NEWSLETTER

May, 1978

Golf Course Superintendents Association

OF NEW ENGLAND, INC.

Sponsors and administrators of the Lawrence S. Dickinson Scholarship Fund — Awarded yearly to deserving Turf Management Students.

What Color's Your Fairway?

The old fairway wetting problem has resurfaced by way of the United States Golf Association which has been caught between breaths of a declaration that "brown is beautiful". . .meaning, of course, that golfers prefer the high ground rather than the wetlands when playing their daily or weekly round.

The issue is simple. There are golfers, who do not take notice of the aesthetic aspect of the golf course, just as content to play off "burned" fairways as if they were beauty shop-pampered. And there are others who are willing to put up with plugged balls, soaked golf shoes and other annoying discomforts in order to look around them and drink in the green, green grass of the home club.

That's the issue. The cause has at its base, irrigation. And, as usual, the golf course superintendent is trapped in the middle of the problem. He must decide or have decided for him to either give the course a generous watering to satisfy the looks of the fairways or a sparse sprinkle while accepting the dangers of the grasses turning what used to be an "ugly" brown before the USGA offered its descriptive.

According to Bob Williams - the former president of the Golf Course Superintendents Association of America, the house is divided on the fairway appearance score. "Actually, there are golfers who really would rather have brown fairways all the time," the UMass Turf Conference panelist laughed. "It's a matter of roll with them. They get up on the tee and hit those low scalers which turn into 250-yard drives on the dry turf. That's when you find yourself in a dither. You don't know if the golfers even care about the looks of the course when they're hitting drives like that."

Along the same thought waves, the heavy lean on irrigation produces just the opposite driving effect for the golfer. Heavily irrigated fairways lose all roll. What's more, they present further playing pains by complicating the lie of the ball. Obviously, it is much harder for a player to slam out of a watery lie.

Williams and Paul Voykin - another skilled super who was part of the attractive UMass speaking program - agree that their profession went hog wild with overdoses of water when irrigation equipment exploded on the market. "We should have had 'temperance meetings' before we started using that stuff," Voykin joshed. "But, all joking aside, there should have been a gradual approach to automatic watering. A lot of us went into it without considering the new problem it might cause."

That new problem, of course, is over-watering which has resulted in something more than sloshy lies for members. In places where water collects, drainage woes became a major headache and pretty soon supers were combating plant rot.

"I'm not sure about this 'brown is beautiful' business," Voykin added. "Brown definitely is not beautiful when poa annua burns out. This is why we experience a lot of over-watering. The superintendent does not want to lose that poa. It is a disgusting sight, you know."

Williams, an old hand at super's problems, takes a scholarly approach to the irrigation issue. "Why don't we put more effort into turf research so we can get along without irrigation?" he wondered out loud. "As far as I'm concerned, there's too much dependence on artificial methods of grooming the course. We haven't concentrated on turf research and we don't know what could be accomplished if we doubled or tripled the effort. If we eliminate the heavy dependence on irrigation, we might come to achieving the best of two conditions."

It all boils down to responsibility. . .this question of having burned fairways or green, soggy surfaces. "I wish I could get a written statement from my green chairman saying it was all right to reduce irrigation," Voykin concluded. "Then, I -we - would know what to do. The members are the ones who should decide. Do they want a course that looks good or one that plays easier? If I get that in writing, I can give them what they want without worrying about it."

Gerry Finn

STARTING TIME FOR DIRECTORS MEETING AT THE MAY MEETING HAS BEEN CHANGED TO 9:30.

NEW MEMBER

Ed Picard of Woburn Country Club has been voted an Associate Member.

MEMBERSHIP APPLICATION

Paul Miller, Tedesco Country Club, Associate Member.

MEMBER RE-CLASSIFICATIONS

Les Allen, Henry Guenther, Ed Phinney retired and are Life Members. Dan Collins retired and voted a Life Member.

