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From Arborvitae, Cacti, through Gardenia, Rhododendron and Viola . . . Stauffer TRITHION is your best way to fight mites and a wide variety of insect pests. TRITHION will fill your needs to control aphids, mealybugs, spider mites and mite eggs, scale insects, bagworms and potato leafhoppers.

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Return the coupon for your free copy of our illustrated fact sheet showing the full list of flowers, trees and ornamental shrubs that can be treated with TRITHION. Stauffer Chemical Company, Agricultural Chemical Division, 380 Madison Avenue, New York, N. Y. 10017.

READ THE LABEL, HEED THE LABEL AND GROW WITH STAUFFER CHEMICALS



When Writing to Advertisers Please Mention WEEDS TREES AND TURF

What Good Is a Sod Growers Association?

In numbers there is strength. It makes no difference what the organization—be it the Army, Navy, business, politics or a trade association. A group of individuals or firms carry more weight and can accomplish more than an individual person or firm.

Starting in 1952 Warren's Turf Nursery began to try to convince the Highway Department of the State of Illinois that its sod specifications were wrong. We spent several years making calls on various individuals in the Highway Department and got absolutely nowhere.

Later on, after a sod association was formed, the bureaucrats at the Illinois State Capitol in Springfield changed their minds and listened to the association. Following briefly are the facts.

The Illinois Highway Department had a specification calling for $2\frac{1}{2}$ to 3 inches of soil for sod planted on Illinois highways.

A survey of all state highway departments at this time revealed that the Illinois specifications were the most unreasonable.

For instance, Wisconsin called for 3/4 inches of soil, Indiana 1 to 11/2 inches. All other states, where sodding was done, were more reasonable than Illinois. No one was furnishing sod for Illinois highways 21/2 to 3 inches thick. However, whenever an operator of a turf nursery tried to supply sod at a reasonable thickness his sod was usually rejected. Pasture sod was accepted regardless of the thickness, but not nursery sod. We made numerous calls to the Landscape Engineer at Springfield and to his assistants scattered over the state. Only two fellows, out of 10 or 12, concurred with our claim. They told us we were fighting a losing battle. The Landscape Engineer at Springfield actually tried to discourage us by flatly stating that sodding contractors had all the sod they

By ROBERT M. WARREN Warren's Turf Nursery, Palos Park, Illinois

needed and that the idea of nursery-grown sod was ridiculous.

One person implied that thin cut sod, delivered where specifications called for 3 inches of soil was a juicy source of graft for the ward heelers in the Illinois Highway Department. (For a bribe they would approve thin cut sod.) He would not name names nor be specific.

Lobbyist Said, "Form Association."

To make a long story short, Warren's Turf Nursery hired a lobbyist and sent him down to Springfield in an effort to correct this foolishness. He spent the better part of a year on this project and finally came up with the finding that the only way we would accomplish anything was to form a Growers Association. He said the politicians and bureaucrats will listen to a group, but not to an individual

> Present Officers of SOD GROWERS ASSOCIATION of Mid-America

15515 Wolf Road, Orland Park, Illinois

President:

Leroy Mueller, Mueller Sod Nursery Vice President:

Dale Habenicht, H & E Sod Nursery

Treasurer: Tom Thornton, Thornton's Turf Nursery

Secretary: Don Morrill, Shamrock Turf Nursery

Board of Directors: Dick Horner, Horner Farms; Tom Thornton, Thornton's Turf Nursery; Ben O. Warren, Warren's Turf Nursery.

> Technical Consultant: Dr. Michael P. Britton

Executive Secretary: Mrs. Dorothy H. Carey firm. We then contacted Carl Habeneck of H & E Sod Nursery, Roy Muller of Muller Sod Farm, Al Shoper of The Sod Nursery (now out of business), Gerald Dearie of Dearie & Strud (now Thornton's Turf Nursery), and several smaller growers.

We got together for a luncheon and decided to explore the possibility of an association. After two or three more meetings a set of bylaws was formulated, officers elected, and The Sod Growers Association of Illinois was born. This organizational work took place in late 1957 and early 1958.

