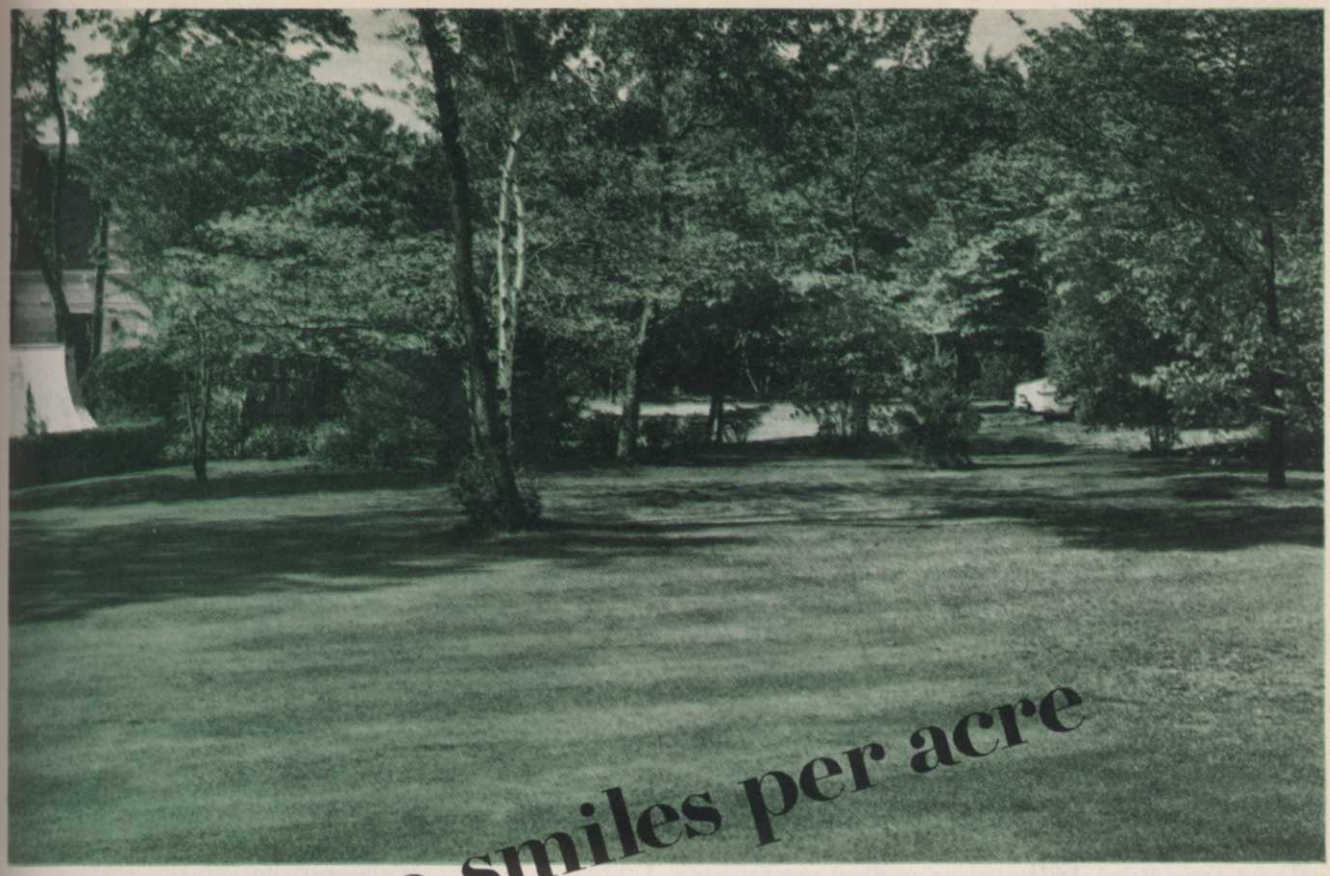

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Write for Velsicol Turf Chemicals Catalog:
Velsicol Chemical Corporation, 341 E. Ohio St., Chicago, Ill. 60611. Dept. GM

Insect Report

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

Turf Insects

APHIDS
(Aphis spp.)
Arizona: Heavy in spots in Bermudagrass seed fields at Yuma Valley, Yuma County.