NEXT MEETING

June 6, 1978
Woodland Country Club
Newton, Mass.

Host Superintendent - Norm Mucciarone
Golf Tournament - Superintendent - Greens Chairman
Shot Gun at 1:00 p.m.
Dinner at 6:30 p.m.
Lunch available at the club
Carts and caddies available
Directions: Off Rte. 128 take Rte. 16 East. Club is on the left.
Cards will be mailed to make your reservations.

Golf Course Superintendents Association

Mosquito Control

By: Charles R. Lane, Supt.,
Ould Newbury Golf Club

Mosquitoes have been with us for a long time. At Ould Newbury, mosquitoes have been with me for what seems an eternity. Actually, it has been four years, uphill all the way. I have decided to put what I have learned into print. Hopefully, others similarly affected may learn and be helped by our experiences.

At their best they are an annoyance, irritating to anyone who is outdoors in warm weather. Your golf members are not the only ones bothered, so are resort guests, swimmers and tennis players. We have had members and fee players leave in the middle of a hole, swearing never to return. This of course, hurts financially. How much is hard to estimate. Who knows how many people never join because of the aggravation from mosquitoes?

Other areas of the economy are also affected. Most outdoor sports, both spectator and participant, are financially affected. Real estate values are lowered, drastically in some areas. Outdoor construction has been affected in such varying times and places as the Panama Canal to the Alaska Pipeline. Working outdoors can be near impossible during heavy infestations. Farms that rely on manual labor may find it hard to hire laborers that will put up with the annoyance.

Mosquitoes also present a serious hazard to the public health. Diseases carried by mosquitoes can be fatal to both man and beast. They transmit malaria, encephalitis, equine infectious anemia and dog heartworms. Beef and dairy cattle have been literally bled to death by hordes of mosquitoes. Horses left out at night have been known to run to near exhaustion, just to escape being eaten alive.

Mosquitoes range all over the globe and there are approximately 2,700 species and subspecies. Fortunately there are only 52 species in New England. Only 12 of these are classified as annoyance species. This article will deal with fresh water and salt marsh types. Since control of both is basically the same, larval control will be dealt with in the next few paragraphs on fresh water types. Adult control will be taken up when we get to salt marsh types.

Fresh water mosquitoes infest most of the land area simply because there is less coastal area than inland area. To properly control the mosquito a brief description of its life cycle is important.

The first brood overwinters as eggs and begin their life cycle when the temperature gets to 40 degrees. Larva begin life in shallow pools of water, coming to the surface for air and going to the bottom for nutrients. This constant yo-yo motion from top to bottom is crucial to the life of the larva. If is has to go too far down it may starve on the way down, or suffocate on the way up. Generally, any depth over 12 inches is too great for survival. Therefore, your irrigation and decorative ponds are generally not breeding areas, except maybe at the edges. The mosquito transforms from larva to pupa and emerges from the surface as an adult.

Any shallow standing water is a potential breeding area. The surface area is of little importance. Heavy concentrations have been calculated at 400 larvae in a standard 1 pint dipper. This is a heavy infestation, but lighter ones are still potential for high adult populations.

Water stands in many diversified areas. Cans, bottles, wheelbarrows, old tires and rain gutters are some of those that quickly come to mind. Be observant and imaginative when looking for standing water. Never overlook the obvious. One of the heaviest concentrations of larvae I ever observed was in my backhoe bucket that hadn't been used since a previous rain.

Now we can state control rather simply: remove standing water and you will drastically interupt the mosquito's life cycle. So much so, it will cease to exist. Drain or fill low spots where possible. Clean sluggish brooks of leaves or sod to speed flow. Watch your housekeeping and keep cans, bottles, etc. from collecting water. Some courses still use or have on site dumps. These are great breeding areas, even if they haven't been used in years. Clean rain gutters on clubhouse and other club buildings. Your ponds could be stocked with small fish that feed on larvae around edges.