Our first major effort was to prove to the State of Illinois that its highway sodding specifications were incorrect. This was done by a demonstration planting on the Congress Street Expressway (now the Eisenhower Expressway) in Chicago.

If the association never accomplishes any more than the Congress Street demonstration, the Association will have been worthwhile. As a result of this demonstration, the State of Illinois has changed its specifications and millions upon millions of square yards of nursery-grown sod have been planted on Illinois highways.

Every sod grower in Wisconsin, Indiana, and Illinois has benefited by this work done by the association on Congress Street. Not only have sod growers in these three states benefited but growers from as far away as New York and Denver have been helped. As a result of Illinois findings on Congress Street, other states have followed Illinois in its specification changes. Every yard of sod used on the highways took a yard off the home lawn market, thus helping to keep prices firm.

What An Association Can Do

To have a strong successful organization there must be a motivation or an incentive factor. The Illinois sod association's first motivation was the Congress Street experiment. And there are many places where a strong association can help the industry. Some of them are:

Correcting specifications on the part of the Army and Navy which use a lot of sod, and correcting specifications by landscape architects. The association can and should advise landscapers on sodding problems; the association is in a position to warn the public and landscapers against unscrupulous marketers of questionable lawn or turf products. An individual firm cannot, in good taste, do so.

A financially strong association will aid various universities in research grants, which will return benefits to every sod producer in the nation.

At this very moment a producer of fertilizer, seed, and chemicals is promoting a new strain of bluegrass as seed and sod. This new bluegrass has not been proven. An association can warn the public of this coming flood of high-powered, misleading advertising of an unproven product. A single firm or individual cannot do so.

Another place where a strong association fits is the exchange of credit information. The American Association of Nurserymen has been highly successful in credit information exchange, and our own association is doing a fair job in credit control. It can do a better job with more members.

Can Advise Neophyte Growers

A strong association can advise people planning to enter into sod production as to their possibilities and costs. Altogether too many people with a few acres of land, little or no working capital, with a big wishbone, and no backbone are entering this field. They are going broke themselves and helping to depress sod prices at the same time.

Now, I don't care how you slice it; it takes at least \$250,000.00 of capital to establish a 200-acre turf nursery when land values are at or near \$600.00 per acre. If more people were made aware of this cost, less of them would be jumping into the sod business, and prices would be more stable.

III. Assn. Attracts Out-of-State Growers

Getting back to the Illinois sod association, it was noticed about two years ago that growers were joining from outside Illinois. We had attracted Wisconsin, Indiana, and Michigan growers. So the word "Illinois" was deleted and "Mid-America" inserted. Today the organization is known as The Sod Growers Association of Mid-America.

My personal opinion is that the name should again be changed to The Sod Association of America because today we have members from New York to California and until recently, a Canadian grower. Incidentally the Canadian got angry and resigned when, in self defense American growers, working through the association, were influential in getting duty collected on sod moving into the States from Canada. The associa-



When Writing to Advertisers Please Mention WEEDS TREES AND TURF



Witchgrass, known also as tumble panicgrass, witches hair, and ticklegrass, is native to the United States but has spread to several countries in Europe. In the U.S., it is found growing along roadsides, in gardens, flower beds, and near parks particularly where soil is sandy and dry.

This grass is common in the north central states and is not frequently found in the West. Witchgrass is a shallow-rooted (1), annual species and reproduces only by seeds.

Seeds (3) are $\frac{1}{16}$ inch long, shiny, smooth, and grayish or greenish. They are borne singly at the tip of small, stiff branches of the flower head (panicle) which is from 8 to 14 inches long and often one-half the length of the entire plant. When mature the panicle is large, bushy, and greatly spread. Its branches are brittle and threadlike. Often the panicle (2) is snapped off by a breeze and carried by the wind with the seeds intact. Seeds are distributed widely by this means being easily separated from their hulls when ripe.

Depending on the length of the growing season and soil fertility, stems grow from 2 inches to 2 feet tall. They are hairy, especially at the nodes. Stems branch mostly from the base of the plant, which habitually spreads as it grows, giving a bushy appearance.

Soft hairs are found on both sides of the leaves, and are very dense and long on the leaf sheaths. Leaves are 6 to 12 inches long and $\frac{1}{4}$ to $\frac{1}{2}$ inche broad.