A BILLBUG
(Sphenophorus phoeniciensis)
Arizona: Adults light in uprooted Bermudagrass sod at Phoenix, Arizona, Maricopa County.

RHODES-GRASS SCALE
(Antonina graminis)
Arizona: Moderate in crowns of Bermudagrass on many properties in Phoenix, Maricopa County.

A SNAIL
(Rumina decollata)
Arizona: Feeding on dichondra lawn at residence in northwest Phoenix, Maricopa County.

Insects of Ornamentals

A CONIFER APHID
(Cinara tujafilina)
Alabama: Moderate to heavy on several 4- to 6-foot arborvitae planting; honeydew heavy.

AN ERIOPHYID MITE
(Calacarus adornatus)
Alabama: Light on numerous camellia plants in central area; up to 100+ per leaf damaging few plants.

HEMISPHERICAL SCALE
(Saissetia coffeae)
Florida: All stages severe on 3,000 coontie plants, *Zamia floridana*, at Tampa, Hillsborough County.

A PIT SCALE
(Cerococcus deklei)
Florida: Adults severe on stems of 342 of 427 hibiscus plants at nursery in Miami, Dade County.

A SOFT SCALE
(Ehrhornia cupressi)
California: Moderate on juniper nursery stock in Sunland, Los Angeles County.

CUBAN-LAUREL THRIPS
(Gynaikothrips ficorum)
California: Moderate on *Ficus retusa* in San Francisco, San Francisco County, for a new county record. This is most northern find in State.

Tree Insects

BARK BEETLES
(Dendroctonus terebrans)
Alabama: Adults and larvae inactive, 1-10 per tree, under bark of twenty 10 to 25-year-old loblolly and shortleaf pines at Lee County home. **Texas:** Total of 330 *D. terebrans*-infested trees treated in Davy Crockett and Angelina National Forests October through December. *D. frontalis* decreased to negligible level October through December. Total of 31 multiple-tree spots found over 4.5 million acres during detection flights in October. Total of 66 infestations involving 4,531 trees controlled by mid-November. *D. brevicomis* light in ponderosa pine stand in western area in October through December. *Ips. avulsus, I. grandicollis,* and *I. calligraphus* activity continued heavy October through December. Losses heaviest in southeastern area; up to 25 percent tree mortality in localized areas.

Compiled from information furnished by the U. S. Department of Agriculture, university staffs, and WTT readers. Turf and tree specialists are urged to send reports of insect problems noted in their areas to: Insect Reports, WEEDS TREES AND TURF, 1900 Euclid Ave., Cleveland, Ohio 44115.

Classifieds

When answering ads where box number only is given, please address as follows: Box number, c/o Weeds Trees and Turf, 1900 Euclid Avenue, Cleveland, Ohio 44115.

Rates: "Position Wanted" 5¢ per word, minimum $2.00. All other classifications, 10¢ per word, minimum $2.00. 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.

HELP WANTED

FIELD SUPERVISOR Industrial Weed Control firm in eastern Pennsylvania is looking for a field supervisor. Degree in one of the agricultural sciences is desirable but not necessary. Write Box 30, Weeds, Trees and Turf, 9800 Detroit Ave., Cleveland, Ohio 44102.

IMMEDIATE OPENING FOR ASSISTANT PRODUCTION MANAGER. Being the largest Landscape Company in N.E. Ohio and due to an increasing volume of business we are in need of a man with experience in landscape plants, construction, equipment and management. Some knowledge of Spanish helpful. Standard benefits and paid vacation up to 4 weeks. Transportation provided. This is not a 9 to 5 desk job, it's a job for a man who likes the outdoors and to visit various jobs daily. Send resume to P.O. Box 300, Bath, Ohio 44210. Salary open as to qualifications.

FOR SALE

SPRAYERS, USED, all sizes and makes, at large savings. Send your requirements. Equipment Sales Co., 4742 Sunrise Highway, Massapequa Park, N. Y. 11762.

