

Keeping a city green with a killer of 20,000 trees on the loose

"Planting 8,500 trees in our city nursery in one month was the easy part of what faced us because of Dutch Elm disease," Paul Naland, Sioux City, Iowa, forester recalls. Taking care of them was something else. That involved plowing irrigation furrows for each row of trees, and working the ground in between to keep them free of weeds. "Naturally, the equipment required was critical; we took several bids and tested many tractors before buying." The Wheel Horse GT-14 got the nod because "it matched our specs to a 'T' and bested competitive prices." Paul Naland's job consists of raising 10 acres of Oak, Ash, Honey Locust, Maple, Russian Olive, Crab Apple and Purple Leaf Plum saplings to replace dying Elms and increase the variety of the city's tree population. The ground in Paul's area breaks up easily and gets slick when it rains. For the extra traction needed, ballast-filled cleat tires are used on the GT-14. "The automatic transmission is its best overall feature — you can't beat it for matching power output to load." To Paul Naland city streets are like windows, and trees are "window dressing." He compliments Wheel Horse for playing a key role in "keeping Sioux City's windows green."



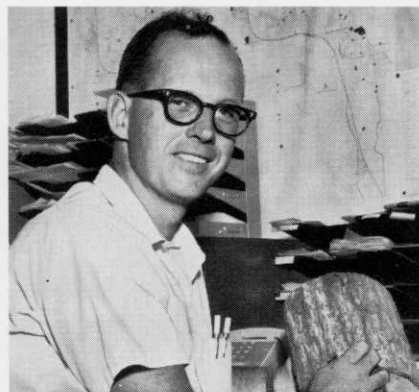
Tractors/Mowers/Snow Throwers/Snowmobiles

If you have much ground to cover quickly, and keep looking nice, try Wheel Horse, the pick of the pros.

Write: Professional Services, Wheel-Horse Products Inc., 515 West Ireland, Road, South Bend, Ind. 46614.



"This year, Dutch Elm disease killed 500 of our trees. We'll lose over 20,000 before it's done. Keeping Sioux City green is no small job."



"We have to have dependable equipment to fight a killer like this. We'll grow 40,000 replacement trees in the next few years."



"There are 135 rows—each 350 feet long—to plow and cultivate in our nursery. The GT-14 works each row 4 times without strain."



"We plant 2,000 trees around our streets, parks and public grounds every year. That means restocking the same quantity in our nursery yearly too."

ANOTHER WHEEL HORSE PROFESSIONAL

For More Details Circle (101) on Reply Card

**FOR MORE FACTS
USE THE
POSTAGE FREE CARD**

You are invited to use the Reader Service card provided to obtain further information on equipment, materials or supplies appearing in this issue. This card is preaddressed and postage paid.

Your inquiry will be forwarded to the manufacturers in whose products you are interested.

**FOR MORE FACTS
USE THE
POSTAGE FREE CARD**

You are invited to use the Reader Service card provided to obtain further information on equipment, materials or supplies appearing in this issue. This card is preaddressed and postage paid.

Your inquiry will be forwarded to the manufacturers in whose products you are interested.

Special for This Issue

Soil Shredders	6
<i>Article discusses why soils need to be mixed, who uses soil shredders, who makes them, representative models, operating cost examples.</i>	
Levelland, Tex., Goes City-Wide Against Weeds	12
<i>Geigy's Pramitol used as part of clean-up campaign.</i>	
Utility Line-Clearance: Pinning Down Costs	14
<i>Bernard E. Swisher, forester, reports on the program at Columbus and Southern Ohio Electric Company.</i>	
Hotel Brings Landscaping Downtown	18
<i>Report on how the Hilton Hotel in Portland, Ore., was designed to make room for landscaping.</i>	
Alligator Weed Magic from Tulare County, Calif.	20
<i>William Clark, deputy commissioner, reports on how many agencies combined research to find a successful method to control alligator weed.</i>	

Regular Features

Editorial: November is for Thanking	4
Meeting Dates	10
Industry People on the Move	23
Sod Industry Section: Princeton Turf of KC	24
New Products	30
Industry News: Northwest Pesticide Applicators Meeting	32
Insect Report	33
Letters to the Editor	34
Trimmings	34
Classified Advertising	35
Advertisers' Index	35

The Cover

Mogren Bros. of St. Paul are building an 18-hole championship golf course that will require about 6,000 cubic yards of specially mixed soil for greens. The brothers, also sod producers, are using a Lindig CL-75 shredder with screener. The unit processes 75 cubic yards per hour. Lindig makes models with capacities of up to 200 cubic yards per hour. Lindig claims it has the only unit that combines in one machine the functions of shredding, mixing, aerating, elevating, screening, and high discharge. Rene Belland, golf course contractor, is on the crawler tractor. Read more about the uses of soil shredders beginning on page 6.



