

Turf Topics

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WE CAN HELP!

There are six chief causes of disease: (1) Emotional, (2) Nutritional. (3) Poisons, (4) Infections, (5) Accidents. (6) Inherited.

The greatest cause of disease is, without a doubt, emotional. Worry, fear, hate, envy, jealousy...These

are the great killers.

The second greatest cause of disease is nutritional. We live in a country where we have more good doctors, more great medical schools, and more hospitals, more education, and more great scientists, and more money than any other place on earth. We hear so much about the great scientific advances that have been made in certain branches of medicine.

Last year we had more cancer than ever before. We had more heart disease. It is the leading cause of death, killing young people before the age of forty all over the land. We had more high blood pressure, more stomach ulcers, more rheumatism, more diabetes, and more mental disease. Fifty percent of the hospital beds in America are filled with mental patients. They are running out the top windows all over the land and more mental hospitals are being built every day.

We had more polio last year than ever before. Perhaps we are not so smart after all. Maybe something is wrong here. There are places in the world where these degenerative diseases do not occur. There is a place in India, called Hunza, where British physician Sir Robert McCarrison, stayed seven years looking, without success, for cancer. These people live to be one hundred and ten years of age and die with their own teeth in their mouths. Seventy year old men run 20 miles a day and think nothing of it. Sir Robert McCarrison said the reason these people have such excellent health is because they do three things that we fail to do. They eat natural food, grown on fertile soil, and they eat it fresh. We do none of these things. The first great fundamental reason why all of us are sick, from the standpoint of nutrition, is because the land is worn out. The farmers of America violated another of Gods natural laws...Natures law of return. This law simply states that if you take away from me then you must return something to me. But all the farmers violated this law. We cut down the trees, plowed up the land, planted cotton one year and corn the next, and even burned the stalks. We constantly took out and never put anything back. As a result, all the land became poor land. And poor land grows poor food that makes poor people, who are sick. Poor land grows food that is poor in vitamins, poor in minerals, poor in enzymes and proteins of poor quality. All of this means sick people.

The most common disease in America today is hypoproteinosis, that is, not enough protein, or protein of poor quality. This is of tremendous significance. The vitamins, the enzymes and the antibodies that give us resistance to disease are all protein substances.

About the time all the land became worn out, along came science to the rescue. And in this country we have been taught to bow down and worship this word-Science. In this instance the scientists through the chemical trust, using USDA, the A&M Colleges, and County Agents, gave to the farmers, "If you will put this on your land we promise it will grow twice as much, and you will put money in the bank", and the farmer did put more money in the bank as a result of its use. This was true for awhile, but the farmer found it took more and more fertilizer, and he got less and less in return. Unfortunately, NPK does not make the land rich. It merely drives out what remaining fertility is present and finally leaves a piece of dead, hard

concrete. A hard pan or plow sole develops. A concrete slab would be a better name.

The end result of chemical farming is always disease, first in the land itself, then in the plant, then in the animal, and finally in us. Everywhere in the world, where chemical farming is practiced, the people are sick. The use of synthetic chemicals does not make land rich. It makes it poorer than before.

Joe D. Nichols, M.D. Southern Arizona GCSA

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TENTATIVE PROGRAM 13TH ANNUAL WISCONSIN GOLF TURF SYMPOSIUM PFISTER HOTEL - MILWAUKEE October 25 and 26, 1978

WEDNESDAY, OCTOBER 25

8:00 A.M. - Registration and Coffee

9:00 A.M. - Watching and Listening to the World of Golf, Waxo Green, Sportswriter, The Nashville Tennesseean, Nashville, TN

10:00 A.M. - Taking Care of the Golfers Ole Bill Lyons, Owner, The Lyons Den Golf Course, Canal Fulton, Ohio

11:00 A.M. - Golf Course Playability Changes I Have Seen, Harold Sargent, Golf Professional and Former President, P.G.A., Atlanta Athletic Club, Duluth, Georgia

NOON - Lunch

2:00 P.M. - Research Toward First Grass in the Northeast, Dr. C. R. Skogley, University of Rhode Island, Kingston, RI

2:45 P.M. - Short Break

3:15 P.M. - The Promise and Peril of the Stimpmeter Carl Schwartzkopf, Director, North Central Region, U.S.G.A. Green Section, Crystal Lake, Illinois

4:00 P.M. - Research Toward Fast Grass in the Midwest, Dr. Alfred J. Turgeon, University of Illinois, Urbana, Illinois THURSDAY, OCTOBER 26

9:00 A.M. - What Is Sacrificed for Unrealistic Goals
Theodore W. Woerhle, CGCS, Oakland
Hills Country Club and Former Presi-

dent, Golf Course Supts. Assn. of America, Troy, Michigan

9:30 A.M. - High Quality Turf Under Stres
Bobby McGee, Atlanta Athletic Club,
Duluth, Georgia

