



Tee to Green

MEETING NOTICE

Date: July 10, 1973 Tuesday
 Place: Siwanoy C.C.
 Golf: 12 noon on
 Lunch: Available in grill room
 Cocktails: 6 PM
 Dinner: 7 PM
 Speaker: Dr. Ralph Engel — Poa annua
 Host: Vincent Pentenaro
 Directions: From Northern Westchester, take Hutchinson River Parkway to Mill Road Exit, take right at exit proceed and go to Waverly Square (Route 22). Make a left proceed to Pondfield Road, take a left on Pondfield Road and the club is on your left.

From Long Island and Southern Westchester: take the Hutchinson River Parkway to the Pelham Road exit, take a left on to New Rochelle Road, which will turn into Pondfield Road. Club about 1 mile from exit on the right side.

COMING EVENTS:

- August 16 Wee Burn Country Club
- August 20 MGCSA Field Day: Al Tretara Chairman
- August 22-23 Rhode Island Field Day
- September 20 Bonnie Briar C.C.
- October 2 MGCSA Invitational, Metropolis C.C.
- November Annual Meeting — Open for club
- December 8 Christmas Party — tentative date

MGCSA News:

June started off slowly but the second week we had a nice heat wave. It sure kept down attendance at the Rutgers Field Day. Possibly we should have the turf field day again in the fall. Plans call for a building and parking lots to be built where the turf plots are located now. What a shame.

We had another fine meeting at Waccubuc Country Club. Al Moore had the red carpet out. Those who played enjoyed playing on real bent greens some of which had quite alot of velvet. Possibly we should give Al's daughters the credit. They work for Dad as water girls and help change tee markers, check ball washers, etc. He says he never has to worry about the job being done and he is very proud of their work. The course was in excellent condition. Bill Closter gave an excellent presentation on the true patterns of an irrigation system. It certainly cleared our minds as to the various differences in irrigation systems.

Those in lower Westchester and parts of Conn. and I am sure Long Island were greeted with a bumper crop of Hyperodes this year. In some cases two applications of

insecticide didn't even give good control. Cornell University has put out plots at Bonnie Briar. If you don't care to go on a Chip Cal program for Poa eradication try Hyperodes without an insecticide and I am sure you will have equal results. It's too bad our Hyperodes "King" Bill Caputi wasn't given time to give some comments at the meeting on his control methods.

The USGA did have a Green Section Educational Program at Oakmont on June 13th. It was little known in our area as the communications broke down somewhere and we never received the information. The few who did make it, thought it was a good start but everybody I think would have preferred spending a little more time on seeing the course. It will probably be held at Winged Foot Golf Club next year so many of us will be able to take advantage of having the program in our own back yard.



Bill Closter

True Patterns of an Irrigation System

The June meeting of the Metropolitan Golf Course Superintendents Association was held at Waccabuc Golf Club. The turnout was good and the dinner and hospitality of the club was quite enjoyable.

The guest speaker was Mr. Bill Closter who represented the Sprinkler Irrigation Association. The goals of the S.I.A. are for a greater understanding of irrigation principles and for more control of irrigation projects. The association is also trying to promote an educational program by giving a three day seminar in California.

Mr. Closter showed slides and briefly spoke about the fundamental procedures for attaining proper water distribution. The key points discussed for irrigation uniformity were triangular spacing, using correct pressure, and equal wedge patterns.

The meeting was very pleasant and well worth attending.

David Lerner
Winged Foot Golf Club



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OSHA regulations. For a 235 page guide of OSHA, send \$6.00 to the National Club Association, 1120 20th Street, N.W., Washington, D.C. 20036 requesting the "Occupational Safety and Health Manual" and the special Inspection Guide. NCA will also send you the OSHA poster which by law must be displayed prominently by your club.

New Jersey 1973 Turf Field Day by Andy Androsko

Vertical cutting — on bentgrass mid spring, May, appears best. October thinning encourages *Poa annua*. Bluegrass is more tolerant of vertical cutting than is bentgrass. For bluegrass, September appears to be the best period. August thinning results in *Poa annua* and encourages Chickweed. November thinning encourages early spring knotweed.

