

to Prevent This



then Dutch Elm disease paid its ugly visit, leaving this scene on Feb. 25, 1969.

cure, control, or arrest of DED—that the product proved to have arrestment capability. Now that federal registration has been granted in four states, he expects similar registration in other states soon.

Freers has formed a corporation in Iowa known as The Freers Company of Muscatine. His firm will be involved in manufacturing the chemical, selecting franchised applicators, training such applicators, and administering the entire field franchise operation.

Hercules Predicts Growth In 'Visko-Rhap' Usage

Because "Visko-Rhap" herbicides provide effective control plus low drift, their already wide-spread use will expand even more in 1969, says Hercules, Inc., Wilmington, Del.

Developed by Hercules' Agricultural Chemicals Division, Visko-Rhap herbicides are special formulations of 2,4-D, 2,4,5-T, combinations of these, and silvex. They deliver a thick, regulated spray that resists wash-off and evaporation, according to Hercules, and not only clings to but penetrates leaf surfaces. Because of their mayonnaise-like thickness, Visko-Rhap formulations don't drift off target when applied, Hercules says.

The herbicides, applied by ground, air or aquatic equipment, can be used on county roadsides, utility rights-of-way, in drainage control districts and on various crops.

Pennsylvania Group Elects Grau Executive Director

Dr. Fred V. Grau, long active in the turfgrass industry, has been appointed Executive Director of the Pennsylvania Turfgrass Council, according to Council President Don Krigger.

His many achievements in the turf industry include helping to develop Merion bluegrass, Meyer Zoysia and U-3 bermuda and discovering and developing—with the aid of his late wife—Penngift crown-vetch.

Grau's turfgrass career includes work at Penn State as Extension Agronomist, where he worked closely with the late Professor Emeritus H. B. Musser—pioneer in turfgrass research and education and formerly the Council's Executive Director. Grau was also consultant to West Point Products, to Nitroform Agricultural Chemicals, and to Hercules, Inc. Since 1965 he has devoted his full-time effort to Grasslyn, Inc., the firm he and his wife established.

Grau is a life member of the American Society of Agronomy and of the American Association for the Advancement of Science. He holds honorary memberships to several golf course superintendent associa-

tions and in 1954 was awarded the Distinguished Service Tribute by the Golf Course Superintendents Association of America. Last January he won the U.S.G.A. Green Section Award.

Neeley Reveals Pros, Cons Of Fertilizing Trees

Dr. Dan Neeley, Illinois Natural History Survey plant pathologist, pointed out both the benefits and drawbacks of fertilizing trees at the University of Maryland's Arborists' Day held in College Park.

Tree fertilizers serve four functions, he said: (1) spurring rapid growth; (2) improving tree's appearance; (3) retaining vigor and safeguarding against diseases; and (4) regaining vigor after damage by disease, drought, insect pests, mechanical equipment.

On the other hand, Neeley explained, fertilizing trees may have drawbacks.

"You will have to mow your lawn more often," he said. "You may need to prune more frequently. And you may actually decrease the amount of flowering or fall color. Some plants may develop a weepy appearance."

To decide whether or not to fertilize, Neeley suggests checking the growth rate of your trees and examining the condition of your soil.

Twig growth, he said, can be determined by comparing the amount of space between the first and second—or last two—sets of bud scale scars. Growth can also be checked by removing a plug from the trunk to see if the latest ring is wider or narrower than the previous one.

Soil should be examined for depth (the deeper, the better), texture, structure and sub-soil, Neeley explained.

If fertilization is in order, Neeley recommends an annual application of nitrogen in April or May at the rate of 6 lbs. per 1000 sq. ft. of ground. Phosphorus and potassium need to be added only at 3- to 5-year intervals at the rates of 3.6 lbs. per 1000 sq. ft. and 6 lbs. per 1000 sq. ft., respectively, he said.

For a free publication entitled "Fertilizing and Watering Trees," write Dr. Neeley at the Survey, Urbana, Ill. 61807.

**Next
Issue**

*J. R. Watson tells about
the science of mowing grass*

Specialists Review New Grass Varieties

In Brief:

New grass varieties are important to the turf industry. A feature of special interest at the recent Midwest Regional Turf Conference at Purdue University, Lafayette, Ind., was a review of new variety characteristics and promotion ideas by a panel of seed industry representatives. The material presented constitutes the highlights of data from each panelist.

