



Some 2½ acres of Nunes sod was laid in Willard Park in a 3-day period.

## Willard Park Sodded With Nunes Turfgrass

Nunes Turfgrass Nurseries at Patterson, Calif., won the bid for sodding Willard Park at Berkeley. The 2½ acre site was financed from the City of Berkeley's Capital Improvement Program and the Open Space Program of the US Department of Housing and Urban Development.

Of interest to sod growers is the thinking of Berkeley's Superintendent of Parks, Grayson Mosher, in justifying sodding over seeding to his city administration.

First, Mosher pointed out, time is a critical factor. "In the long run," he emphasized, "the cost balances it-

self out. If we were to seed a park, park personnel would be required to watch over the area 24 hours a day, 7 days a week, to keep dogs and people off the area until the seeding had time for adequate germination and a good stand of grass was up."

"Watering of the seeded area," he continued, "is critical too. Crews would have to be on hand to do this regular. Then, there's fertilizing and weeding to be done. On the other hand," Mosher said, "with the use of sod, the irrigation system can be used immediately and the park can actually be opened to the public in a matter of days as opposed to a matter of months with seeding."

## Merion Bluegrass Association Report Good Crop Outlook

At the recent 18th annual meeting of the Merion Bluegrass Association at Corvallis, Ore., reports from growing areas of the Northwest indicate a good crop for this year in all regions. New acreage will increase the coming '72 crop.

Arden Jacklin, president of Jacklin Seed Company and also president of the Merion association, was again named president for the new year. Dick Bailey, Turf-Seed Inc., Woodburn, Ore., was elected vice-president; Arnie Bonnicksen, Western Farmers Association, Seattle, Wash., treasurer; and James Eveson, La Grande, Ore., secretary. Directors are Jacklin, Bonnicksen, Bailey, Elmer Schneidmiller, Liberty Lake,

Wash., Elmer Satchwell, Post Falls, Idaho, Tom DeArmond, Hubbard, Ore., George Royes, Grass Seeds, Imbler, Ore., and Ron Olsen, Madras, Ore.

Dr. John Hardison, Oregon State University, reported on new chemical studies for control of stripe smut, ergot, and others, indicating that several look promising which are mild in toxicity and could also be less expensive.

The 60 members attending discussed the merit of promoting Merion bluegrass as a base grass in mixtures. The group also decided to exhibit at the coming February turfgrass show of the Golf Course Superintendents of America. They named Spokane, Wash., as site for the coming annual meeting in the spring of '72 and voted to continue support for the Better Lawn & Turf Institute.



Keep *Poa annua* from showing up in your turf. Use Dacthal® W-75 turf herbicide—the pre-emergent herbicide that controls most annual grass and many broadleaf weeds. Yet it's safe even for new grass when used according to label directions.

One early spring application is sufficient to check most weeds. But with *Poa annua* and other late germinating grasses, try a second application in late summer. Always read the label before using any herbicide.

Dacthal for turf is also available in 5% granules. Ask your dealer about Dacthal or write Agricultural Chemicals Division, Diamond Shamrock Chemical Company, 300 Union Commerce Bldg., Cleveland, Ohio 44115.



**TABLE I. STANDARDS: Seed standards for sod quality seed are as follows:**

Variety	Minimum Purity	Minimum Germination	Maximum * Other Crop	Maximum *** Weed
Merion Kentucky Bluegrass	95%	80%	0.1% **	0.03%
Other varieties of Kentucky Bluegrasses	97%	80%	0.1% **	0.03%
Red Fescue	98%	90%	0.1%	0.03%
Chewings Fescue	98%	90%	0.1%	0.03%

\* Must be free of ryegrass, orchardgrass, timothy, bentgrass, big bluegrass, Canada bluegrass, Poa trivialis, smooth brome grass, reed canary grass, tall fescue, and clover.

\*\* Other Kentucky bluegrass — Maximum 2%.

Canada bluegrass — Maximum 0.1%.

\*\*\* Must be free of dock, chickweed, crabgrass, plantain, black medic, annual bluegrass, velvetgrass, and prohibited noxious weed seeds.

## Seed Standards Into Use For State of Washington

Washington state's sod quality certified standards have been revised and recently went into effect. They include a number of changes. These along with the original proposal warrant review by sod growers.

