

# Texas A&M Reports Research Progress on 'SAD'

Texas A&M University plant scientists have found disease resistance to the virus lawngrass killer, St. Augustine Decline (SAD), through a new technique of screening for resistance.

Fifteen resistant types have been discovered from a check of 185 St. Augustine-grass cultivars (varieties produced by breeding), clones (vegetative propagation), and seedlings.

Dr. R. W. Toler, A&M plant virologist, and Norman L. McCoy, assistant Extension plant pathologist, detected these disease-free kinds through a method they developed for rapid determination of resistance to the virus disease.

First, they grind diseased plant tissue by a special process and extract the virus in a buffered plant sap solution. The buffer acts as protection for the virus against destruction by enzymes present in plant tissues. The virus is then inoculated into healthy plants in the laboratory and the greenhouse.

After 21 days, they examine the inoculated plants for disease symptoms. Comparisons are made with control test plants given distilled water inoculations to determine

whether damage to the plant is caused by the disease or by inoculation technique.

Plants showing virus symptoms are discarded as being susceptible. Those apparently healthy or symptom-free plants undergo inoculation onto an indicator host, Proso millet, to determine if they are symptomless carriers or are truly resistant.

Toler and McCoy discovered that Proso millet is highly susceptible to the virus and develops diagnostically optimum symptoms in only six days. This speeds up reverification of disease resistance considerably. To eliminate the possibility of "escapes," resistant plants are re-inoculated at least three times. This is done to confirm non-appearance of symptoms as true resistance rather than from changes in environmental conditions, errors in inoculation or other interactions which may mask virus symptoms.

The 185 types checked for resistance by Toler and McCoy were obtained from the world collection of St. Augustine varieties at the University of Florida in Gainesville; Big B Ranch, a part of King Ranch, Inc., of Belle Glade, Fla.; Texas col-

lections from badly infested lawns; and Texas A&M's St. Augustine grass breeding program.

Additionally, the A&M researchers are further evaluating resistant St. Augustine strains found by two commercial lawngrass breeding companies. Commercial firms have joined the search for resistance since Toler and McCoy's screening technique has been shared with them and other public and private grass breeders.

"With discovery of a good nucleus of SAD resistant source material, our next step will be field testing," Toler said. "It will be a matter of determining if these sources will stand up and have desirable quality in actual lawn trials. Those that retain resistance, even though of poor quality, will serve as genetic sources for St. Augustine-grass breeding programs," he continued.

Texas A&M research on St. Augustine Decline, since its discovery in 1966, has received grants from King Ranch, Inc., of Kingsville, and from the Coastal Bend Lawn Improvement Association in Corpus Christi.

## Insect Report

WTT's compilation of insect problems occurring in turfgrasses, trees, and ornamentals throughout the country.



### TURF INSECTS BILLBUGS

(*Sphenophorus* spp.)

MARYLAND: Seventy-five specimens of *S. sayi*, *S. parvulus* (bluegrass billbug), and *S. venatus vestitus* emerged from outerexposed rolls of two trays of Merion bluegrass sod. Each tray contained 55 rolls (500 square feet) of stacked commercially grown sod. Emergence occurred near Poolesville, Montgomery County, October, 1969, following exposure to surface irrigation and sunlight at temperatures in high 70's. Specimens were determined as follows: 7 *S. parvulus*, 12 *S. venatus vestitus*, and 56 *S. sayi*. This constitutes a new state record for *S. sayi* and new host records for *S. sayi* and *S. venatus vestitus*. A single specimen of *S. sayi* was taken in Montgomery County in 1965.

### SOUTHERN CHINCH BUG (*Blissus insularis*)

TEXAS: Widespread and heavy on St. Augustine grass in Harris and Galveston Counties latter part of October. Damage extensive to lawns in cities.

### INSECTS OF ORNAMENTALS A PYRAUSTID MOTH (*Undulambia polystichalis*)

FLORIDA: Larvae infested 80,000 leather hollyfern plants at Emporia, Volusia County, October 31.

### TREE INSECTS EASTERN SPRUCE GALL APHID (*Adelges abietis*)

WEST VIRGINIA: Heavy on 50% of small spruce planting in Marion County.

### SMALLER EUROPEAN ELM BARK BEETLE (*Scolytus multistriatus*)

ALABAMA: Dutch elm disease detected for first time in Colbert and Lauderdale Counties. NORTH CAROLINA: Dutch elm disease confirmed for first time in Mecklenburg County.

### MOUNTAIN PINE BEETLE (*Dendroctonus ponderosae*)

CALIFORNIA: Aerial survey indicates about 5,000 dead trees on 10,000 acres of lodgepole pine at Lava Flow southeast of Hambone Butte, Siskiyou County, on Shasta National Forest.

### A FALSE SPIDER MITE (*Pentamerismus erythreus*)

CALIFORNIA: Heavy on *Calocedrus decurrens* at Los Gatos, Santa Clara County.