Witchgrass flowers between July and October at most U.S. latitudes, depending upon the local climate.

If this weed is not controlled by cultivation in stubble and grain fields, seeds blow to roadsides or areas not maintained, and the plant becomes established. Germinating seeds are killed by preemergence treatments of 2,4-D at 1 lb. per acre, DCPA, atrazine, and other herbicides. Close mowing as soon as seed begins to develop will destroy the plant and prevent it from seeding elsewhere.

Prepared in cooperation with Crops Research Division, Agricultural Research Service, United States Department of Agriculture, Beltsville, Maryland

(DRAWING FROM NORTH CENTRAL REGIONAL PUBLICATION NO. 36, USDA EXTENSION SERVICE)

tion accomplished this quickly. An individual firm would have had difficulty slowing up the importation of cheap Canadian sod. Landscapers in the Buffalo and Cleveland areas are now reporting difficulty in bringing in Canadian sod because of lengthy tieups at Customs.

There is no grower anywhere in the United States that has not benefited one way or another from the efforts of The Sod Growers Association of Mid-America. And the association is still sitting on the taxi strip waiting for a clearance to take off!!

As I mentioned before there must be a motivation, a stimulant, a common cause to bind and hold an association together. The Congress Street experiment was the original spark. The field day held at Warren's Turf Nursery in August of 1964 helped, and our Newsletter has served to a small degree to keep the light burning. For your own self preservation, for the good of the profession that feeds you, you should be a member. If you are not one now, you should join. If you are a member, you should give willingly of some of your time to help make the association a vital, strong organization.

Nothing is gained without effort. The men who have served as officers and directors of the association, since its birth in 1958, have given willingly of their time. All growers have been helped in one way or another. So why not throw in with the leaders and help your own bank accounts by becoming a full-fledged Class A member?

Rompers to Knee Pants

The sod industry is still in its infancy. It is just now beginning to get out of rompers and into knee pants. In the next 10 years it will grow to undreamed of proportions and those of you who are a part of the industry should help yourselves by helping your association into a strong organization that will carry weight with Federal, state and local governments and with builders, architects, contractors, and other commercial organizations everywhere.

For a moment, let's take a look at the potential of the sod mar-

Cold facts about a hot new line of weed killers!

Admittedly Ansul has more than an academic interest in telling you about its new ANSAR and PHYTAR herbicides . . . but if you're a grower, dealer, sprayer, formulator, educator or consultant in the field of agricultural science, we think you should know that:

ANSAR 529 is the first weed killer that has been able to effectively control Johnson Grass! It's approved and proven for use in cotton. It's easy to apply, economical and won't harm the cotton. It's also highly effective on puncture vine, morning glory, nutsedge, cocklebur and a host of other weeds.

PHYTAR 560, a non-selective, general herbicide, is a practical new substitute for old-fashioned weed oil. It eliminates weeds along roadways, ditches, around buildings and storage areas and in other non-crop locations. There is no residual toxicity. Unlike weed oil, it won't stain, won't corrode spraying equipment and solves the storage problem (one gallon of PHYTAR mixed with water when you're ready to apply it is equivalent to 50 gallons of weed oil). In the final analysis it's cheaper and more effective.

As you get ready to face another weed season, tuck these ideas away. They may save you a lot of time and trouble ... and might make you a lot of money.



47 hp with a 70" wheel base, 51" hood height, 13" underclearance and $8\frac{1}{2}$ turning radius?

Sure. The new International® 2424 turf tractor

Why in the world put so much emphasis on tractor specs? Simply because the new International 2424 tractor is shorter, lower, higher underneath, turns shorter and is generally more compact than any other



tractor in its horsepower class.

This one's as powerful and nimble as a polo pony.

Works fast with any kind of mower. Ganged reels. Rotary. Flail. Sickle bar. You name it.



Teams up with a dozen other attachments to handle your spring and fall maintenance. Yes, and winter snow removal, too. Where else are you going to find all these features in a mowing tractor?

Full-time Hydrostatic steering. Live, constant-running power takeoff. Rotary, flail or sickle bar mowers that operate independent of tractor motion.