Primary change has been the upgrading of purity requirements for all Kentucky bluegrass varieties with the exception of Merion. Several of the special turf type varieties, including Fylking, Sodco, Baron, Pennstar and others were previously included with Merion in the category requiring only a minimum

purity of 95%. The new requirements call for these varieties, including Fylking, to now have a minimum purity of 97% to qualify for Gold Sod Quality tags. The purity requirements for Merion will remain at 95% since there are years (hot, dry, climatic conditions) when Merion will be "lightweight" and have a higher percentage of inert material and, therefore, at lower purity.

Following are the standards set forth in the May 16, 1971 order by Donald W. Moos, director of agriculture for the state of Washington:

**SOD QUALITY CERTIFIED SEED STANDARDS:** The general rules for seed certification and grass

seed certification standards are basic and together with the following specific rules constitute the rules for sod quality grass seed certification.

**VARIETIES ELIGIBLE, CERTIFICATION FEES, LAND AND ISOLATION REQUIREMENTS, AND FIELD TOLERANCES:** The varieties eligible and certification scheme of each; the certification fees; the land requirements; the isolation requirements; and field tolerances shall be as listed in grass seed certification standards.

**SOD SEED ANALYSIS CERTIFICATE:** A sod seed analysis certificate, which is a 25 gram purity and includes noxious, all weed, all crop, 10 gram Poa annua check, and germination, will be the basis of determining seed standards.

**SOD QUALITY SEED TAG:** In addition to the certification tag, seed meeting sod quality certified seed standards will be tagged with a special "Sod Quality Seed" tag.

**SERVICE FEE:** Service fee for sod quality seed tags and tagging shall be \$0.25 per cwt.

## Gypsy Moth Creosote Again Being Marketed

Cabot's Gypsy Moth Creosote, a product originally developed by Samuel Cabot, Inc., Boston, Mass., in the 1890's, is again being marketed.

The company sold the product until development of DDT shortly after World War II. With DDT now outlawed for control, Mr. Samuel Cabot, president of the company has announced renewal of the product in the market. It is being re-registered with the Environmental Protection Agency's Division of Pesticides.

The Gypsy moth creosote product is a black liquid that penetrates completely through the nest and kills all eggs, and thereby prevents hatching of the caterpillars.

Gallon prices range from \$2.35 for singles, to \$1.90 for 55-gal. barrels.

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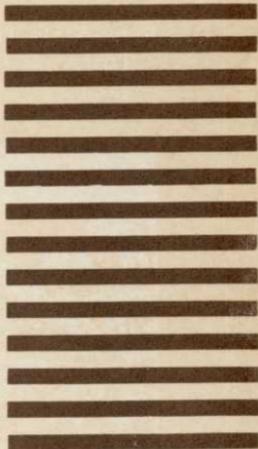
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13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

**Shade Tree Meeting**, Ohio Agricultural Research and Development Center, Wooster, Ohio. July 7.

**Hyacinth Control Society**, Annual Meeting, Manger Motor Inn, Tampa, Fla. July 11-14.

**American Association of Nurserymen** convention, Statler Hilton Hotel, Dallas, Tex. July 17-21.

**1971 Midwest Nursery and Landscape Exposition** at D. Hill Nursery, Dundee, Ill. July 25-27.

**United States Department of Agriculture Turfgrass Field Day**, Plant Industry Station, Beltsville, Md. Aug. 4.

**47th International Shade Tree Conference** at the Queen Elizabeth Hilton Hotel in Montreal, Quebec, Canada. Aug. 8-12.

**American Society of Agronomy, Crop Science Society of America and Soil Science Society of America** concurrent meetings in New York City. Aug. 15-20.

**Penn State Turfgrass Field Day** at the Joseph Valentine Turfgrass Research Center, University Park, Pa. Aug. 25-26.

**National Association of Professional Gardeners**, Annual Conference, Princeton Inn, Princeton, N.J. Aug. 28-30.

**Michigan State Turfgrass Field Day** at the Crop Science Field Laboratory in East Lansing. Sept. 9.

**Alabama-Northwest Florida** annual turfgrass short course in cooperation with Auburn University, Auburn, Ala. Sept. 9-10.