Turf Enemy No. 1

(from page 16)

weeks apart. His first application was made August 19, 1966. He mixed 300 pounds of material in 300 gallons of water. He washed the material off the grass blades with irrigation sprinklers for about 45 minute settings. He sprayed the tri-calcium arsenate with a boom nozzle (Spraying Systems KLC 108). This nozzle requires a 25 gallon per minute pump.

The second seeding was made Sept. 12, 1966, after fairways were aerobladed and dragged.

The original bluegrass seeding didn't do well because of the thick matted thatch in which it was seeded. The bent, which was estimated at the beginning of the program as 5%, was filling in the voids left by weak *Poa Annua,* Woehrle estimates that his bent is approximately 80%, and the bluegrass 5%, with the *Poa Annua* occupying about 15%. Ted states, "This isn't bad, considering that we were in the program less than a year."

Ted noticed more kill both to the *Poa Annua* and the permanent grasses in low poorly drained areas. Ted believes that the grass dies because of lack of oxygen. Drainage has been improved with the installation of slit trenches filled with pea gravel.

During the summer months the *Poa* kept fading and the desirable grasses continued to fill in the voids. After a time it became apparent that Ted might have to control the loss of *Poa* in order to have turf cover for the Western Open in August. He sprayed on a soluble product 12-48-6 and was able to save his *Poa* through tournament time in August. On Sept. 11, 1967, Ted applied 2 pounds of 85% tricalcium arsenate per 1000 sq. ft. This last application provided a noticeable reduction in the vigor of the *Poa Annua.* Woehrle suggests that you never attempt to seed grass into a heavy thatch condition with a drill seeder. He believes that the aero blade is better because it brings up some soil for a suitable seedbed.

The rate of kill can be controlled with the use of liquid soluble phosphates. Good drainage is a must! Good public relations are a must. The members must be told that the course is going to look bad for a year or two. Aerification and thatch reduction are necessary.

Case History Analysis:

1. The granular form of tricalcium arsenate, because of safety and ease of application is suggested.
2. Good management practices should be followed, such as surface drainage, aerification, thatch removal and repeated overseeding. Avoid applications on frozen ground.
3. Plugging, sodding or vegetative improvement may be needed. Emergency use of liquid soluble phosphates may be used to control the rate of *Poa Annua* kill.
4. Low or no phosphate fertilization should be followed prior to and while controlling *Poa Annua.*
5. Light split applications should be followed to avoid objectionable dead spots and retarted overseeding.
6. Suggest start applying 6 to 10 pounds of 48% tricalcium arsenate granular spring and fall applications until toxicity is achieved. This will vary between 24 and 32 pounds per 1000 sq. ft. depending upon the soil type, soil pH, and soil phosphate level. This program should then be maintained annually with 2 to 4 pounds applied either spring or fall.

Editor's Note: Dr. William H. Daniel, Turf Specialist, Purdue University, has worked closely with Mr. Kerr in assessing the problems which beset turf areas containing POA ANNUA. Dr. Daniel assisted Mr. Kerr in editing the material presented here.

Advertisers

INDEX TO ADVERTISERS

Calibrate Sprayers

(from page 10)

determine manpower distribution for spraying programs. This formula calculates the number of acres sprayed in one hour. The formula to determine this factor is as follows:

$$\frac{Y \times MPH}{8.25 \text{ (constant)}} = APH$$

With the symbol Y, representing the boom width in feet, we multiply the ground speed (MPH), divided by the constant 8.25. The product is the APH, or acres sprayed in one hour.

As an example, let us say you are using a Model 308 John Bean Duo-Flex Boom which has 13 nozzles spaced at 20 inches and provides a spray swath of 21 ft. 8 inches or 21.67 ft. You have decided on a spray program which requires a ground speed of 4 MPH. This would be your calculations:

$$APH = \frac{21.67 \times 4}{8.25}$$

$$= \frac{86.68}{8.25}$$

$$= 10.5 \text{ acres per hour}$$

Calibrating sprayer equipment is important in your overall operation. Experiment stations and turf advisors should be consulted for their recommendations before a spraying program is started. If their recommendations are followed faithfully, your spraying program will be successful. If not, the best sprayer made cannot do the job for which it was intended.