0217 Brand Fylking

Jacklin Seed Company, Dishman, Washington, and Hogg & Lytle Seeds, Oakwood, Ontario, Canada, have been granted the exclusive right to produce and market the new patent variety Fylking Kentucky bluegrass by its Swedish developers. 0217 brand Fylking produces a turf with good color, density, hardiness, and at the same time a dwarf type which stands extremely close mowing. Fylking has a short leaf sheath, moderately prostrate leaf blades, and a fairly slow rate of vertical growth. It is recommended for golf tees and aprons and for general turf use on lawns and industrial sites. It shows resistance to both leaf spot and stripe smut. This grass which is becoming well-known was brought to this country some 10 years ago by Arden Jacklin, president of Jacklin Seed, and after extensive testing was introduced 2½ years ago to the commercial market. To date, seed distribution has been largely to professionals such as golf course superintendents and sod growers.

Sales representative and agronomist for Jacklin Seed, Doyle Jacklin, in discussing the introduction of Fylking, stated that \$300,000 in promotional expenditures will normally be expended in the first year's introduction and the following three years in putting a new variety on the market. This heavy expense, he believes, will act to limit the number of new Kentucky bluegrass va-

rieties to be successfully released and merchandised, both now and in the future. Jacklin pointed to Fylking as an example. He listed such requirements as breeding or selection of a variety which is unique and reproduces true to type; the increase of the variety for seed testing stocks; the distribution of seed samples to a representative group of testers; the compilation and evaluation of test data; a program for marketing procedure; and others. Registration of a brand is also desirable to protect and promote the investment. In short, Jacklin stated that five and possibly 10 years of investment will be necessary even before evaluation.

Once released, promotion, advertising, and marketing programs are necessary to establish the new grass in the industry. In the case of Fylking, Jacklin stated that it was first introduced to sod producers and professional turf men, with promotional material being made available. Even though seed has been multiplied and made available at a rapid rate, Jacklin said the Company is still unable to fully supply the retail trade. Limited supplies for this trade are just becoming available and will not be generally available until late summer this year.

Prato

Northrup-King & Company representative, Howard E. Kaerwer, discusses that company's relatively new variety, Prato. This is a vari-

ety developed in the Netherlands and extensively used in Europe and now in the United States, he said. Prato can stand short mowing and is dense. Internodes are short and rhizome buds are plentiful.

Northrup-King started screening special bluegrass varieties 18 years ago and selected Prato Kentucky bluegrass for use in the upper U.S., Kaerwer stated. It has shown a good history of performance, he said, and produces a heavy, plump seed, numbering about 1.2 million per pound. Establishment is similar, he said, to new varieties now being introduced. Prato produces short, prostrate seedlings, and develops an extremely tough sod. It has multi-leaves at the tillers and leaves develop close to the ground. No seed heads are produced in turf, which is a valuable asset during June.

Prato, Kaerwer continued, is reasonably free of leaf spot and is mildew resistant. It is moderately susceptible to rust and has little resistance to stripe smut, but still is superior to Merion in this respect. Though not particularly adapted to the hot climates, Kaerwer said that Prato is doing well in trials in California.

Fertilizer requirements for Prato are at a lower level than Merion. However with water and fertilizer, it develops a heavy, dense turf but goes dormant quickly if water is shut off. The variety has been developed for short mowing, Kaerwer said, and is commonly mowed at a ½-inch height in Europe. It can be mowed up to a 2-inch height, but recommendations are for ¾ to 1¼-inch mowing heights. It is compatible with other grasses such as Fylking, Park and Delta, though it is competitive, according to Kaerwer. Prato also does well with Ruby red fescue (a creeper) and is being used in the Eastern U. S. with the fine leaf ryegrasses, NK 100 and Pelo, he stated. Prato exhibits a broad leaf when first established (similar to Merion) but leaves later become more narrow and Prato produces an extremely fine textured turf. Seed is available, Kaerwer said, and is being further multiplied.

Warren's A-Series

Ben O. Warren, Warren Turf Nurseries, Palos Park, Ill., in reviewing the A-series of grass varieties developed by his company, presented a selection new to growers

(Continued on page 24)

Meeting Dates



Arizona Spring Turfgrass Conference, Tucson National Golf Club, May 12.