**Florida Turf-Grass Management Conference**, Pier 66, Ft. Lauderdale. Sept. 19-22.

**Midwest Regional Turf Foundation** field day, Purdue University, Lafayette, Ind. Sept. 27.

**30th Annual Short Course for Roadside Development**, Columbus, Ohio. Oct. 4-8.

**Society of Municipal Arborists**, 7th annual meeting, Empress Motel, Asbury Park, N. J. Oct. 6-8.

**Wisconsin Golf Turf Symposium**, Pfister Hotel Milwaukee, Wis. Nov. 4-5.

**Arizona Parks and Recreation Conference**, annual meeting, Holiday Inn, Tempe, Ariz., Nov. 17-18.

**National Agricultural Aviation Association**, Fifth Annual Conference, Fairmont Hotel, Dallas, Tex. Dec. 5-9.

**Northeastern Weed Science Society**, 1972 Convention, Hotel Commodore, New York, N. Y. Jan. 5-7.



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## Lake Bottom Weed Control ARS Tests A New Method

A cutrine-diquat combination placed on the bottom of infested lake areas is doing a good job of controlling aquatic weeds in early tests.

Testing is being done by the Agriculture Research Service of the USDA at Fort Lauderdale, Fla. Botanist Robert D. Blackburn, in charge of testing at Lake Maitland, Fla., reports that the combination requires only about 10 percent of the normal cost and chemicals for control.

Early results on one-acre plots look good, he reports, but stresses that tests have only been running for six weeks.

The combination consists of 2 gallons of Chevron's diquat and 4 gallons of Applied Biochemists' cutrine, applied in the bottom two feet of water at the lake bottom. Application is made by dragging hoses from a boat on the bottom of the lake. Metal pipe protruding upward from each hose releases the chemical at about two feet off the bottom.

Extremely optimistic about the process, Blackburn said that there were two surprises in the method.

## Fusarium Shows Up In Michigan Sod Area



The characteristic symptoms of *Fusarium* blight, a relatively new lawn disease in Michigan, are shown here. Cool, wet weather favors the development of the fungus disease. Susceptible grass varieties include Merion and other Kentucky bluegrasses and bentgrasses.

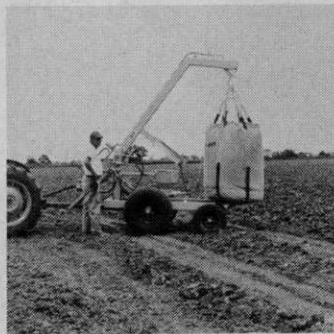
First was the fantastically low rate of chemical needed for control. Second was the fact that activity was produced from the diquat despite bottom residue stirred up by dragging the hoses.

There was no fish kill, and the weed desiccation was slow, both of which favor the system.

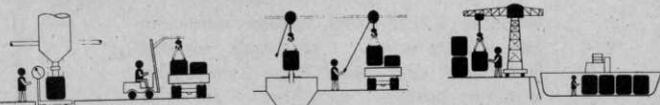
The cities of Lake Maitland and Winter Park are cooperating in the program.

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## BOOK REVIEW

**ANNUALS.** by James Underwood Crockett and the Editors of **TIME-LIFE BOOKS.** 176 pages, illustrated. Retail price: \$6.95. Retail distribution: Little, Brown and Company, Boston, Mass. Library and school edition: Silver Burdett Company, Morristown, New Jersey 07960. Publication date: April 1, 1971.

**ANNUALS**, detailing virtually every aspect of choosing, planting and cultivating those splashes of brilliance so indispensable in a garden, is the first volume in the

**TIME-LIFE ENCYCLOPEDIA OF GARDENING.** Its publication on April 1st initiates the multivolume series, with subsequent volumes scheduled every two months.

The author, James Underwood Crockett, draws from a lifetime of experience as a landscape consultant, horticulturist and nurseryman to guide the home gardener in the step-by-step techniques and "green thumb" secrets that insure gardening success.

The final half of *Annuals* is an illustrated encyclopedia of the an-

nuals available to home gardeners in the United States and Canada, including biennials and those tender perennials generally grown as annuals. Each plant is illustrated in full color to show floral characteristics and leaf arrangement.

The encyclopedia contains more than 160 water colors of annual species by Allianora Rosse, a specialist in flower painting.

*Annuals* will be followed by volumes on roses, landscaping, lawns and groundcovers and other topics important to the gardener.

## National Park Institute Set For November 15-19

Park superintendents and other professionals interested in this segment of the commercial turf industry will meet at Milwaukee, Wis., 15-19 this year for the National Institute on Park and Grounds Maintenance.

Maintenance will be stressed with the theme for this '71 event being "More Maintenance for Your Dollar."

Representatives of the Environmental Protection Agency will specify trends and new regulations in controlling many of the chemicals commonly used in ground work.

Exhibits will include new lines of coming '72 equipment and supplies with service and technical personnel manning booths.