WEEDS TREES AND TURF is published monthly by The Harvest Publishing Company. Executive, editorial: 9800 Detroit Ave., Cleveland, Ohio 44102.

Single Copy Price: 50 cents for current issue; all back issues 75 cents each. Foreign \$1.00.

Subscription Rates: WEEDS TREES AND TURF is mailed free, within the U.S. and possessions and Canada, to qualified persons engaged in the vegetation care industry and related fields in controlled circulation categories. Non-qualified subscriptions in the U.S. are \$7.00 per year; Canada and other countries, \$10.00 per year. Controlled circulation postage paid at Fostoria, Ohio 44830.

© The Harvest Publishing Company, 1969

Member Business Publications Audit



WEEDS TREES and TURF®

Volume 8, No. 11 November, 1969

Gene Ingalsbe
Editor

Alis Anthony
Editorial Assistant

Arthur V. Edwards
Editorial Director

A. J. Michel
Advertising Production

Hugh Chronister
President and Publisher

Dan M. Humphrey
Vice-President, Advertising

Roy Bever
Director of Circulation

ADVERTISING SALES OFFICES

Cleveland, Ohio 44102
9800 Detroit Ave./216+631-6468
William Schmunk, Mgr.

Chicago, Illinois 60601
333 N. Michigan Ave./312+236-9425
Richard Scrymiger, Mgr.

Shawnee Mission (Kansas City),
Kansas 66202
6811 W. 63rd St./913+722-5900
Austin Schnacke, Mgr.

New York, New York 10017
757 Third Ave./212+421-1350
Herbert Lager, Mgr.

Columbus, Ohio 43212
1350 W. Fifth Ave./614+486-9638
Gilman Calkins, Mgr.

Lansing, Michigan 48906
4415 N. Grand River/517+372-5254
Paul Bundschu, Mgr.

Los Angeles, California 90005
The Eschen Company
3142 Wilshire Blvd./213+382-8391
Henry Eschen

San Francisco, California 94104
The Eschen Company
57 Post St./415+781-7440
Al Pierce

November Is for Thanking

Above a background of thunderous applause, the Chevrolet people say on television that the response to a new 1970 model is "encouraging."

Likewise, the response you've indicated to this magazine in a recent survey is encouraging.

Because November is painted thanksgiving month, we say thanks to you for your generous attention to WEEDS TREES and TURF. We asked for your readership appraisal this summer. This is what you said:

92.7% of you said you read the magazine regularly. Some 41.7% of you read it at the office, 18.6% at home and 39.7% at both places. An average of four other persons read the magazine, giving it a projected readership of 134,998.

86.56% of you said you keep WTT for future reference. (And we might add that 100% of you will particularly want to keep the December issue. It contains the annual story index and suppliers' guide and equipment directory. Suppliers

are listed by product and alphabetically. Addresses are included.)

We also asked you what type articles you prefer. And to the best of our ability, we shall attempt to fulfill your wishes.

Here are your requested preferences: Experiences of other operators, 71%; how-to-do-it, 66%; technical, 63.7%; Business management, 33.8%; ideas for selling new business, 20.6%; and miscellaneous, 7%. Of course, these percentages total more than one hundred because you each requested several preferences.

In coming issues, we shall be reporting some interesting characteristics about your collective businesses—such as services offered, types of equipment, work force, dollar volume, expenditures for certain supplies, and so on.

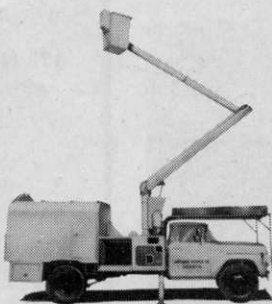
But November seemed the most appropriate time to express our appreciation. It is our pleasure to work with you, and we wish you a surprisingly prosperous coming year.