Central Plains Field Day, Central Plains Turfgrass Foundation, Research Plots, Kansas State University, Manhattan, Kan., June 2.

Turf Research Field Day, Rutgers State University College of Agriculture and Environmental Science, New Brunswick, N.J., June 11.

Michigan Association of Municipal Cemeteries, 9th Annual Conference, Holiday Inn, Traverse City, Mich., June 20-21.

Annual Meeting, American Society of Agricultural Engineers, Purdue University, Lafayette, Ind., June 23-25.

National Fertilizer Solutions Association, Round - Up Program, Ridpath Hotel, Spokane, Wash., July 8-10.

National Fertilizer Solutions Association, Round - Up Program, Hotel Muehlebach, Kansas City, Mo., July 22-23.

National Fertilizer Solutions Association, Round - Up Program, Marriott Motor Inn, Atlanta, Ga., Aug. 13-14.

Golf Course Superintendents Field Day, University of Rhode Island, Kingston, R.I., Aug. 20.

Lawn and Utility Turf Field Day, University of Rhode Island, Kingston, R.I., Aug. 21.

Turfgrass Management Conference, Hawaii Turfgrass Association, East West Center, University of Hawaii, Honolulu, Hawaii, Aug. 27-29.

Annual Turfgrass Field Day, Michigan State University, East Lansing, Sept. 4.

Lawn and Ornamental Days, The Ohio Agricultural Research and Development Center, Wooster, Sept. 9-10.

Central Plains Turf Conference, Kansas State University, Ramada Inn, Manhattan, Kan., Oct. 15-17.

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

Note: Dates for this column need to reach the editor's desk by the 10th of the month preceding the date of publication in order to make the printing deadline.

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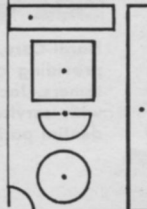
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Sod Industry Report

(From page 22)

and turf specialists alike. This was A-29#S-6, a promising low cut bluegrass. This specific selection, Warren stated, tolerated $\frac{3}{8}$ - to $\frac{1}{2}$ -inch mowing over a 5-year test period. Normally, the tendency, he said, is for outlaw grasses such as crabgrass and annual bluegrass to compete with low-mowed Kentucky bluegrasses. But such has not been the case with the new A-29 selection. Much is yet to be done, Warren said, to determine whether to develop A-29 vegetatively or via the seed route.

Warren also discussed A-10, A-20, and A-34. The theory behind the complete series, he said, is the fact that in selection work, a variety which fits all situations and locations cannot be found.

For example, A-10 is adaptable to the Ohio River Valley area, which is the southern range of the bluegrass area. Northern grasses really don't fit this area, Warren stated, but A-10 can stand the hot humid summer of St. Louis, yet still has some merit in more northern areas. It is a very dark green at all levels

of fertility, and has a more narrow leaf than average. Though is not as dense as some bluegrasses, Warren stated. Resistance to disease is fair and it has good resistance to hot area diseases. *Fusarium zoseum* resistance has been good in St. Louis and similar areas where franchise growers have been selling the selection as plugs. His company is going somewhat slow on A-10 at the moment because of minor disease weaknesses.

For shade areas, A-34 seems the best answer at the moment. It is easy to both grow and transplant. Problems have been apparent only when areas range to 90% shade or more. For turf areas with 65- to 70% shade, A-34 is superior, Warren said. This selection has also been doing well in sunlight areas in California.

Warren's A-20 is a good grass for all areas, Warren pointed out. Disease resistance is good; in fact, he stated that it is as good or better than Merion for four key diseases. The company currently has one million yards of this sod in the mid-west for sale this year. Plans are to promote A-20 on the East coast beginning this year. Test data, including growth data at Rutgers, indicate that the grass is adaptable for the area.



Paul Florence, Scotts

Windsor

Discussing Scotts' turf program was Paul Florence, manager of Windsor sod culture and marketing. He said that Windsor was a single clone selection made from a pony pasture in central Ohio, in 1949. This selection was entered into Scotts Bluegrass Development Program and propagated into selection and performance plots for evaluation and comparison with other turf

Hardi-Gardens, Inc., which only months ago began a nation-wide franchise program, recently announced it will establish 60 franchised garden centers in Texas, bringing the total of committed centers to 165.

Four centers are open in the company's Nashville headquarters; stores in newly franchised areas will start to open in early Spring, according to the company.