A differential lock that feeds power to both rear wheels regardless of traction. No spin-out. No gouging of turf even when you start up from a dead stop on an up-slope. And on side hills it holds the nose straight, prevents down-drifting.

Dual range Hi-Lo transmission with 1.4 to 14.4 mph speeds in even steps. Eight forward speeds and two reverse



(8 and 6 optional for loader work).

Draft-sensing 3-point hitch. Just set it and forget it for blade or scraper jobs. The hitch senses condition changes and adjusts itself up or down instantly for fractional inch control of attachments.





Wide, high flotation tires. Wide stance. Low center of gravity.

The husky engine keeps torque up even on precision, part-throttle jobs. And it's purring quiet. Too well-mannered to bother nearby golfers or nearby neighbors.





The new International 2424 is a turf tractor well worth a study at your IH dealer's. And easy to own. Your dealer offers one, two and three-year financing. Deferred payments—up to three a year with no extra charge. Leasing. Leasing with an option to buy. Or you suggest something. He wants to make a deal!

INTERNATIONAL HARVESTER COMPANY The people who bring you the machines that work ket. By the year 2000, just 34 years from now, there will be a population in the United States of at least 400 million, probably more, if the population explosion continues during the next onethird of a century as it has in the last third of a century. Are you aware that the population of the United States has almost doubled since Herbert Hoover ran against Al Smith in 1928?

This expected population increase will mean at least 50 million new homes, with an average lawn area of at least 1,000 square yards, a total of 50 billion square yards. When we sell the public hard enough on sod (and we will sell them) as opposed to seed. making certain that all these new lawns are sodded, the annual national requirement for sod will run between 11/2 to 2 billion yards for a total of from 1 to 2 billion dollars. This does not include sod needed for public buildings, highways, schools, golf courses, cemeteries, factories, etc.

This is big business. It will be highly competitive and will no

doubt incur governmental control. There never has been a business that developed a sizeable dollar volume that did not attract government bureaucrats and leeches to it. The sod industry is no exception. These government inspectors will never have been called upon to meet a payroll or sell a bill of goods. but you'll have to live with them. In self defense, from governmental regulations alone, we will need a strong association of turf growers to meet with and pacify these "busybodies" who carry the authority of government in their brief cases.

Here are just a few things that the association can do to benefit the industry as a whole and that needs doing now.

1. Correct incorrect specifications.

2. Warn the landscapers against questionable lawn products.

3. Discourage articles of misinformation such as one university professor's claim in a magazine article that sod growers net \$1500.00 per acre. Such articles should be challenged and the association should do the challenging.

4. Put pressure on chemical firms who are gouging growers pricewise.





3-HP BOSS – \$239.50 F.O.B. Youngstown. Weighs 30½ lbs. 2½ gallon tank. Horizontal range 46 feet, vertical 30 feet. Has long range nozzle and twin nozzle for simultaneous spraying of two rows. FRANKONIA-\$69.50 F.O.B. Youngstown. Weighs 20 lbs. 4-gallon tank, made of heavy-gauge sheet brass. Powerful brass pump. Robust suction filter. Self-cleaning valves.



One chemical manufacturer is today charging the grower retail prices. A garden store buys for less than the grower.

5. Put pressure on Congress to increase tariffs on sod imported from Canada at ruinous prices.

6. Put pressure on the Federal and State Departments of Agriculture on unreasonable plant quarantine laws.

7. Promote the use of sod on highways rather than the planting of excess nursery stock which eventually makes a jungle and calls for more expensive maintenance.

8. Make contributions and grants to various universities for grass research work.

9. Explore the advantages of sod certification such as seed certification. I am not sure we need certification, but we should explore the advantages and disadvantages of certification.

10. Educate the public on the use of sod as opposed to seed.

11. Report to growers the merits of various equipment such as sod rollers, conveyors, palletizing, etc. 12. Advise and assist growers in

12. Advise and assist growers in marketing programs, costs, markups, pricing policies, accounting, sales, and advertising practices. And above all, stimulate better distributor, dealer-grower relationships.

13. Arrange for and carry out a national convention or field day to be primarily supported by vendors to the sod industry through the purchase of exhibition space.