Efficiency in 9 Dimensions

The now-famous unit combines three operations . . . the 42' aerial lift, the 12' chipper, the dump truck body . . . into one, which adds, inherently, the additional dimensions of increased mobility, greater economy and total unit capability.

Some of our customers will no doubt write to complain if we don't mention, also, ease of trimming, rapidity of brush disposal and simplicity of the hydraulic dump body. So we will. That makes efficiency in 9 dimensions, doesn't it?

When you've had our free, no-obligation demonstration, you'll think we've *still* understated our case.



ASPLUNDH CHIPPER COMPANY

HAMILTON STREET
CHALFONT, PENNA. 18914

Manufacturing Division of the Asplundh Tree Expert Co.

THE CHIPPER WITH A TRADEMARK



the GREAT one! Highland Colonial Bent

Just possibly, Highland Colonial Bentgrass is the greatest value in grass seed today!

A highly attractive blue-green, cool-season grass, it is one of the most economical of the fine-bladed varieties and has every attribute required for a truly luxurious turf.

Highland Bent may be seeded alone or in a mixture . . . is adaptable to many soils and climates . . . is durable under heavy foot and light vehicle traffic and thrives on close-cutting to 1/4 inch.

With some 8 million seeds per pound, the potential number of plants is great. Highland is also popular for overseeding in Southern regions.

If you would like complete data on cultural practices, seeding rates, fertilization, etc., please write to:



Oregon Highland Colonial Bentgrass Commission

Suite one / Rivergrove Building
2111 Front Street N.E. / Salem, Oregon 97303

For More Details Circle (102) on Reply Card

For More Details Circle (107) on Reply Card



Coming
in
December!

Suppliers:

The Perfect Place to Advertise Your
Weed, Turf, and Tree Market Products

Reserve Space Now in the

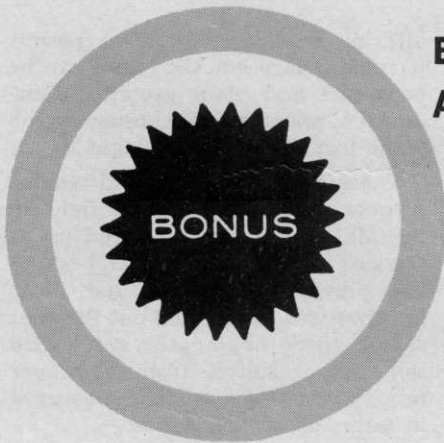
1970 Suppliers' Guide

To Appear in the December '69 Issue of WEEDS TREES AND TURF

1. Boldface Listings. Suppliers using advertisements in this issue will be listed in boldface type in the directory under all categories of products the advertiser supplies. Your name stands out when readers refer to this handy directory which applicators use all year round!

2. Reader Reply Card. Bound into every issue will be a Reader Reply Card. All readers have to do to get more information on advertised products is check off the advertiser's name and send the postage-paid card to us. We forward neatly typed lists of inquiries.

3. Repeat Readership. In the 1970 WTT Suppliers' Guide, we have a complete catalog of weed, turf, and tree maintenance chemicals and equipment. Whenever readers are seeking a source of supply, this handy reference book offers them the easiest way to find it.



Bonus for
Advertisers:

1. Bold
Face
Listings

2. Reader
Reply
Card

3. Repeat
Readership

LISTED in the 1970 WEEDS TREES AND TURF Suppliers' Guide, readers will find all chemicals and equipment used for weed and brush control, turf management, and tree maintenance. Included are such chemicals as herbicides, insecticides for turf and trees, fungicides, and fertilizers, among others. Equipment listings include such items as power sprayers, vertical mowers, trimming and pruning tools, chippers, and many others. This is the only Suppliers' Guide compiled annually for the entire vegetation maintenance and control industry in America.

Reserve Space today!

**WEEDS
TREES
and TURF®**

Phone 216 + 631-6468

9800 Detroit Ave., Cleveland, Ohio 44102

**CLOSING DATE
NOVEMBER 10th**

Golf courses are among the biggest users of specially mixed soils. From the mixing site (on the cover) Mogren Bros. moved green mix by the truckloads. Each green of the 18-hole championship course gets a one-foot layer, which can add up to anywhere from 180 to 300 cubic yards. Tees may also be prepared with the same soil. The standard practice of top-dressing greens creates a continuous need for uniform soil mixtures. Several models of soil shredders are available that have been specially designed for this purpose.