The Institute is centrally located in the downtown area, just a block off the interstate. Headquarters will be the Sheraton-Schroeder Hotel. More information is available from: National Institute, P.O. Box 409, Appleton Wis. 54911.

## Sprinkler Irrigation Group Establishes Turf Committee

The Sprinkler Irrigation Association has named a special Turf Interests Committee. Purpose will be to investigate the industry and compile all possible data relating to effective use of turfgrass irrigation.

A bibliography of all available written material concerning lawn and turf irrigation, including technical papers, magazine articles, textbooks, reference manuals, manufacturers' literature of an educational nature, and other types will be published.

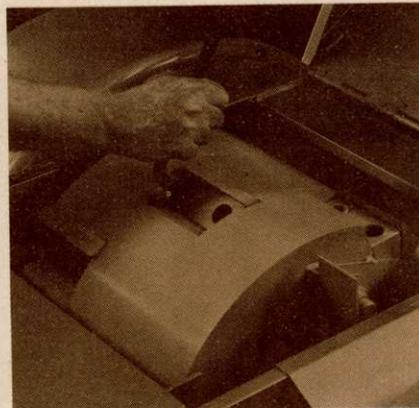
Chairman is A. C. (Chet) Sarsfield, owner of Irrigation Technical Services, Lafayette, Calif. Published data and other material are being solicited by Sarsfield at P.O. Box 268, Lafayette, Calif. 94549.

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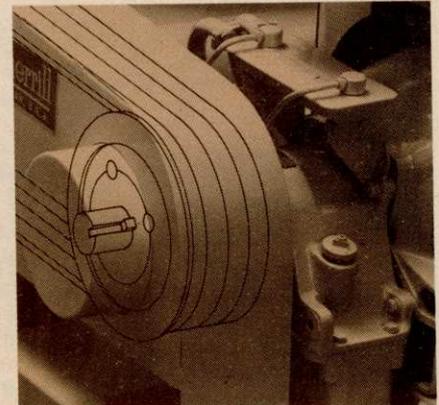
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- **Positive safety-lock pin** for greater operator safety
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**Optional torque converter** isolates engine and transmission from cutting shock to minimize maintenance. Makes operation virtually fully automatic; increases operator productive time. Available on all models.

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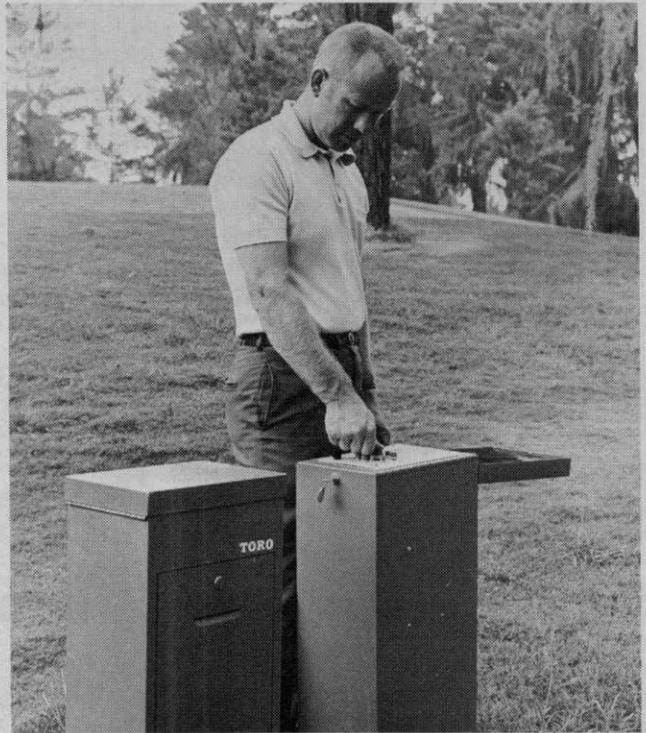


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**A LIFETIME GIFT.** On behalf of his company, Merck & Co., Dr. B. A. Krukoff (center) presents 30 pounds of the flowering erythrina (coral tree) seeds to the City of Los Angeles, which he collected during a recent expedition to Mexico and Central America. Accepting is Mrs. Virginia Baldwin, president of Los Angeles Beautiful, and Brad Pye, president, Recreation and Parks Commission.



Greens Superintendent Arlin Grant manually adjusts a "satellite." The clock mechanism is connected to eleven sprinkler heads, and can activate each valve in sequence. Satellites are activated according to the program set at the central control panel.