14. Warn and advise farmers against cow-pasture sodders who are usually under financed and are often found stripping a farmer's bluegrass pasture and then skip out without paying the farmer.

There is always of course the tendancy to "Let George do it." There are just not enough hours for 3 or 4 men to do the entire job and still manage their own businesses. A good example is the compiling and editing of the Newsletter. It usually takes a day or so to get it together. This time has got to come from somewhere. In my case it has been evenings and Sundays simply because I've too many other duties in connection with Warren's Turf Nursery.

One thing the association needs badly is a full-time executive secretary. His efforts will help cement and firm up a stronger organization and in the long run develop the association into one of the more aggressive trade associations.

Look about you at other professions and business operations. See how they have benefited themselves. The AAN, American Association of Nurserymen, and its affiliated state organizations. have sold the Federal Government lock, stock, and barrel on its "Plant America" sales pitch; even got Lady Bird chasing around the country buying nursery stock, with your money, to plant-out signs and automobile grave yards. I understand she's a good saleslady; we ought to get her selling sod instead of shrubbery.

And examine the trade unions. You are at their mercy because they stick together. They are organized. You are not.

Let's just see what could be accomplished when the Sod Growers of America takes a page out of the nurservmen's book and begins to sell lawns instead of shrubbery. We've got a lot stronger selling pitch in the way of maintenance cost than the bush peddlers have. Are you aware, that some of the new expressways are being planted so heavily to nursery stock that within ten years all the grassed areas will have to be hand mowed. Right there is one fight sod growers can tie into and in so doing add profits to your individual operations. But it takes an association to do the spade work. An individual firm cannot do it alone.

Competition Looms

Sooner or later the seed boys are going to wake up and start hitting back at us sod busters. They are going to find ways to produce lawns faster with seed and when that day comes, unless we are prepared, they will jerk the rug right out from under us and we are going to be in trouble. In areas such as Detroit, Milwaukee, and Chicago, it is of course, unusual to see a lawn being seeded. Naturally this cuts into grass seed sales. Some smart cookie in the seed business is going to start snipping at us and if we are not prepared it will be our fault. A strong association can help sell the public so strongly on sod that it will be difficult for any seed producer or seed association to ever catch us.

We, in the profession of growing grass which is to be marketed as turf or sod, can use as a guidepost or beacon light the advice of the renowned architect, Daniel Burnham. It went something like this: "Make no little plans; they have no magic to stir men's blood; make big plans, aim high, remembering that a noble diagram once recorded will never die."

In my early days of selling, a highly successful salesman, a Frenchman, used to advise me, "aim at ze stars young man; you may hit ze moon."

"As a man thinks, so he goes."

Wetting Agent Doesn't Guarantee Weedkilling

The common notion that a surfactant or wetting agent makes a chemical weedkiller work better because it more thoroughly wets the plant is only partly true.

University of California Botanist David E. Bayer, speaking at the 18th annual California Weed Conference held recently at Riverside, reported that "it has been found that the wetting of plant surfaces does not correlate with the increase in toxicity of the herbicide."

It is important to wet the plant well, he said. However, tests have shown that maximum wetting takes place when the amount of surfactant ranges from one-hundredth to one-tenth of one per cent of the total solution. But the most effective concentration of surfactant is always higher than that. Bayer says that 2,4-D-type weedkillers generally show most toxicity at from one-fourth to one-half of one percent, while most others -such as dalapon, amitrole and paraguat-work best at the onehalf to one per cent level.

Many factors influence effectiveness of a chemical herbicide, Bayer said. Characteristics of the plant, position and size of leaf, type of leaf surface, age, and condition of the plant, all are important.

Weather makes a big difference, too. "In areas of high humidity, cool temperature, the need to include a surfactant in the herbicide spray solution is much less than in areas of low humidity and high temperatures," Bayer said. If it is extremely hot and dry, the benefit of using a surfactant will be somewhat less, he concluded.



- Hawaiian Turfgrass Management Conference, University of Hawaii, Honolulu, Aug. 25-26. International Shade Tree Confer-
- International Shade Tree Conference, 42nd Annual Convention, Sheraton-Cleveland Hotel, Cleveland, Ohio, Aug. 28-Sept. 2.