*All the Ways
You Can Use*

Soil Shredders

WHAT DOES your machine do?" John Lindig has been asked at trade shows. And his answer that it shreds and mixes soil has prompted, on a number of occasions, another question: "Why do you want to do that?"

In this oft-repeated dialogue, there is a story of opportunity for the manufacturers of soil mixers and shredders, believes Lindig, director of marketing and sales for Lindig Mfg., St. Paul.

A great deal of technology has been accumulated in plant genetics, in production and application of plant nutrients, and in the development of chemicals to control weeds, insects and disease. But with the exception of a few, the industries that rely on soil resources are "still in infancy," says Lindig, concerning their realization of the importance of soil preparation, composition, and treatment.

If the goal is vegetation perfection, "underneath it all," claims Lindig, "are soil and soil mixes.

"The proper growth and low-cost maintenance of turf and plants must begin with their foundations—the soil. When soil is compacted, improperly mixed (or not mixed at

all), or processed so as to permit particle separation, the result can be poor turf and plant growth. Maintenance costs increase because the plant just doesn't grow right."

There can be more painful results. A new university football field in the Midwest is to be plowed up at the end of the grid season because the playing surface is too hard. Coaches will be playing out the first season there hoping the compacted soil that resulted from improper mixing won't be a mistake measured in terms of broken bones.

And elsewhere the thought of broken bones may cross the minds of golfers who miss critical putts because of a green's poor playing surface.

Use of specially processed soils is widening, and, consequently, brightening the future of at least four manufacturers of extensive lines of soil and mulch shredders and grinders. These companies are the Kemp Shredder Co., 1027 E. 20th St., Erie, Pa. 16512; Lindig Manufacturing Co., 1875 West County Road C, St. Paul, Minn. 55113; Royer Foundry & Machine Co., Kingston, Pa. 18704; and W-W Grinder Corp., 2957 N. Market, Wichita, Kan. 67219.



These companies offer models with capacities of a few cubic feet per hour for the home organic gardener to commercial models of up to 200 cubic yards per hour for construction contractors. Prices ranged from about \$150 to \$24,000.

Buyers use soil processing equipment for their own soil or mulching

projects or to manufacture soil and mulches for sale to others.

Who Uses Soil Shredders

Royer, in business for more than 40 years, has found this variety of users: nurseries, landscapers, florists, golf course superintendents and contractors, top soil producers, mush-

room growers, peat producers, cemeteries, educational institutions, composters, excavating contractors, land developers, sewage sludge processors, and groundskeepers.

Lindig also has machines in operation shredding limestone and processing salt cake.

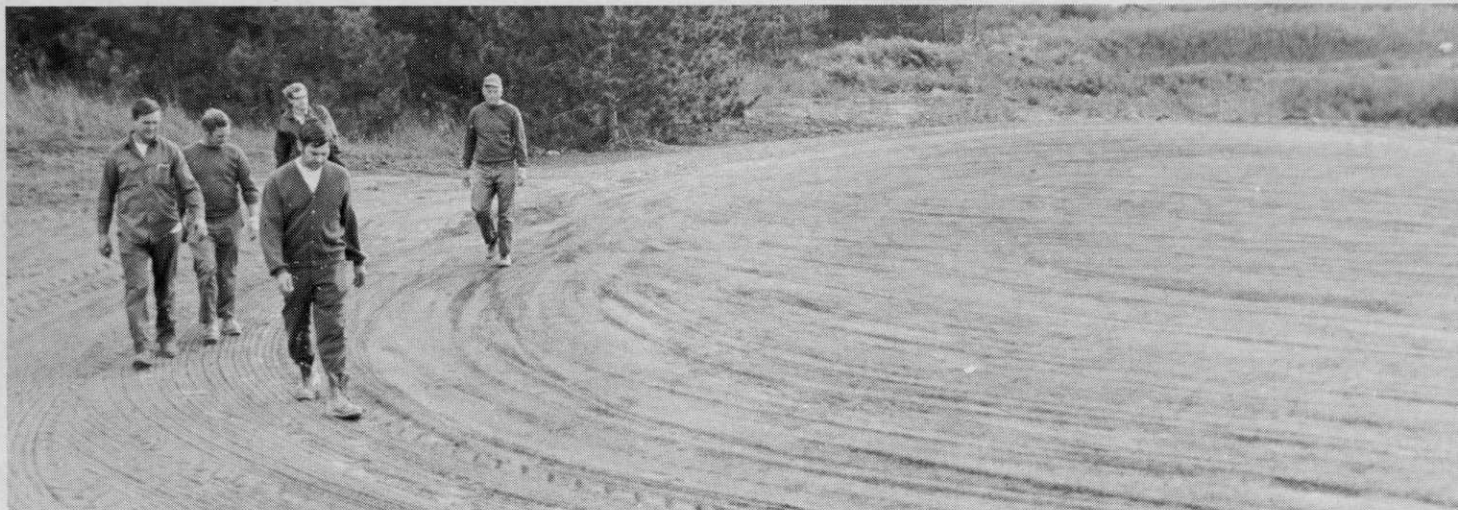
"R. S. Broadstone in Northfield, Ohio, is using one of our models to remove bullets from the soil of a rifle range," reports Lindig.