10:00 A.M. - Break

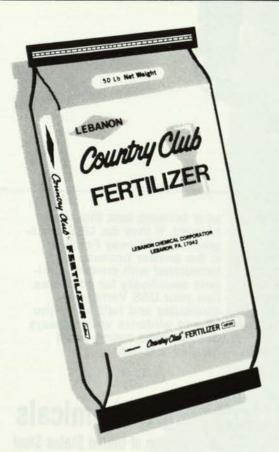
10:30 A.M. - Fast Grass at a Unique Club
Thomas F. Rewinski, National Golf Links
of America, Southampton, New York

11:00 A.M. - Providing All Golfer's Desires for Playability, Garold M. Murphy, CGCS, Somerset Country Club, St. Paul, MN

SPEAKERS PLEASE NOTE: We will enjoy your company at a get-together and dinner about 6:00 P.M., Tuesday night at the hotel, to meet all the participants and arrange for any special requirements you may have.

For further information contact: Bob Welch, 8500 South Fifth Avenue, Oak Creek, WI 53154, (414) 764-2300.

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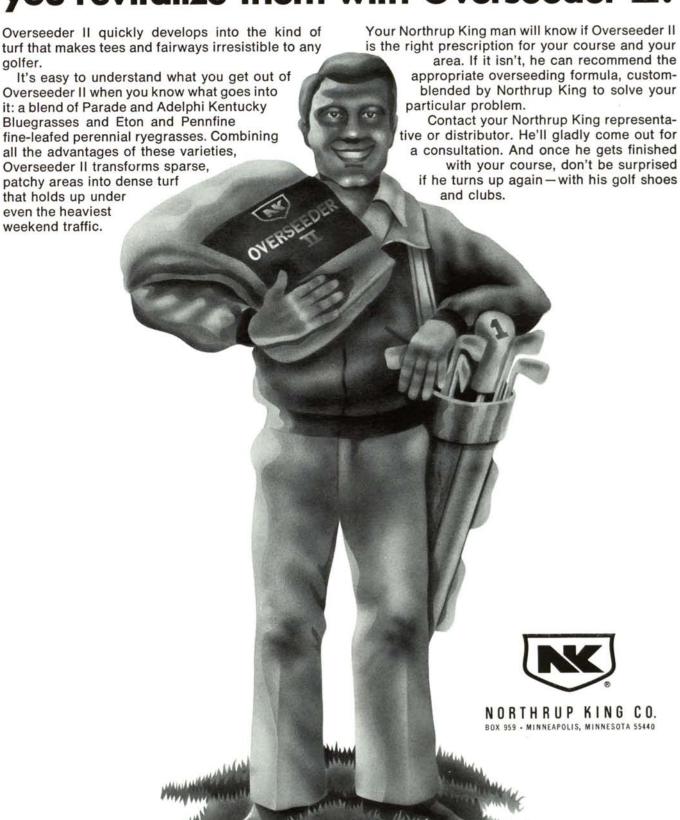


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EVALUATION OF METHODS OF CONTROLLING SOIL-INHABITING INSECT PESTS OF TURF

Control of the insect pests that inhabit the soil presents the greatest challenge to the turfgrass manager now and in the future. This is true because the target usually lives and feeds under thatch. For this reason, it is important that the pesticides reach the target pest immediately after application. We have learned through research and much experience that this is not easily accomplished with the methods and materials presently labeled.

Pesticides currently labeled for control of certain soil-inhabiting insect pests of turf include these: chlorinated hydrocarbons--chlordane; organo-phosphates--diazinon, chlorpyrifos (Dursban), and trichlorfon (Dylox, Proxol); and milky disease bacteria spore.

Milky disease, Bacillus popilliae, is still an effective means of controlling Japanese beetle grubs. In addition to occurring naturally, dust containing spores of the bacterium can be artificially distributed to effect control. In order to be effective, infection of larvae must take place for some years after application. Yearly infection and death of larvae multiplies the spores and helps distribute them through the soil. In order for reinfection and further distribution to occur, the presence of the some larvae in the turf must be tolerated. However, once distribution is accomplished, control is provided for many years.

One discouraging note. Recent work in Connecticut indicates resistance to milky disease (i.e., low infectivity in the larvae) may have made its appearance.

Chlorinated Hydrocarbons

For the past 25 years, the chlorinated cyclodiene insecticides--aldrin, dieldrin, heptacholor, and chlordane--have been used successfully to control the soil-inhabiting insect pests of turf. Generally, a single application of one of these insecticides provided control for several years. However, actions taken by the Environmental Protection Agency (EPA) over the past few years have eliminated heptachlor, aldrin, and dieldrin for this purpose. Current hearings concerning chlordane indicate that it may meet the same fate.