### WALKINGSTICK (*Diapheromera femorata*)

Severely defoliated red oak and locust on about 100,000 acres on Ouachita National Forest in eastern OKLAHOMA and western ARKANSAS.

## Trimmings

### NO SMALL DEGREE OF IRONY

is associated with the largest turf transplant in the San Francisco area. Candlestick Park, home of the San Francisco Giants, was stripped in December of its 125,000 sq. ft. of sod by Nunes Turfgrass Nursery of Patterson. The scalping was done to make way for the installation of artificial turf.

The natural grass, said a Nunes official, is valued at roughly \$25,000 and is being replaced with artificial grass costing more than \$1 million.

Seven men and newly developed Nunes harvesting equipment transplanted the turf to McLaren Park in just 16 hours.

\* \* \*

**ARTIFICIAL TURF** has been considered also for the new sports stadium in Kansas City, Mo. William Latta, co-owner of Princeton Turf of Kansas City, has said that his firm could provide sod twice a year for just the interest that would be paid on the money borrowed to install the artificial grass.

\* \* \*

**BOY SCOUTS** of Troop 13 in Kenilworth, Ill., have taken steps to offset the damage of Dutch Elm Disease, reports Scouting Magazine. The troop, as a community service project, established a 20x70 tree nursery to grow trees to replace those destroyed by DED. Scouts bought 87 trees, one to four feet tall. Species included green ash, white ash, river birch, white bark birch, ginko, Norway maple, American beech, red maple, crimson maple, honey locust, hackberry and pin oak.

\* \* \*

**DUTCH ELM DISEASE** has invaded the grounds of Daniel Boone's home at Defiance, Mo., reports **FARMLAND**, a newspaper published by Farmland Industries, Kansas City, Mo. Some of the largest and oldest elms already have been removed. This is tragedy enough, but arborists fear the worst is yet to come. One of the trees "was already old when Daniel Boone first saw it," reported Mike Graznak. Boone decided to build his home near it and later conducted court beneath the tree to settle disputes between white men and Indians. It became known as "The Judgment Tree."

Arborists estimate the famous elm is more than 300 years old. They fear that with DED on the grounds that no matter what precautions they take the "Judgment Day" for the Judgment Tree may not be far off.

## IH Sees More Lawn Tractors in 1970

More lawn and garden tractors will be in operation in 1970 than ever before, predicts International Harvester Co.

Power equipment enabling homeowners and gardeners to take care of larger areas in less time will be a principal reason. Another factor will be the variety of attachments available.

For example, says Max McCallister manager of IH industrial equipment sales, some 60 attachments are available for the IH Cub Cadet line of tractors. These are designed, he says, to expedite

such jobs as lawn mowing and maintenance, seeding, fertilizing, soil preparation, landscaping, earthmoving, sweeping of sidewalk, parking lot and lawns, hauling, gardening, and such winter chores as snow removal by plow or snow thrower.

Industry annual sales figures show the rapid upward trend. Unit volume of between 10,000 and 12,000 in 1956 jumped to 34,000 in 1961, to 114,000 in 1964, and to more than 250,000 in 1968. And McCallister believes the peak is yet to come.

## Key Speakers Announced For Weed Science Society Montreal Meeting, Feb. 2-5

"Weed science and food—Canada, Britain and the U.S." will be highlighted in the 1970 annual meeting of the Weed Science Society of America at the Queen Elizabeth Hotel in Montreal, Feb. 2-5, announces Dr. Glenn C. Klingman, president of the society.

H. A. Olson, Canadian Minister of Agriculture, will be a featured luncheon speaker. Also participating in a general session will be Dr. J. C. Elliot, a weed scientist from Begbroke Hill, England; Dr. G. E. Jones, University of Guelph; Dr. E. G. Anderson, herbicide liaison officer from the Canadian Department of Agriculture; and Dr. B. B. Migicovsky, director general of the research branch, Canadian Department of Agriculture.

Leading authorities are expected to present more than 100 scientific papers at the meeting, dealing with various aspects of weed science and the control of vegetation. Registration will start Monday, Feb. 2, at noon. General session and sectional meetings will run all day Feb. 3 and 4 and the conference will end at noon Feb. 5.

Program chairman for the Montreal meeting is Dr. Loran L. Danielson, plant physiologist and leader in weed research in horticultural crops, U. S. Department of Agriculture, Beltsville, Md. Dr. Danielson is also president-elect of the Weed Science Society. Other officers are: vice-president, Dayton Klingman,

U. S. Department of Agriculture; secretary, Dr. Arnold Appleby, Oregon State College; and treasurer and business manager, Dr. Fred W. Slife of the University of Illinois.

Chairman of local arrangements for the meeting is Dr. John D. Bantden, Ontario Agricultural College.

## New Chemical Increases Pesticide Residual Power

A chemical to give a number of pesticides increased residual power is being developed and marketed by Miller Chemical and Fertilizer Corporation of Hanover, Pa.

