in the soil and left open to the atmosphere, made no difference where water was adequate. Optimum depth of punch planting was related to seed size and seedling vigor. Small diameter holes (1/4 inch) produced best plant emergence, because the bottom of small holes dried slower than the bottom of large holes.

The tests, conducted by scientists with the USDA-SEA-Agricultural Experiment Station, offer a possible solution to the problem of seeding failures in the Plains area. The conventional planting practice for perennial grasses is to place grass seed about 1/2-inch deep in the soil, but that soil layer often dries quickly and prevents plant establishment.

TURF

Turfgrass group honors Cornell prof

The New York State Turfgrass Association has honored professor emeritus John F. Cornman of the N.Y. State College of Agriculture and Life Sciences at Cornell University.

Cornman, a specialist in turfgrass management and an authority in this field, received the Association's Citation of Merit given annually during its turfgrass conference.

In another event at the college, A. Martin Petrovic has been appointed assistant professor of turfgrass science in the department of floriculture and ornamental horticulture.

Petrovic recently completed his doctoral degree in the department of crops and soil sciences at Michigan State University. His research is in the areas of turfgrass management and soil physics.