Chemical control is practical for constant wet areas that cannot be drained or filled. Because of its life cycle, the mosquito is most susceptable in its larval stages. The best time to spray is early spring after larvae are observed. Repeat sprays every 2 or 3 weeks for successive broods if necessary.

Larvacides are still available, although some may soon be restricted. I have had great success with Abate, in a knapsack sprayer at a rate of 1 oz. per acre of standing water. Believe me, a gallon lasts a long time. This is sometimes cheaper than draining and filling.

In our area the mosquito control agency dusts frozen swamps and wet lowlands with a larvacide. This is done in the winter after January 1st. When the ice melts, the dust remains on the surface, young larvae surface for air and contact the larvacide. This has been the best way to treat swampy areas that are inaccessable during the other three seasons of the year.

If all the preceeding programs are followed, you will have eliminated a large percentage of your adult mosquito population. Getting "the ones that got away" and control of salt marsh adults will be discussed in the following few paragraphs.

Salt marsh mosquitoes present somewhat of a different problem. Salt marshes are prevalent in most coastal areas of the United States, and New England is no exception. In Essex county alone, there are close to 44,000 acres of salt marsh, all prime breeding ground and poor feeding area. A hatched brood moves inland almost immediatley. It is not uncommon for a salt marsh mosquito to move 10-12 miles inland, and on rare occasions, have been reported up to 50 miles inland, in search of food. Heavy infestations start in June or early July, and continue until the end of September.

Any large scale application of larvacide is frowned on (or illegal) in most areas, so proper drainage is the only solution. Properly maintained ditches keep shallow breeding pools from forming, and allow small fish in at high tide to feed on larvae and eggs. Due to the huge volume involved, proper maintainance of existing ditches is difficult. There are approximately 3000 miles of ditches in Massachusetts alone. Most were dug in the 1930's as a W.P.A. project. Keeping all of these clear on limited budgets is difficult for mosquito control agencies. The net result is a high concentration of huge breeding areas. Also, the rate of reproduction can be staggering. Under optimum conditions a salt marsh mosquito can go from egg to adult in 7 days.

Those of us in coastal areas are fighting adult salt marsh species, a seemingly never ending battle. To control adult mosquitoes one should know something about their habits and life style. It is true that only the female "bites." She requires the protein in blood for egg production. Mosquitoes are nector feeders, relying on plant juices for nourishment. They prefer

shade to hot sun, they seldom fly or feed above a height of 15 feet, and cannot fly much further than 15 feet without resting and feeding. A strong gust of wind will increase these distances drastically.

Bearing all this in mind, the target area for residual pesticides is easily defined. The underside of trees and shrubbery along fairways, next to tees and greens, around parking lot, shady areas around other facilities and shaded side of club buildings. A note on electric insect "zappers": they must be mounted less than 15 feet in the air to be effective. Remember this if you are responsible for these at your clubhouse or pool.

Now that we know where to spray, it follows that we should know what to spray. I won't dazzle you with numbers or bore you with rates, this information appears on all labels. I have had the best results with Methoxychlor; with Dursban and Malathion running a very close second. I have also had my best results with wetable powder formulations rather than with emulsifiables. They seem to stay in suspension better, and therefore spread and stick better. Remember that these are residual sprays, so frequency of application is dependent on weather conditions.

Most professional mosquito controllers prefer U.L.V. (ultra low volume) mist blower for their large scale work. These put out technical material in droplets fine enough to be windborn. However, a good U.L.V. unit is rather costly and has few, if any, other uses on a golf course. This cost can be justified if infestations are heavy and by the somewhat reduced cost of material.

Standard mist blowers are considered, by the professionals, to be almost as good as U.L.V.'s. The cost of a mist blower can be justified because it is used for several types of pests and areas on the golf course. More courses are considering mist blowers as a supplement or replacement for hydraulic sprayers. Mosquito control is just one more use a club can get for its capitol outlay.