The garden centers carry over 15,000 items of living stock and feature a complete line of name-brand lawn and garden items, from plant foods to patio furniture.

"One of the beauties of our franchise plan is that the franchise need not have a special horticulture background to operate a Hardi-Gardens center," said company President Francis Galloway. "We offer a comprehensive course in garden center management and actual on-the-job training in one of our Nashville outlets. It greatly simplifies the horticultural and management aspects of the business."

Hardi-Gardens Establishes 60 Franchises in Texas



Hardi-Care, a new franchise concept developed by Hardi-Gardens, Inc., is currently providing complete landscape services for Nashville industrial and residential customers. Jack King (in dark suit), manager of the pilot Nashville operation, consults with servicemen Paul Bauman (foreground) and Don Martin, at work in a residential patio garden.

Conference Panelists



H. E. Kaerwer, Northrup King & Co.; Doyle Jacklin, Jacklin Seed Co.; Ben Warren, Warren's Turf Nurseries; Laurel Meade, Agricultural Alumni Seed Improvement Association.

varieties. Research data, Florence said, have consistently rated Windsor superior in (1) disease resistance, including the common bluegrass diseases such as leaf spot, rust, dollar spot and striped smut; (2) drought tolerance; (3) color; (4) turf density; (5) texture; (6) close mowing, performing well at clipping heights as low as $\frac{3}{8}$ of an inch; and (7) chemical tolerance, including the phenoxy herbicides, the mercurial fungicides and the chlorinated hydrocarbon pesticides.

In 1960, Florence stated, Scotts offered contracts to professional seed producers in the Pacific Northwest to produce Windsor seed. These producers were, and still are, paid a premium for seed meeting the contractual specifications.

Limited quantities of Windsor seed became available and test marketing at retail was initiated in 1962 under Scotts brand, "Gold Label Classic," a bluegrass blend. As the seed producers increased their acreage and yields, Windsor was marketed in a broader geographic area and in several additional Scott brands including pure variety.

The market place, Florence stated, determines the success of any new product. Last year, he said, Scotts spent several million dollars promoting lawn products to the consumer in the United States and in Europe. Windsor was an integral part of that program and as a result, sold over 3 million pounds of Windsor bluegrass seed in 1968. Windsor bluegrass was made available to the professional sod producer for the first time in 1964.

Scotts has developed a sod grower licensing program designed to

support the professional sod grower with technological assistance in production and marketing. The licensed grower is provided marketing assistance thru his co-op advertising fund, designed to broaden the Windsor market, and stimulate the sod market in general. Selling aids, Florence pointed out, include signs, banners and promotional literature.

Sodco

Sodco is a new dwarf variety of bluegrass developed at Purdue University. It was discussed by Laurel Meade, Agricultural Alumni Seed Improvement Association, West Lafayette, Ind., the organization which will promote and develop the variety in the market.

Meade said that the Foundation group owns and operates 500 acres of land in the area and also has a research farm in Florida. Foundation seed for Sodco was made with a trial University planting in the fall of 1968. A few thousand pounds were produced, he said, and will be expanded as rapidly as possible. The Purdue Research Foundation has applied for a patent for the new variety and has assigned distribution rights to the Association. Meade said that this latter group is working under a contract with Western seed producers to produce seed.

Sodco, according to Meade, grows slowly and low. It is resistant to striped smut. Leaf nodes are close together and the leaf blades have a horizontal growth habit. Whereas common bluegrass varieties are cut at one and a half to 2-inch heights, Sodco may be cut three-quarters of an inch to an inch in height, Meade said. This can bring

about a "manicured" look to lawns. Because it does not have to be cut frequently, thatch is reduced. However, Meade stated, there are some shortcomings. Sodco is not designed to withstand heavy play use or traffic. It is more a "picturebook" grass. It will do best, Meade believes, on front lawns with little traffic and on golf course fairways which receive excellent care and management. Sodco has been tested at several state agricultural experiment stations in the United States.

Warren's A-20 Bluegrass Has Five-Year Guarantee

Warren's Turf Nurseries recently announced that its new disease-resistant bluegrass, A-20, is guaranteed to grow within five years of the date of planting. The sod, however, must be planted and maintained in accordance with instructions specified by the company, according to Robert Warren.