A shredder isn't a recent innovation. W-W Grinder Corp. has been around since 1910 and Kemp claims the "original compost and soil shredder." Rather, the market is expanding on a widening of uses and on the demand for increasing volumes of processed soil.

Uses Are Varied

The more common uses of shredders and soil processors include: to prepare potting and bench soils, soil mixes for container-grown stock; to shred, remove stones and other trash from mushroom casing soils, top soils, and peat; to prepare top dressings for turf areas; to shred and blend compost; to prepare soil mixes for road beds and wayside rest areas and to construct, maintain, and renovate turf areas, running trucks, and various athletic fields; to shred sewage sludge; and to shred partly decomposed organic materials and mix them with soils to improve nutrient content, increase friability and percolation of water through growth materials.

Essentially, explains Lindig, a soil shredder (1) mixes and blends varying types of materials to obtain a soil most beneficial for plant growth



Touring the green after the soil mix has been leveled to the desired grade are Don Herfort (leading) golf course architect; and from the left behind him, Bob Mogren, land-

scape contractor; Rene Belland, golf course construction; John Lindig, director of marketing, Lindig Mfg.; and Jerry Mogren, landscape contractor.

and durability; (2) produces a blend in a homogeneous format that assures no separation during processing or after installation; (3) aerates the mixture by injecting large quantities of air into the soil and trapping it in the mixture (this reduces the chance of compaction, adds to a friable and workable material, and enhances water percolation necessary to distribute the vital plant nutrients); and achieves a uniform mixture minus clods, stones, twigs, roots, and so forth.

Golf courses are perhaps the largest single user of processed soil. Lindig estimates that construction of an average golf course of 18 holes takes 6,000 cubic yards of green mix.

Examples of Operation Cost

Mogren Bros. of St. Paul is presently engaged in constructing an 18-hole championship course on 440 acres. The firm, also having extensive sod-production acreage, is using an L-75 model (75 cubic-yard-per-hour capacity) Lindig dual rotor shredder with screener (cover picture).

"Approximate cost of preparing the mixes for the course are about 25¢ per cubic yard," reports Lindig.

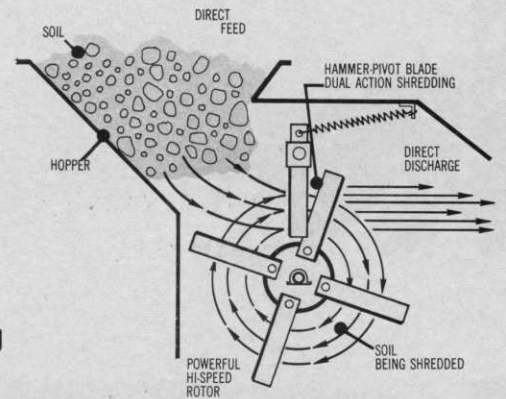
This is exclusive of labor—for which one tractor or front-end loader operator is required.

"This cost is computed using the following data: list price of shredder and screener; a northern U.S. climate with about six months use (normally higher than this—thus lowering cost below 25¢); average

servicing costs to unit; fuel; periodic replacement of shredding hammers; and depreciation of unit over a five-year period plus an annual rate of return on investment of 6%.