## Innisbrook Golf Club Installs Unique New System

Innisbrook Golf and Country Club lies in a small, distinctive region between Clearwater and Tarpon Springs, Fla. In this area abound the highest coastal bluffs in the state. The course has rolling hills that rise from sea level to 80 feet above.

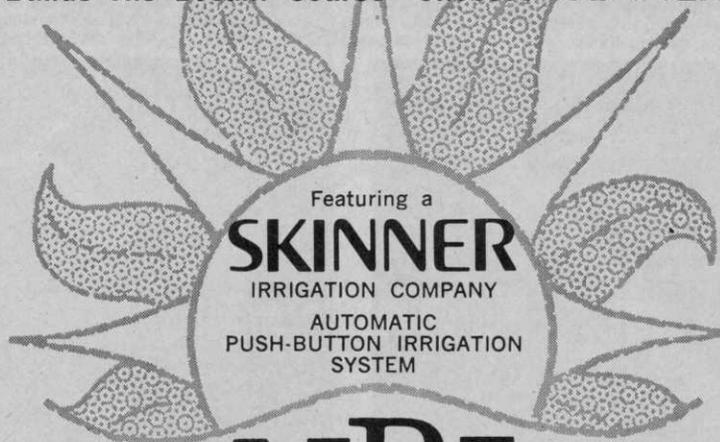
Because of sand, hilltops at Innisbrook are like giant sieves. Water filters readily to cypress swamps in the bottomlands. Result is that ten times as much water is required to irrigate the porous turf on the knolls as is needed for the mucky soil in the low areas.

To solve this problem, Innisbrook developers have installed a fully automatic irrigation system with 1,000 sprinkler heads which can be individually programmed from a central control panel.

"This is an ideal system for the conditions resulting from Innisbrook's unusual terrain," Project Director Harvey Jones says. "We can deliver with precision the exact amount of moisture needed by each part of the course."

A Toro system was installed by The Wadsworth Company. Deep wells supply the water, which is pumped into Innisbrook's many lakes, then onto the course.

Golf Course Architect "Andy" Anderson  
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## Turf Specialists Recommend Lawn Grass Mixtures

Turf specialists know that each grass variety reacts differently to soil conditions, management and environment. For these reasons they recommend formulations or blends of Kentucky bluegrass varieties for turf adapted to a wide range of conditions. Until now it has been impossible to produce a blend of three Kentucky bluegrass varieties that are compatible in color, texture and beauty. So says Howard Kaerwer, turf agronomist at Northrup, King & Company, Minneapolis, Minn.

With the introduction of Pennstar Kentucky bluegrass, such formulas are now possible, Kaerwer says. Prato Kentucky bluegrass developed in Holland, Fylking Kentucky bluegrass from Sweden and Pennstar Kentucky bluegrass developed by Penn State University are so similar in appearance that it is difficult to tell them apart under normal lawn growing conditions. Yet due to their diverse backgrounds, each reacts as an individual to local conditions. Therefore, it is no longer necessary to establish mixtures of grasses differing in color, texture or leaf-width to gain the benefits to be derived from using formulas of grasses.

Fylking, Prato and Pennstar react differently to disease and insect problems and counteract damage. All three varieties are highly competitive and crowd out weeds. They perform well at short or long mowing heights. They react favorably to mowing heights.

## IIRC Proceedings Available From Davis at Wooster

Proceedings of the First International Turfgrass Research Conference are now available according to Dr. James B. Beard, of Michigan State University, who was chairman of this meeting held in England in 1969. The 610 page Proceedings is organized into subject matter areas covering all phases of turfgrass science and culture. The complete research papers of the participants and the discussion sessions are included. Cost of the Proceedings is \$8.00 per copy including postage in the United States. It can be obtained by writing to: Dr. R. R. Davis, assistant director, Ohio Agricultural Research and Development Center, Wooster, Ohio 44691. Checks should be made out to the International Turfgrass Society.



The patented side hopper of the Cut 'N Shred Shredder provides the fast and exclusive method of first cutting and then shredding the most fibrous materials, such as tree prunings, stalks, vines, etc. into desirable mulches or fertilizers. Any garden wastes fed into either hopper, comes out shredded into useable mulch or compost that is ideal for fertilizing, weed smothering, moisture retention, or winter protection. The 3 1/2 h.p. Cut 'N Shred Shredder for only \$149 will make up to 80 gallons of wood mulch per hour from tree prunings.