The new bluegrass has proved to be rust and mildew resistant, as well as resistant to stripe smut and leaf-spot, says Warren. Its thick growth retards weed invasion, the firm contends. A-20 will survive close mowing to $\frac{1}{4}$ -inch and is therefore good for home putting greens and croquet courts, says Warren.

Dark green in color, A-20 Bluegrass makes a dense carpet-like turf but does not develop thatch as readily as most bluegrasses, the company says.

A-20 must be planted from sod or plugs; it is not available as seed. It is not guaranteed against damage by insects or traffic.



Deal Says Air Pollution Damages Annual Bluegrass

Air pollution hasn't been given proper blame for causing damage to golf courses and lawns, says University of Maryland Turf Specialist Elwyn E. Deal.

Plants show harmful effects to air pollution well before humans become uncomfortable, he reveals. An oxidant concentration of about 0.15 ppm is required for human discomfort, but plants begin to show harmful effects at one-third this concentration, Deal explains. Table 1 shows

the susceptibility of common weeds to air pollutants.

Perhaps a closer look at a relationship between air pollution, turfgrass and annual bluegrass around cities should be taken, Deal suggests. Many cases have been cited in which annual bluegrass has continued to die, often with few or no positive disease symptoms apparent and even after fungicides were applied.

High temperatures that the plant cannot tolerate have been blamed for annual bluegrass injury in warmer urban areas, but perhaps a combination of weather and air pollution was the cause of damage, Deal says.

New officers and Board of Directors for New York State Arborists Association are, left to right: front row, William Herrmann, immediate past president; Fred Micha, 1st vice president; Bill Cadwallader, 2-year director; Stephan Grant, 1-year director; Ira Wickes, Jr., newly elected president; back row, Fred Donovan, 2nd vice president; George Callaway, secretary-treasurer; Carl Lundborg, 3rd vice president; Jack Schultz, 1-year director; and Robert Kessler, 3-year director. Not shown are 3-year Director Douglas Campbell and 2-year Director Edwin Drabek.

Table 1. Decreasing order of susceptibility of ten common U. S. weeds to three atmospheric pollutants (Benedict and Breen).

Sulfur dioxide	Hydrogen fluoride	Oxides of Nitrogen
*Chickweed	*Nettle-leaf goosefoot	*Mustard
*Mustard	*Chickweed	*Sunflower
*Annual Bluegrass	*Pigweed	*Annual bluegrass
Sunflower	Annual bluegrass	Dandelion
Kentucky bluegrass	Lamb's-quarters	Cheeseweed
Pigweed (Amaranthus retroflexus)	Mustard	Kentucky bluegrass
Cheeseweed	Kentucky bluegrass	Chickweed
Lamb's-quarters	Cheeseweed	Nettle-leaf goosefoot
Dandelion	Sunflower	Lamb's-quarters
Nettle-leaf goosefoot	Dandelion	Pigweed

* Significantly more sensitive than others in list.



William Herrmann, immediate past president of New York State Arborists Association, congratulates this year's president, **Ira Wickes, Jr.**

Calhoun Is Greens Expert

Charles Calhoun, consulting turfgrass specialist and golf course consultant of Ames, Ia., will have a hand in developing a new Story City (Ia.) golf course, which will be part of a large municipal recreation area.

Calhoun is currently developing grading specifications for tees, greens and fairways. Greens should be of modest contour to provide pleasing yet challenging conditions for the average or novice golfer, he says.

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For More Details Circle (101) on Reply Card



Reid A. Woodbury, General Manager of Woodbury Chemical Company's Western Division, addresses the first annual Turf Clinic for lawn and garden supply dealers, recently held in Denver. Woodbury described soils in the western states, for which his company's new "Envy" Lawn Fertilizer, soon to be introduced in the West, was formulated. Seated is Dale Garrett, member of the sales staff of the Chemical Division of CF&I Steel Corporation, manufacturer of "Envy."

Woodbury's 'Envy' Treats Alkaline Western Soils

Woodbury Chemical Company of St. Joseph, Mo., and Denver, Colo., is marketing 'Envy,' a new fertilizer especially formulated to treat the alkaline soil condition characteristic in the western part of the country.

Produced by CF&I Steel Corporation, Pueblo, Colo., Envy contains 17% nitrogen, 21% sulphur and 4% iron (up to 4 times the iron in other brands), the three chemically compatible ingredients necessary for turf development in the iron-poor soils of the West, according to Woodbury.