Miller's new proprietary chemical, Pinolene, is a film-forming agent designed for spray use with pesticides. The company says Pinolene retards natural degradation of pesticides by minimizing the effects of environmental degrading factors.

With the use of Pinolene, officials say a five- to seven-day pesticide can be made into a two- to four-week product, depending on the specific pesticide and the specific Pinolene formulation. Data is being developed with many pesticides under extensive test programs in the U.S. and abroad.

One formulation of Pinolene, named Vapor Gard, is used as an anti-transpirant. This material, the company says, has shown a high level of effectiveness in the areas of winter protection of evergreens in cold sections of the U.S. One fall application of Vapor Gard will protect evergreens from cold, drying winds for the entire winter.

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## 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

**FOR SALE—Worthington 7 gang 3 blade blitzer mower, 30" blade capacity, 3:50 x 18" tires, excellent condition. \$950.00. West Salem Machinery Company, 7th & Murlark St., Salem, Oregon 97304.**

**SPRAYERS, chippers, log splitters and other equipment at large savings. Let us know your needs. Equipment Sales Company, 4744 Sunrise Highway, Massapequa Park, N. Y. 11762.**

**FOR SALE: Vermeer model 10 stump cutter, very good condition, recently overhauled. Write to: Acme Tree Surgery, 203 Woodland Ave., Morton, Pennsylvania 19070.**

### WANTED TO BUY

**JOHN BEAN hydraulic sprayer 35 to 70 gallon per minute pump. 400 to 600 gallon tank, late model, excellent shape. Write or call W. J. Smith, 2191 Pine River Rd., Midland, Michigan 48640. Phone: Midland, Michigan 631-0817.**

### HELP WANTED

**SPRAYMEN needed, Portland, Oregon area. Must be able to obtain**

license and move to area as near first of year as possible. Able to run route and to schedule customers and bid new jobs, to landscape, do weed control and pruning. (These are wishes not necessities). Will furnish schooling for business management if desired. All inquiries held in strictest confidence. Please send salary and qualifications to Box 47, Weeds Trees and Turf, 9800 Detroit Avenue, Cleveland, Ohio 44102.

**TREEMAN Capable of operating developing small tree company. Must be able to price tree pruning and removals. Knowledge should include tree spraying and pruning. Opportunity for right man to earn excellent income, also fringe benefits. Send resume to: Bob Heavey, Heavey Landscape, 44 White Place, Brookline, Mass. 02146.**

### POSITIONS WANTED

**WANTED supervisory positions in one of the following fields. Background in forestry - arboricultural, (utilities and private work). Nursery management: Landscaping, (utility, public, private work). Tree farming: specializing in large plant specimens 18 to 25 ft. Material. College background in above fields. Expectant salary range \$12,000 to \$15,000 annual. Age 40. Write Box 49, Weeds Trees and Turf, 9800 Detroit Avenue, Cleveland, Ohio 44102.**

**LANDSCAPE architect — Ambitious and talented. Extremely good future for right man. Firm doing landscape design, construction and maintenance. Now owned by large corporation that desires to expand nationally. Reply confidentially to Cut**

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N'Care, Inc., Mr. E. Berthe, 2615 DeLeon St., Tampa, Fla. 33609. Phone 877-8261.

### SALESMAN WANTED

**CANADIAN Company requires sod salesman for Northeast United States and Canada. Must be capable of running entire sales program under professional management. Young, energetic man will best suit. Send complete resume to Box 48, Weeds Trees & Turf, 9800 Detroit Avenue, Cleveland, Ohio 44102.**

### FOR SALE

**A FORT Lauderdale Lawn and Ornamental Pest Control Co. 700 yearly contracts. \$70,000 gross. \$20,000 plus net. Employees will stay. Write Mr. DuBois-Anaconda Realty Co., 1776 E. Sunrise, Fort Lauderdale, Fla. 33304.**

## Meeting Dates

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

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

**North Carolina State University Pesticide-Fertilizer School, Hotel Sir Walter, Raleigh, N.C., Jan. 12-13.**

**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.**

**Purdue University landscape maintenance workshop, University campus, West Lafayette, Ind., Jan. 20-21.**

**Southern Weed Science Society annual meeting, Sheraton-Biltmore Hotel, Atlanta, Ga., Jan. 20-22.**

**Ohio Chapter, International Shade Tree Conference, annual meeting, Hotel Sheraton-Columbus, Columbus, Jan. 25-26.**

**41st Ohio State University short course for arborists, turf management specialists, landscape contractors, garden center operators, and nurserymen, Hotel Sheraton-Columbus, Columbus, Jan. 25-29.**

**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.**

**Michigan Association of Landscape Architects annual meeting, Statler-Hilton Hotel, Detroit, Mich., Feb. 3.**

**Michigan Association of Nurserymen winter meeting, Statler-Hilton Hotel, Detroit, Mich., Feb. 3-5.**

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