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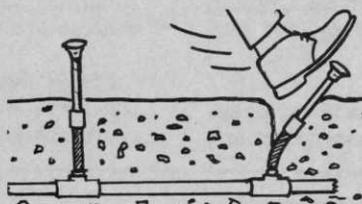
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## industry people on the move



**Eistein Pedersen** named director of Distribution Planning for J I Case Company at Racine, from duty in Case European Operations Div.

\* \* \*

**Dr. Neil W. Stuart**, ARS research plant physiologist, awarded the Distinguished Service Award, highest USDA honor.

\* \* \*

**Zoltan Merszei** and **Herbert H. Lyon**, named vice-presidents for Dow Chemical. Merszei is president of Dow Chemical Europe S.A., and Lyon will service as assistant director of corporate administration. A. Philip Hanmer succeeds Lyon as corporate controller.

\* \* \*

**Dr. Edward F. Knipling**, science advisor to ARS administration of USDA, a Distinguished Federal Civilian Service Award from President Richard Nixon, for pioneering in battle against insects.

\* \* \*

**Jerry Claussen**, to Phelps-Brauer & Associates, Lakewood, Colo., golf course architects and site planners,

from consultant for National Golf Foundation.

\* \* \*

**John D. Birkett** and **William K. Manos**, to Union Carbide as technical sales representatives for the Northern Region for ag products and services; **Edward B. Baskin, Jr.**, to similar position at Bishopville, S.C.

\* \* \*

**Dr. Walter H. Grimes**, named Chemagro's director of Research and Development, from product and market development group of company.

\* \* \*

**Thomas Scrivner**, to Air Rake Manufacturing Corp. as sales manager, from Manufacturers' Sales Company.

\* \* \*

**Ernest Brooks**, **David Jetzke**, and **Steve D. Keating**, named district sales managers for Toro's turf products division. Brooks, to East Coast, Jetzke, the upper mid-West and part of Canada, and Keating New England and eastern Canada.

\* \* \*

**Lewis B. Bloch**, elected president of Landscape Contractors Association of Metropolitan Washington, D. C. Bloch is vice president of J. H. Burton landscaping contractors.

\* \* \*

**Muryl White**, appointed branch manager of Thompson-Hayward's Natchitoches, La., office, from sales representative.

## insect report



### TURF INSECTS

#### SWEETPOTATO FLEA BEETLE (*Chaetocnema confinis*)

ARIZONA: Heavy on dichondra lawns in several areas of Phoenix, Maricopa County.

#### A BILLBUG (*Sphenophorus phoeniciensis*)

CALIFORNIA: Adults appearing in lawns at San Diego, San Diego County.

#### WESTERN TENT CATERPILLAR (*Malacosoma californicum fragile*)

OREGON: First instars observed north of Chiloquin, Klamath County, on bitterbrush.

#### A WHITE GRUB (*Phyllophaga anxia*)

NEBRASKA: Averaged 36.6 larvae and 13.3 adults per square yard at several locations in Cherry County. Counts lower than in 1970.

### INSECTS OF ORNAMENTALS

#### NANTUCKET PINE TIP MOTH (*Rhyacionia frustrana*)

KANSAS: Two larvae found in terminals of Scotch pine in Riley County planting.

#### HOLLYHOCK WEEVIL (*Apion longirostre*)

VIRGINIA: Adults collected in Powhattan County May 18, 1971. This is a new county record. Previously recorded from Montgomery, Sussex, Fluvanna, Stafford, and Fairfax Counties.

### TREE INSECTS

#### ELM LEAF BEETLE (*Pyrralta luteola*)

OREGON: Adults in Medford and Talent area of Jackson County. Slight to moderate feeding damage reported. NEVADA: Small numbers of eggs in southern Washoe County. WYOMING: First adults on elm in Wheatland, Platte County. KANSAS: Many eggs on Siberian elm leaves on May 14 at McPherson, McPherson County. Many adults feeding on leaves. OKLAHOMA: Eggs and small larvae heavy on Siberian elm at Seminole, Seminole County. Heavy in Kay County and moderate in Craig County. TEXAS: Light and localized on elm trees in Denton County. Eggs reported as hatching; first and second instars present. MISSISSIPPI: Light to moderate on Chinese elm in Yalobusha, Calhoun, and Oktibbeha Counties.