A 40-lb. bag of new, pelletized Envy covers up to 8000 square feet, says Woodbury, which is offering a money back guarantee if satisfaction is not attained.

Texas A&M Combats St. Augustine Decline

Developing resistant strains of St. Augustine grass may be the only way to fight St. Augustine Decline (SAD), a virus devastating Texas lawns, according to Texas A&M University assistant Extension plant pathologist Norman L. McCoy.

Because the disease is parasitic on living plant cells, McCoy explained, it cannot be eliminated by present viricidal chemicals without damage to the plant. With no cure in existence, the disease can have a shattering impact economically on South Texas' homeowners, as 96 percent of Gulf Coast lawns are St. Augustine grass, McCoy said. In the Corpus Christi area alone, SAD may cause an estimated loss of \$18

million, he revealed.

Texas A&M researchers are now screening St. Augustine varieties for a source that has genetic re-spring, McCoy reported. When resistant possibilities are found, plants and progeny will be inoculated with the disease. From these, sources of resistance will again be screened for combination with an improved St. Augustine variety for market.

Grass Is Sound Absorbent Illinois Study Indicates

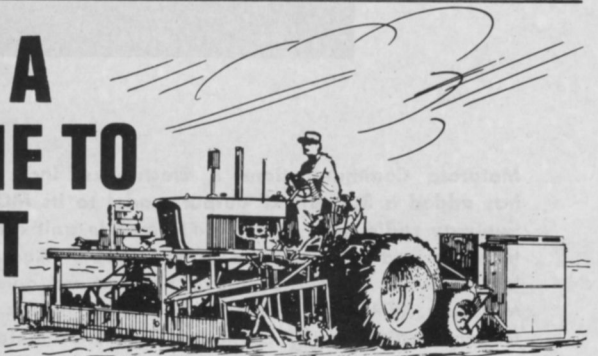
Want a quieter neighborhood? Then plant more grass, say researchers at the Riverbank Acoustical Laboratories in Geneva, Ill. Their recent studies have indicated that grass is a highly efficient sound absorber, although not an effective sound barrier, according to William Siekman, manager of Riverbank.

"Our study indicates that grass would be useful as a sound-absorbing material in closed areas, such as courtyards," Siekman explains. Looking to the future, he notes the possibility of contouring the opposing faces of buildings to direct reflected sounds into grassy areas rather than toward other buildings.

Square blocks of Marion Bluegrass, trimmed to a height of 2 inches, were used in the Riverbank tests. The sod, which was saturated with water to remove any acoustical effect due to the earth, was found to be more sound absorbent than most carpets, Siekman reports.

Riverbank Acoustical Laboratories is managed by ITT Research Institute of Chicago, an affiliate of Illinois Institute of Technology.

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Features of Baker Equipment Mfg. Co.'s (Richmond, Va.) fully hydraulic B-12 Spira-Matic Crane include: 6-ton capacity, 22½-foot reach, 32-foot sheave height, full 365° rotation, mounting on standard truck chassis and dual hydraulic system (one for crane, one for 15,000-lb. winch). Two self-locking A-frame outriggers extend and retract at 45° angles, offering spread of more than 12 feet, pin to pin, Baker reports. Side rollers and full-width support roller guide telescopic boom. "Wrap-around" gear teeth are securely meshed for even load distribution, says Baker. For added safety all cylinders have pilot-operated check valves. Rotational system features automatic side-pull relief to protect booms from lateral overloading. For more details circle (701) on reply card.

Motorola Communications & Electronics, Inc., Chicago, has added a 30-watt RF output model to its MOCOM-30 two-way radio line. The new FM mobile unit offers fully transistorized receiver and power supply. Audio output lets message be heard above background noises, says Motorola. PERMAKAY filter is sealed in plastic for protection against drift, aging and environmental conditions, Motorola reports. For more details circle (702) on reply card.