At my club we have used a hydraulic sprayer for the past 4 years. I don't consider it the best tool for mosquito control, but it is available and also used for other pesticide applications. In years past we sprayed with 2 men, one driver and one sprayer. This was time consuming and coverage was questionable, at best. The vegetation was probably being covered, the tractor, sprayer and tractor driver were certainly being covered.

In the spring of 1977, I purchased a "Boom-Jet" nozzle. This was mounted on the rear of the sprayer with a shut off that the tractor driver can reach. The "Jet" was turned around about 90 degrees from its normal position, the bottom two nozzles were removed, and plugged. This gives us about a 120 degree fan that sprays under trees, tops of bushes and grass. Exactly where mosquitoes are apt to land first. This mechanical conversion has cut my spraying time by almost 75%. In addition, we are making a better and safer application. When we want to spray fairways, I turn the "Jet" back to the original position and replace the nozzles.

Thermal foggers seem to have slipped in popularity in the past few years, possible because they are so highly visible. This makes for very poor public relations with an ecology conscious public. I seldom use mine because of the poor residual effect. I do run a small fogger from my tractor muffler. This is a self defense mechanism so my tractor operator can mow fairways with a degree of peace. It is difficult to drive if you are slapping with both hands.

Dusts are rarely used anymore for mosquito control. They seldom stick to anything for any length of time, unless it is a perfectly horizontal surface. So there is little residual where and when you really need it.

When you are trying to decide on a method of application, remember that the best machine is one that puts the material where you want it, in the least possible time. If you use your imagination and the equipment available at your course, you will do a fine job of mosquito control.

Timing of sprays is difficult to recommend. Obviously the best time of application is right before the mosquito lands. Each superintendent must be his own judge, considering: weather, concentration of mosquitoes, tournament schedules, etc. I have sprayed as often as five times a week and as infrequently as once in two weeks. We spray the whole wooded perimeter, around shady greens and tees, around the clubhouse and the parking lot (in the absence of cars). I have found early morning the best time of day for spraying. The mosquitoes are out then, and very few members or their cars are around.

At this point a few words on repellants are in order. After four summers at Ould Newbury, I can state, without reservation, that repellants do work. The best are in aerosol cans because clothing can be sprayed. We use from 24-48 cans a year for a four man crew. The crew sprays each others backs, spray your hands and rub onto face and neck area. That stuff stings the eyes and half a snoot-full will keep you coughing until lunchtime. As far as I am concerned, the guy that puts repellants in body and laundry soaps may have people beating a path to his door. Seriously, repellants will work if you put them on.

We know that mosquitoes are a nuisance and a health hazard. They can be controlled, to some extent, with our knowledge and chemicals. Freshwater varieties are best controlled in larval stages. Salt marsh mosquitoes are usually controlled as adults, which requires chemical sprays.

Most of you who read this are or will be certified applicators, so I will say very little about safety. Try to impress your crew with the dangers of insecticides. Mine is impressed, but can't seem to realize that filling time is the most dangerous. I have to live with this and do most of the filling myself. After four years I can't start beating their heads with a 2 x 4. So stress safety and use safety.

You may have noticed I have avoided talking about costs. Costs will vary greatly with every individual operation, so what we spend would mean nothing to any other course, or outdoor operation. Chemical prices are constantly changing. This makes accurate, long range costs hard to predict. Also, methods of application affect both material and labor costs.

Work closely with your extension service or local mosquito control agency. They are quite knowledgeable and helpful. They may be able to assist with drainage or spray for you occasionally. So don't be afraid to ask for help. I should thank Mr. Robert Spencer of the Essex County Mosquito Control District, for data and background material he has given me. His help and advice has been invaluable over the years.

Mosquitoes to one degree or another are inevitable. However, proper programs will reduce their impact and make outdoor activity more pleasurable.

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