#### FOREST TENT CATERPILLAR (*Malacosoma disstria*)

NORTH DAKOTA: Eggs hatched by May 15 in Fort Totten area of Benson County. MINNESOTA: Eggs hatched on May 6 in International Falls area. Defoliation expected to be heavy on aspen in northern Koochiching County, and small locations in Douglas and Otter Tail Counties in 1971.

#### EUROPEAN PINE SHOOT MOTH (*Rhyacionia buoliana*)

MISSOURI: Collected on Scotch pine at Platte Woods, Platte County, May 17, 1971. This is a new county record.

#### PINE NEEDLE SCALE (*Phenacaspis pinifoliae*)

OHIO: First crawlers hatched May 19 on Scotch pine in Geauga County. Seriously reducing marketability of Christmas trees.

#### PINE SPITTLEBUG (*Aphrophora parallela*)

MISSISSIPPI: Moderate to heavy on loblolly pine in Leake, Attala, Winston, and Oktibbeha Counties.

# classifieds



When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

Rates: "Position Wanted" 10¢ per word, minimum \$3.00. All other classifications 20¢ per word, minimum \$4.00. All classified ads must be received by Publisher the 10th of the month preceding publication date and be accompanied by cash or money order covering full payment. Bold-face rule box: \$25.00 per column inch.

## USED EQUIPMENT

**COMPLETE new and used units and spare parts** for professional grounds maintenance and lawn spray equipment. Applies thousands of gallons of liquid fertilizer, insecticide, fungicide, surfactant and weed control at one time with automated precision without refill. Unable to meet planned expansion, must sacrifice where is as is. Contact Dave Wilson or Wayne Matson 615 244-7201.

**FOR SALE: 35 gallon Hardie sprayer** with a 400 gallon wooden tank, mounted on a 1947 Studebaker truck. Good operating condition. \$1,000 or best offer. Tamke Tree Experts, Bernardsville, N.J. 07924. Phone 201 766-1397.

**VERMEER model 18, series 188,** \$2,800.00; 1968 Asphundh 16" 8 cylinder chipper, \$3,600.00; Hardie sprayer 35 GPM (as is), \$300.00; 1968 5T Alenco crane with 60' boom extension on Ford chassis, \$12,500.00. Osborne Bros. Tree Service, Mentor, Ohio 44060. Phone 946-4355.

**SPRAYERS, chippers, log splitters** and other equipment at large savings. Let us know your needs. Equipment Sales Company, 5620 Old Sunrise Highway, Massapequa, New York 11758.

## HELP WANTED

**WANTED: Top-Notch Tree-Service Salesman.** The man we want has a degree in forestry or equivalent, five years' experience in selling tree work, hiring and managing tree and landscape crews, and is ready to accept responsibility and progress with a dynamic company. If you are the man, you will be well-compensated, with top salary, company car, with bonus and commission geared to performance. And a liberal pension plan. You will be proud to sell our services to homeowners, utilities, municipalities, and industries. We are one of the nation's top 10 tree care and landscaping businesses, and growing. As we grow, you grow, too. Write us about yourself or send a resume. Your reply will be treated confidentially. Write c/o Box 66, Weeds, Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

## SEEDS

**SOD QUALITY MERION SEED** for discriminating growers. Also Fylking, Delta, Park, Newport, Nugget and Pennstar bluegrasses as well as fine fescues. We will custom mix to your specifications. Michigan State Seed Company, Grand Ledge, Michigan 48837.

## Wilson (from page 17)

per acre. It is almost impossible to apply sprays with hand-held guns and achieve uniform coverage. An alert sprayman can achieve a satisfactory degree of coverage, however it takes constant concentration.

Knowledge of the various factors that make up the mechanics of spray application will not guarantee a total absence of herbicide application failures; however, a thorough understanding of the major principles involved will increase your percentage of successes.

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## Trimings

### ADVERTISING PAYS DIVIDENDS.

Take the case of the G.I. in Viet Nam who saw the current Sabre Saw Chain ad which features a SABRE gal reaching for another saw. He wrote that, "I hadn't heard of your saw chains before but the girl pictured caught my eye. Keep them coming. Out in the boonies you don't see that type of female. It made the sun break through the rain for a moment."

\* \* \*

### ARBORISTS ARE ADVERTISING

or at least that's the case for the American Society of Consulting Arborists. This young organization of experienced arborists is finding themselves in court on a regular basis — as technical witnesses. There's a great demand for their services to set the cost of damage claims where trees are removed, legally or otherwise. They are finding excellent response from association ads in *LAWYERS WORLD* and the *AMERICAN BAR ASSOCIATION JOURNAL*.