Memphis STA Conference Sees Record Attendance

Attendance records were shattered when 301 turfmen congregated for the recent Southern Turfgrass Conference at the Sheraton Peabody Hotel in Memphis, Tenn., Feb. 28-Mar. 1.

Discussions on the agenda ranged from maintenance and design of golf greens, to talks covering new chemicals.

Elected president for the association's 1966-67 term was Marcus Wilson, president of the Turtle Point Yacht & Country Club, Florence, Ala.

Other officers elected to head the association for the coming year include: vice-president, Norris Morgan, Greenwood Country Club, Greenwood, Miss.; secretary-treasurer, Reg Perry, Turfaid, Inc., Memphis, Tenn. New directors are: Bill Curtis, Decatur Country Club, Decatur, Ala.; Paul Lewis, Rebsamen Golf Course, Little Rock, Ark.; D. H. Baird, Fulton Country Club, Fulton, Ky.; Marvin Perry, Shreveport Country Club, Shreveport, La.; Tom Lundy, Greenville



Country Club, Greenville, Miss.; Bob Reed, Kennett Country Club, Kennett, Mo.; and Daniel "Kayo" Mullen, Poplar Meadows Country Club, Union City, Tenn.

Next year the association's conference will be Feb. 27-28 in Memphis, Tenn.

Vandermolen Announces New "26" Sprayer-Duster Series

A new 26-cc. engine that develops two horsepower and delivers a blast of 350 cu. ft. of air per minute has been introduced by The Vandermolen Co.

New carburetion, expanded exhaust system, new plastic tanks, and other refinements have been incorporated into its new Model 26-M and 26-TT knapsack-type sprayer-duster. A new metal fan housing is also featured.

The Model 26-M is available with a 2½-gallon polyethylene tank, said to be corrosion free and stronger than former brass tanks.

Model 26-TT sprayer-mist

SPRAY IT

Specify PRATT products to give your trees the level of pest-proofing protection and horticultural health that their value warrants. Arborists and custom spraymen—the professionals who have to be certain of the right results — depend on the complete, premium quality line of safe and sure PRATT dormant and summer oils, emulsifiable concentrates for hydraulic and mist blowers, and oil base concentrates for thermal fog equipment. Send for the circular that tells you why—and how: "PRATT'S SHADE TREE SPRAY BULLETIN." It's free.

Distributors of Bidrin®, a product of Shell Chemical Company.



blower is a twin-tank model and has a capacity of 3½ gallons, liquid, or a dust capacity of 15 pounds. The unit weighs 27 pounds, has an effective range of up to 40 feet for applying dust, and a mist penetration of up to 30 feet, the company says. Replacement parts are available for immediate delivery.

Complete details on this new line of knapsack sprayer-dusters can be obtained by writing to The Vandermolen Co., 378 Mountain Ave., N. Caldwell, N.J. 07006.

High Concentrate Spraying Movie Offered by Marlow

A motion picture on high concentrate spraying has just been completed by the ITT Marlow, Division of International Telephone and Telegraph Corp., and is available to readers.

Entitled "A Fact Of Life," the film compares, illustrates, and demonstrates the advantages and disadvantages of both high concentrate and conventional type spraying, according to Marlow. The production, in color and with sound, uses a grower's operation in Hancock, Md., as setting for the comparison.

Marlow makes the film available free of charge, except for return postage. Write to: "Econ-O-Mist," ITT Marlow, Box 200, Midland Park, N. J.

Vapam Uses Told

Use of Vapam to combat spread of Dutch Elm Disease, to control roots in sewers, and to prepare tree replant sites is explained in information sheets recently released by Stauffer Chemical Co.

Fungi-spread through roots of elm trees growing close together is a chief factor in spread of Dutch Elm Disease, one sheet reports. Another describes root control problems in sewers. Both suggest methods of control using Stauffer's Vapam. The chemical can also be used to fumigate soil to remove nematodes and soil fungi prior to planting of young trees, according to the third news piece. Copies of the three publications are available from Stauffer Chemical Co., 380 Madison Ave., New York, N. Y. 10017.