Royer publishes a pamphlet for golf course superintendents as a guide to using one of its models designed especially for top-dressing

Lindig Earth Processing System

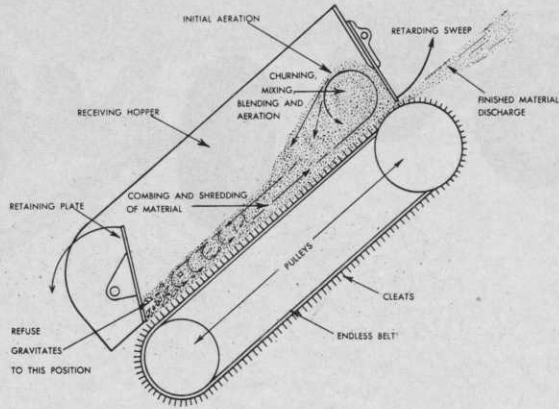


W-W Grinder Corporation offers a shredder that can be powered by a garden tractor with the use of a V-belt pulley. A stabilizer bar is provided which is simply and easily attached to most garden tractors. This Model 5 unit provides up to six yards per hour capacity.

The Royer Paul Bunyan 360T is what its name implies, the biggest of the Royer line with a capacity of 100 cubic yards per hour. Its receiving hopper will handle buckets up to two cubic yards. It can be towed at highway truck speeds.



Royeration



and renovating greens, and cleaning sand traps.

The Superintendent Shredder (15 cubic yard-per-hour capacity) plus a power screen, states the pamphlet reduces top-dressing costs from \$10 per yard manually to less than \$4 per yard.

An average-size green probably

can be renovated in a single day, the guide says.

One man and Royer's POWER-screen, the guide adds, can keep bunkers free of pine cones, acorns, and other debris—and remove pea gravel to eliminate stony greens caused by trap shots.

Maintenance of a turf nursery is

a growing trend at golf courses to provide sod that is readily available. Soil shredders are extremely valuable by enabling preparation of large volumes of soil mixes on site.

Steam Aerator Purifies Soil

Lindig has carried its soil processing and treating products a step further by developing a steam aerator and soil treating and planting cart.

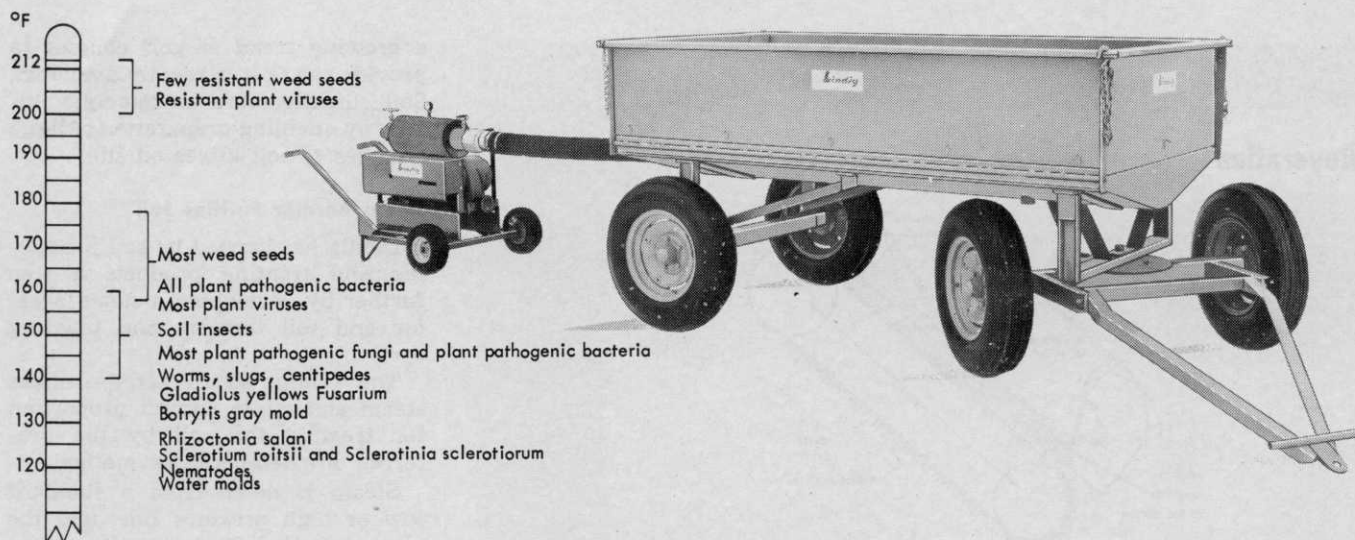
The Lindig steam aerator mixes steam and air in correct proportion for treating the soil by the preferred low-temperature method.