\* \* \*

### FEWER PESTICIDES ARE BEING USED IN THE EAST,

particularly to fight gypsy moth. In New Jersey alone this year, the infested area is about 200,000 acres according to that state's department of agriculture. The Department reports that two consecutive years of heavy defoliation of oak will kill from 30 to 60 percent of the trees, depending on site conditions. And the USDA reports that "gypsy moths defoliated more than 800,000 acres of woodlands in the northeast last year. This more than tripled 1969's defoliated acreage and is six times the amount of damage caused in 1968." End of quote.

\* \* \*

**EUTROPHICATION** is a 5-syllable word that a short time ago was exclusive property of ecologists and plant biologists. It means "nourishment," and especially applies to the feeding of algae floating like green scum in lakes and streams. Rutgers plant biologists are studying this so-called happening, about which they admit there is little precise knowledge to date. When phosphates and nitrogen compounds from detergents, fertilizers, industrial emissions, municipal wastes and other sources enter the water, the algae "blooms," then decays. Oxygen is depleted, and fish kill begins with the slowing down of the natural decomposition of organic matter. Copper sulphate has been the stand-

by control for years but the scientists, with luck, hope to measure nitrogen and phosphate levels, and seek solutions.

\* \* \*

**WE COULD BE STARVING WITHOUT PESTICIDES** if we were at 1930 levels of production when they were not in use. At that time the average yield of corn per acre was 27 bushels. Today, the average is 95. The increase is not all due to use of pesticides, but they have played an important role in keeping down disease, insects, and weeds so that the chemical fertilizers could perform.

### Penn State Developing New Soil Test Method

Penn State University soil scientists are developing a new method for soil testing. It will determine soil requirements — or excess nutrients — for each nutrient element.

The new test, according to Dr. E. Baker, soil chemist, will utilize a chemical solution which, when perfected, will contain the minimum amounts and balance among elements required by plants. Removal of ions from the solution by soil will indicate the need for fertilizers at a given time. The amount of each ion removed, Dr. Baker states, from the solution by the soil will show directly the requirements for a particular nutrient.

Elements being analyzed include nitrogen, phosphorus, potassium, calcium, magnesium, manganese, iron, copper, zinc, and sulfur.

The new procedure will be helpful in using waste products as fertilizers. Soils, water, and crops must be monitored constantly to insure that the quality of each does not decrease. If the new method proves superior to present soil analysis systems, it may be used routinely in five years.

The chemical solution must be perfected to the point where it will always contain minimum concentrations of the essential nutrient ions found in the soil and needed for maximum crop production. Consideration must be given to differing tendencies of various ions to be absorbed or held onto by soil particles. Once this procedure is perfected, the new approach will be ready for calibration.

### K-State Offers New Hort-Therapy Curriculum

A new curriculum in horticultural therapy is being offered at Kansas State University at Manhattan. It is being done in cooperation with the Menninger Foundation.

Horticultural therapy, the reasoning goes, can involve patients in practical work in plants and plant production where jobs are available. The study leads to a bachelor's degree in agriculture.

### Comment

**News Item:** Nurserymen and gardeners of Torrance, Calif., recently gave top soil, ground cover, trees, and shrubs valued at \$40,000 plus, plus their own labor to landscape the newly built Memorial Hospital in that city. Landscaping material was the gift of the nurserymen, labor came from the Gardeners Assn.

**Quotable Comment from a Businessman:** "Nurserymen have donated the plant material, and somehow have managed to scrounge up enough 'free' labor to complete the landscape construction phase of the local hospital. This to the tune of \$40,000! Big Deal!

"Now, I have a question. How was the rest of the project accomplished? Did the brick layers donate their time and material? How about the plumbers, electricians, steel workers, etc.?"

"Of course, we all know the an-

swer. It is the poor, nieve, nature-loving nurseryman, who can't afford to pay his help a decent wage because we are an agricultural enterprise, who places such a low value on his goods and services that he is willing to donate them for any worthy cause that comes along.

"It is high time that the people in our trade realize that we are operating a 'Business', not a benevolent organization, and that our goods and services have a definite value and must be paid for. Why do we insist on perpetuating the thought that our goods and services, somehow, are of less value than those of other trades?"

"If we do not wake up to this fact, we will always be second class citizens in the business world. Edwin E. Smith, President, Smith Tree & Landscaping Service, Inc, Lansing, Mich.