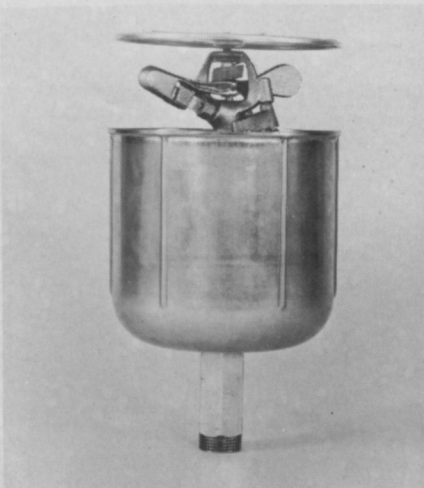


J. I. Case Co., Racine, Wis., offers its new Model 200 series "Performance King" compact tractors available in 10 hp (Model 220, shown at left) or 12 hp. Unit's sloping engine hood provides greater operator visibility, Case reports. Series 200 has matching Case-built rotary mower that cuts a 44" path. Case's compacts feature dual hydraulic no-shift drive system with "high" range (for light loads and over-the-road travel) and "low" for heavy loads. Full speed can be maintained in both high and low range, says Case. For more details circle (703) on reply card.



Vandermolen Co., North Caldwell, N. J. is marketing its new Diadem spreader and Seeder Model K-600 featuring a 1500-lb.-capacity conical steel hopper. Centrifugal spinner spreads seed or fertilizer in a 3 to 50-foot swath. Coverage can be regulated from

4 to 2500 lbs. per acre; spreader can cover 40 acres per hour with a tractor speed of 10 mph, says Vandermolen. Control full rear or one-sided spreading from tractor while driving. For more details circle (704) on reply card.



Its new all-brass Pop-Up Impulse Sprinkler defies breakdown and the need for replacement, says Turf Irrigation Corp., Commack, N.Y. Spray diameters can be regulated, plunger assembly can be

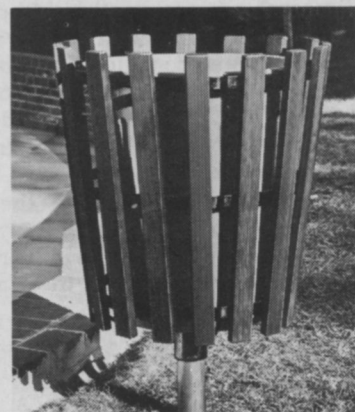
taken out without need to remove housing from ground, Turf contends. Unit requires only shallow trenching because of its small size. For more details circle (705) on reply card.



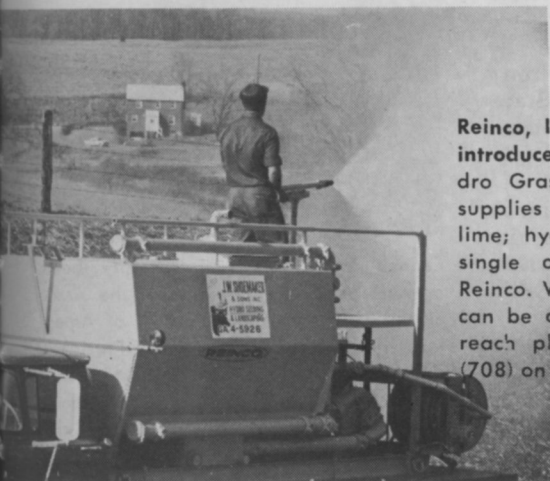
Universal Metal Products Div., Leigh Products, Inc., Saranac, Mich., has a new 3½-gal., stainless steel sprayer with 36" hose, extension tube that swivels 360°, adjustable nozzle and carrying strap. For more details circle (707) on reply card.



Gravely Corp., Clemmons, N. C., now offers a riding-walking Convertible tractor in 7.6, 10 or 12 horsepower. Features include all-gear drive, instant forward and reverse, rear engine for traction and short turning radius. Variety of attachments is available: pictured above is Gravely's new 12 hp Convertible with 50" front-mounted mower. For more details circle (706) on reply card.



Victor Stanley, Inc.'s (Dunkirk, Md.) "Litter King" receptacle takes care of trash beautifully. Walnut-stained cypress wood slats and reinforced steel rings and struts withstand even extreme weather conditions, says Victor Stanley. Unit is dip-coated to prevent rust and rot and to maintain finish. Comes with 22-gal. plastic container. For more details circle (709) on reply card.



Reinco, Inc., Plainfield, N. J., recently introduced a power reel for their Hydro Grassing Model HSJ-10WX. Reel supplies slurry of seed, fertilizer and lime; hydraulic agitation method lets single operator control spray, says Reinco. With the reel, 200 feet of hose can be attached for spraying hard-to-reach places. For more details circle (708) on reply card.