Steam is taken from a standard low or high pressure line, and the air is supplied from a positive type of blower. Air and steam are forced into the mixing chamber under pressure, where they are blended before being injected from the aerator to the soil treatment cart. The aerator can be used with similar treatment containers, planting bed, bench, and so on.

"When soils are held in a range of 145 to 165 degrees for a period of 30 minutes, most weed seeds, insects, virus, and disease-causing fungi are destroyed," Lindig explains. "Beneficial forms of soil



Kemp Shredder Company offers a variety of smaller mulch and compost shredders ideally suited to the home gardener and for nursery use. Capacities range from three to 12 cubic yards per hour. The units are "created solely to shred, grind or pulverize leaves, weeds, vines, brush trimmings, sticks, stalks, bone, phosphate rock, sledge, sod, soil and manure."



Lindig Mfg. also offers a steam aerator and a soil cart. The aerator provides low-temperature steam sterilization that does not harm beneficial soil pathogens. Steam is injected into the soil cart at a temperature range between

145 and 165 degrees for a period of 30 minutes. As the chart indicates, most plant-damaging micro-organisms, insects, viruses and weeds can be destroyed. The aerator and cart come in two sizes.

pathogens are not destroyed, and soil nitrates are not leached out.

"The aerated steam system provides the user with a positive method of obtaining and controlling the temperatures that are required for treatment of various soil mixes. The soil is well aerated, not toxic, free of added moisture . . . the net

result is that recontamination possibilities are lessened, and stronger and better plants are produced in less time and at lower cost."

Lindig, the newest of the four shredder manufacturers, began operations in a dairy barn shortly before the U.S. entered WW II. After the war, expansion of the family

business was steady.

When the plant was moved to its present location about 15 years ago, some friends questioned the wisdom of the move "to the country."

"When we asked for telephone service, all that was available was a party line with a construction firm and a nursery," said John. The Lin-

Meeting Dates

Dates for this column need to reach the editor's desk by the 10th of the month preceding the date of publication.

North Dakota Nurserymen's Association, Annual Convention and Trade Show, Fargo, N.D., Nov. 7-8.

National Fertilizer Solutions Association, National Convention and Equipment Exhibition, Cincinnati Convention Center, Cincinnati, Ohio, Nov. 9-13.

Ohio Turfgrass Conference and Show, Sheraton-Cleveland Hotel, Cleveland, Ohio, Dec. 1-3.

Oklahoma Turfgrass Research Foundation, Inc., Conference and Show, Oklahoma State University Student Union, Stillwater, Okla., Dec. 3-5.

National Aerial Applicators Association, Third Annual Conference, Roosevelt Hotel, New Orleans, La., Dec. 7-10.

Louisiana Turfgrass Conference at the Ira Nelson Horticulture Center, University of Southwestern Louisiana, Lafayette, Dec. 9-10.

24th Annual North Central Weed Control Conference, Sioux Falls, S.D., Dec. 9-11.

22nd Annual Helicopter Association of America convention at the Stardust Hotel, Las Vegas, Nev., Jan. 11-14.

4th Annual Park Symposium, New Jersey Recreation and Park Association, Lewis M. Herrmann Labor Education Center, Rutgers University, New Brunswick, N.J. 10 a.m. Jan. 14.

22nd California Weed Conference at the Grand Hotel, Anaheim, Calif., Jan. 19, 20, 21.

Associated Landscape Contractors of America, Statler-Hilton, Orlando, Fla., Jan. 19-23.

Annual Virginia Turfgrass Conference, Sheraton Motor Inn, Fredericksburg, Va., Jan. 27-28.

40th Annual Michigan Turfgrass Conference at the Kellogg Center of Michigan State University, East Lansing, Jan. 27-28.

Weed Science Society of America annual meeting, Queen Elizabeth Hotel, Montreal, Quebec, Canada, Feb. 3-5.

National Arborist Association annual convention, Del Webb's Towne House, Phoenix, Ariz., Feb. 13-19.