Organo-phosphates and Water Requirements

When the chlorinated cyclodiene insecticides were used, there was no great urgency to water the treatments in; eventually, they worked their way into the turf and soil. With the organo-phosphate (O-P) and new carbamate insecticides, there is a distinct urgency to move these materials to the target pest immediately.

These insecticides have characteristically short residual activity (a month or less). The most important medium through which penetration is accomplished is water; either irrigation or rainfall. This immediately presents a problem on golf courses and other turf areas without irrigation systems, unless research develops new ways of getting the insecticide to the target pest.

The Thatch Barrier

Another major factor related to the effectiveness of the O-P insecticides currently registered is that **they do not move through thatch**. This layer, which is tightly intermingled between the layer of green vegetation and the soil surface, is common in golf course or home lawn turfgrass.

Many experiments on control of various species of grubs (Japanese beetle, northern masked chafer, billbug, and **Ataenius**) conducted in Ohio from 1971 to 1976 (Table 1) have shown that when liquid or granular formulations of diazinon are applied to turf at 5.5 to 6 lb. Al/acre (active ingredient per acre), 90%

or greater control is achieved.

Applications of liquid chlorpyrifos at 2 and 4 lb Al/acre gave an average of 69 and 74% control, respectively. However, when these two insecticides, in either liquid or granular form, were applied at the same rates to turf with 0.5 inch or more thatch, the percent control achieved was sharply reduced (Table 2). Granular diazinon at 5.5 to 6 lb Al/acre gave 69 to 74% control and chlorpyrifos at 2 and 4 lb Al/acre 21 and 26% respectively. Liquid formulations of diazinon at the same rate gave 52 to 60% control and chlorpyrifos 51 to 63%. The experiments and general field experience have shown that granular diazinon in low concentration formulations provides better control than the liquids.

Insecticide Bound to Thatch

The reason for reduced effectiveness of soil insecticides was investigated through laboratory experiments conducted at the OARDC. The results confirmed that most of the insecticide was being adsorbed (bound) to thatch and thus did not reach the target. Of the two insecticides, diazinon and chlorpyrifos, the latter was the most readily adsorbed. Indications are that this is a physical-chemical binding which is not reduced by extensive aerification.

Though the tendency for trichlorfon (Proxol or Dylow) to be adsorbed is much less than that of diazinon and chlorpyrifos, its performance in controlling soil inhabiting pests has ranged from poor to excellent. The reasons for this variability are not

known.

Timely Irrigation Important

While the performance of organo-phosphate insecticides is reduced by thatch, proper and timely use of water increases the probability of obtaining the most control possible from the treatment. This is reflected on the labels of liquid products currently registered for grub control in turf. Some labels recommend using 15-30 gal. of spray per 1,000 sq. ft. This volume may be impractical for the turf manager or operator of a lawn care firm, but it is required for optimum performance.

If less than the recommended volume of spray is applied, the treatment should be irrigated with ½-inch or more of water immediately after application. Sprays of these relatively short-lived insecticides should not be allowed to dry before irrigation is applied. A good time to make applications is when the turf is still wet. Some golf course superintendents have achieved fairly good control by applying the insecticide sprays during a rain. Granular formulations must also be watered in but the need is not as immediate as it is for spray treatments.

New Insecticides

In view of absorption and problems of inconsistent control with currently registered products, what does the future hold for control of soil inhabiting insect pests? Our best answer rests with the two experimental insecticides, one an O-P and the other a carbamate, which control grubs in spite of thatch. The former is a product of the CIBA-Geigy Corporation and the latter of Fisons Corporation.

Extensive field tests (Table 2) have shown both to be very effective against grubs under heavy thatch. Laboratory tests indicate their effectiveness is due to the fact that they are not adsorbed onto thatch. These compounds are short residual insecticides and will also require the timely irrigation or rain very soon after application. Early projections indicate that one or both of these materials may be available for commercial use by 1978 or 1979.

Credit - Old Dominion G.C. Supt. Assn. H. D. Niemczyk - Dept. of Entomology

POPCORN ON MY TREES?

Trees infested with Cottony Maple Scale are easily spotted since they will have white popcorn-like masses on the twigs, branches and limbs. In addition, while feeding on the foliage, the young scale crawlers secrete a sticky substance called honeydew and creates a sticky mess. A sooty mold grows on the honeydew often causing the foliage and bark to appear black.