Dr. Boysie Day, left, director of the Citrus Research Center and Agricultural Experiment Station at the University of California, Riverside, and university chancellor Dr. Ivan Hinderaker welcome Dr. George R. Ferguson, right, president of Geigy Agricultural Chemicals at the international symposium on triazine herbicides held in Riverside last February. The three-day event was attended by 160 scientists from the United States, Canada, England, France and Switzerland.

Students, Public To Enjoy Louisiana Tech's Arboretum

Louisiana Polytechnic Institute at Ruston has a 30-acre Arboretum where more than 5000 trees of 300 species are being tested for general adaptability to northern Louisiana soils and climate.

Invaluable for research purposes and student instruction and experimentation, the Arboretum also serves as a recreational retreat and a means of learning about native exotic species for the public and collegians alike.

Research on propagation of ornamentals and commercial trees and plants is being done in greenhouse near the Arboretum. Greenhouse seedlings are then transplanted to the Arboretum, where their progress is evaluated year by year.

Tree species from each of the 50 states are reportedly growing in the Arboretum, whose flowering trees and shrubs are expected to attract a number of tourists each year.

Morishita Says Control Of Chinch Bug Is a Cinch

The southern chinch bug, first detected in Southern California less than two years ago, can be easily controlled, according to Frank S. Morishita, entomology technician at the University of California at Riverside.

A single application of Akton, Ethion, Diazinon or Dursban pro-

vides adequate control for 2 or 3 months, Morishita reports. The insecticides act against the pest's nymph stage, which is especially active in April in the Southland, according to the researcher.

Although a one-shot treatment offers effective control, to be on the safe side apply insecticide once in April and again in August, Morishita recommends.

Grass damaged by chinch bug nymphs, which can't be seen, turns an off-color green, he reports. Good cultural practices, along with an insecticide, help control the pest, which hits where grass is weakest.

Jersey Clean-Up Program Stresses Weed Control

Urban beautification programs being encouraged in New Jersey stress the control of noxious weeds as well as the elimination of litter.

Weed-free lots, says Archie B. Freeman of the Division of Environmental Health, New Jersey State Department of Health, are not usually subjected to dumping and littering as are weedy vacant lots.

Interest in noxious weed control programs was on the upswing in 1968, Freeman reports, with an increasing number of municipal health departments asking for state financial aid for such programs this year.

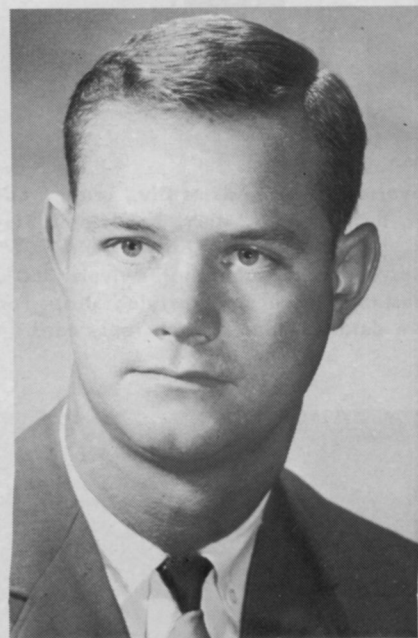
To encourage and recognize effective local weed control programs, Jersey's Division of Environmental Health has established a special citation and awards program.

Preventing Law Suits Involving Employees' Cars

If one of your employees, while on a company errand and driving his own car, is involved in an accident, the company can be liable, cautions an article in the *Indiana Nursery News*, publication of the Indiana Association of Nurserymen, Inc.

Insurance company studies indicate that even the occasional use by a company of an employee's car—even if the person is merely to mail a letter on his way home from work—is sufficient to establish a business relationship, with the company, consequently, considered liable in case of an accident, the article reveals.

To safeguard against such law suits, a company has three alternatives: (1) never allow an employee to use his own car for company business; (2) have your insurance company include a non-ownership contingent liability coverage in your company policy; or (3) contact the insurance firms of all employees, requesting copies of "Evidence of Insurance Certificates," which are usually easy to obtain and give a complete picture of the employee's car insurance coverage, the article says.



Clarke W. Davis has recently been named Executive Director of the Associated Landscape Contractors of America, Inc., according to ALCA President Tom Lied. Davis is also Executive Secretary of the National Arborist Association and Executive Director of the American Society of Consulting Arborists.