Another important point to consider is the choice of spraying equipment. Be sure the sprayer has sufficient capacity to carry out your full program. Make sure it has a tank and piping system which are protected against the ravages of modern day chemicals. Be certain it has a good filter or ample capacity; plugged nozzles will upset your rate of application. Be doubly sure it has a pump that can withstand abrasive and corrosive chemicals you will be using. It should have an accurate and reliable pressure gauge and pressure regulator or relief valve. Make sure also that the boom is protected inside against rust and corrosion.

Buy your sprayer from a reliable source, preferably your turf equipment supplier. He has access to factory warranty and service programs which can be very helpful. Take good care of your spraying equipment; keep it in good condition. Periodically check nozzle capacities. Follow closely the recommendations of your turf advisors, and your spraying program will be successful.

Pit Scale Control

(from page 22)

ly free from phytotoxcity. Apparently certain environmental stresses on trees such as excess or deficient soil moisture, or root disease, have an important bearing on the likelihood of foliage injury following the application of a spray chemical. None of the trees, however, showed subsequent symptoms of leaf injury when the treatments were made before bud break. Unfortunately, these California trials indicate that applications made between late April to early June, when trees are in a foliated condition, result in more effective pit scale control than applications made in the late dormant stage. As is the case with many scales, maximum control apparently is contingent on application of the insecticide when the insect is in the vulnerable immature stage.

New Adjuvants

(from page 33)

which may be a 30 or 55 gallon drum.

Development of these application adjuvants when used with the Bi-Vac Inverter have many advantages over straight solutions or conventional emulsion applications. Through the Stull system, the spray mixture becomes a water-in-oil emulsion. The advantages over oil-in-water emulsions include less evaporation, more uniform droplet size, ease of control, and greater leaf penetration. Users also report reductions in run-off, spray drift and application costs.

Trimmings

Plaudits to John Gallagher. Special thanks are due John Gallagher for his time and effort in seeing that technical conference material is made available to the industry. We've attended two major meetings within the last few weeks, the Northeastern Weed Control Conference and the Weed Science Society of America. In both sessions, John, as president of NWCC and public relations committee chairman of WSSA was busy lining up officers and participants for the benefit of the press. Previously, in addition to his duties at Amchem Products, Inc., he, along with his committee members, had spent months in getting technical papers produced for press use. We appreciate this kind of help.

* * *

The When of Preemerge For Crabgrass. We've heard a number of of opinions on the best time to use preemergence treatment for crabgrass control. Because of the difference in climates and the variation in seasons, we believe the practical approach is that advanced by Dr. L. J. King in his book, "Weeds of the World." The chemical according King is best applied just before or just as the crabgrass begins to germinate. This will be the time between the withering of the flowers of Forsythia and the beginning of the flowering of dogwood. These are both easily recognized events for the sprayman.

* * *

Lots of Room For Better Golf Courses. We are amazed at the recent National Golf Foundation report on golf course irrigation. Of 7880 courses surveyed, only 42 percent had irrigated fairways. So, we can expect lots of business for irrigation contractors during the next few years. Another surprising statistic was that Kansas has 116 of 500 sand greens still in use across the country.

* * *

DED Now In Idaho. Dutch elm disease continues its trek westward. Dr. Arthur D. Partridge, forestry professor at the University of Idaho, reports that recent laboratory tests confirm findings of the Boise City forestry department. Citizens are being asked to report symptoms to get a further check on the extent of DED in the state.

* * *

Welcome to the Club. Delaware turf interests have just organized a new group, the Delaware Turf Grass Association. Purpose, like those in many other states, is to get turfmen together for management sessions and to further and review research. Walter Petroll, Winterthur Gardens, heads up the bylaws committee, and Edgar Downs, Rehoboth Country Club, is the new president.