The eggs hatch in May and June. The young emerge, feed on the leaves during July and August and then move onto limbs covering themselves with a waxy protective layer. Severe infestations on limbs can kill branches or sometimes the entire tree. Fortunately, cottony maple scale infestations are often reduced by natural enemies such as parasitic

insects

To control the scale, spray with MALATHION. Use 50 to 57 per cent malathion, per gallon of water. Apply this spray to the infested tree foliage in July or early August.

Dormant oils can also be used but should be used while the tree is dormant and temperatures are suitable. In addition, follow all directions and precautions on the label.

Waldemar E. Schmidt Extension Adviser Agriculture-DuPage Co. James E. Schuster Extension Adviser Horticulture-DuPage Co.

SAFETY IS IMPORTANT WHEN HANDLING AND STORING PESTICIDES

Proper handling and storage of pesticides should be an integral part of any golf course superintendent's chemical use program. These substances, with their remarkable abilities to enhance the appearance and playability of a golf course, also have the potential for considerable damage to you and your employee's

Improper handling of even small amounts of pesticides can cause blurred vision, headaches, nausea and chest constriction. Larger doses can deposit dangerous chemicals in the bloodstream, causing permanent damage to organs, especially the lungs and kidneys. Periodic blood tests should be run on workers who regularly come in contact with pesticides.

Establishing some clear and easily followed rules will protect you and your crew when handling

potentially dangerous chemicals.

Read and reread the product label each time the pesticide is used. Manufacturers review and test their products often and may change label instructions.

Wear protective clothing when handling pesticides. Long sleeves, rubber gloves, unvented goggles and a respirator are necessary. Never drink anything, eat, smoke, put your hands in your mouth or rub your eyes while handling chemicals. Avoid spraying on windy days and always stay upwind when spraying. Wash thoroughly with soap and water when you've completed a job.

Use good housekeeping practices, washing chemical spills off work areas and mixing equipment promptly. Even the smallest splash of pesticide on your skin should be washed off with soap and water immediately. Having a safety shower in the chemical mixing area for washing off larger spills gives added pro-

tection.

The proper storage and mixing facilities are a great aid to having a safe pesticide operation. A separate room or building for these functions is preferable, but under all circumstances you should have a lockable storage area and a mixing bench with running water. Pesticides should be segregated according to type to prevent cross-contamination and should be kept away from other supplies.

Containers for chemical storage should be clearly marked and periodically inspected for leaks or corrosion. Use original containers whenever possible. Under no circumstances should a pesticide be stored or mixed in a container that could be mistaken for a beverage or food container -- a drinking water jug, for

example.

Allowances should be made for the collection and proper disposal of runoff from the chemical preparation area. You should also develop a plan for containing water contaminated by fighting a fire in the chemical storage area.

Avoid the temptation to stockpile pesticides. Use up supplies on hand before you order more and don't

accumulate odds and ends of old chemicals.

A safe operation is no less efficient than a careless one. In fact, careful handling of expensive compounds and strict adherence to use guidelines may reduce waste and save money in the end.

The driver is safer when the roads are dry ... and the roads are safer when the driver is dry.

FIRST AID ON THE GOLF COURSE

What would you do if a golfer had a heart attack before your eyes? Would you recognize it as a heart attack? What would you do for heat prostration? Stroke? Poisoning? A serious laceration? A broken leg

How many of your employees would know what to

do in any of these situations?

The employees and golfers at a course, while vulnerable to the normal range of afflictions requiring first aid, are even more likely to suffer from some of them than the average person. Strenuous work or recreation, exposure to a variety of chemicals and the use of potentially dangerous tools and machinery all lead to an increased likelihood of injuries occuring on your golf course.

Every superintendent should have a well-thoughtout procedure to put into action when a medical

emergency occurs on his course.

Post the telephone number of the emergency care facility in your community near every telephone--a good place is in the front of the phone book. Many communities use "911" as an emergency number. Also, make sure you know where the emergency room in the nearest hospital is in the event that an ambulance is not available.

Strongly encourage your employees to participate in a first aid training course, and be the first to sign up. In many areas, the Red Cross will provide free instruction to your group, so the only cost is for

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materials. First aid classes are often offered through local adult education programs or from the Red Cross.

CPR--cardiopulmonary resuscitation--is another important skill for you and your employees to acquire. CPR is a method used by either one or two people to restart breathing and heartbeat in an injured person. The CPR method is not difficult to learn, but it has great potential for saving lies. The American Heart Association estimates that 100,000 lives a year now lost could be saved by basic CPR followed by advanced life support. CPR training is often incorporated into first aid classes.

Equip and maintain a first aid kit. Consider keeping kits at many locations around the golf course. Don't forget to replenish supplies as needed.

Finally, consider that the Red Cross estimates people who have had first aid training are much less likely to become injured themselves.

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