Bluegrass varieties — Nugget greens up slowly in the spring but has excellent summer color; fairly disease resistant but does get dollar spot. Warren A 34 is very aggressive and shows some shade tolerance. Fylking showed some susceptibility to *Fusarium roseum*. Nugget appears to be hurt by Calcium arsenate. Baron looks good but is still too new. Professor Reed Funk feels that the best bluegrass will be grown where three or four good varieties are used in a mixture. Preferably none of the varieties would be overly aggressive.

Poa trivialis — several varieties showing great variation in colors. Quick establishment, 3-4 days; good in moist, cool, shaded areas but burned out during hot weather of summer but greens up rapidly with the cool, wet weather of the fall. Should be fertilized and limed like Kentucky Bluegrass.

Chinch bug — many red nymphs present in the sod now, mid-June. It is important to control this first brood to eliminate carry-over which causes the more destructive second brood in August which drags on into the fall; causes many turf problems attributed to other reasons. The second brood overwinters resulting in a new population next spring.

Professor Hilesky discussed systemic fungicides indicating that they are absorbed in about one hour after application. They travel from the point of absorption upward and outward so that as the plant grows and the leaf is mowed, the material is slowly eliminated by mowing. It is best in applying these

materials to get them to the lower part of the plant. Professor Hilesky indicated that there were several somewhat similar type fungicides whose breakdown products on the plant were very similar compounds.

Clearys 3336, a similar product to Tersan 1991, appears not to control striped smut. For striped smut control, Tersan 1991 should be applied in October and drenched in. Control can be obtained by using spring treatments but it will take more material and additional treatment to get the same affect as one Tersan 1991 drenched in in October. *Fusarium roseum* controlled by Tersan 1991 when treated in July and August and drenched in thoroughly.

Dormant feeding in the late fall appeared good for Kentucky bluegrass but there was some question about its use on bentgrass as it could stimulate and increase *Poa annua*.



Jim Fulwider, Jr. Jim Fulwider, Sr.

Progress in the Control of Turfgrass Weevil, a Species of *Hyperodes*

By H. Tashiro and R. W. Straub Department of Entomology
New York State Agricultural Experiment Station, Geneva and
Highland, N.Y.

The turfgrass weevil, a species of *Hyperodes* was first reported damaging lawns on Long Island in 1957, and repeatedly thereafter as a serious pest of annual bluegrass, *Poa annua* L., on Long Island and in Westchester County, New York.¹

Turfgrass weevil adults overwinter in turfs of fescue and among leaves and debris, and emerge during April to feed on the leaves and oviposit between leaf sheaths of *P. annua*. Young larvae feed in the stems. As they outgrow the stems they leave to migrate into the thatch and feed externally on the bases of the stems.

Damage from turfgrass weevils shows up in late May or early June as brown patches of dead grass.

According to Cameron and Johnson² the eggs are most abundant during mid-April. Larvae are present from mid-April, and reach their peak during late May when the overwintering adults reach their lowest level. As a result of two season's study², the following recommendations were made: application of granular diazinon at 3-4 lb AI/acre or chlorpyrifos* EC at 1.2-2 lb AI/acre applied in mid-April and again in mid-May. The first application is directed toward adults before oviposition and the second toward the young larvae¹. They² indicated that further field studies might prove that lower rates or one treatment a year may adequately control this insect.

It appeared logical to us that since adult damage is relatively minor compared to the larval damage, a single critically timed application of the above recommended materials aimed at killing young larvae when most of the eggs had been deposited might provide sufficient control for the season. A single field test was made with this in mind and

results are reported herein.

Methods and Materials

On May 4, 1972, 20 x 20-foot plots were established on the 14th fairway of Brookville Country Club, Glen Head, L.I., New York. Each of seven treatments was replicated five times in a randomized complete block design. All insecticides, pre-weighed for each plot, were applied in two directions at right angles to each other. Granular formulations were applied with a 2-ft. Scotts spreader, and emulsifiable formulations were diluted in six gallons of water and applied with a 3-gallon sprinkling can.

The weather, following rain the previous day, night, and early morning, was cool and cloudy with a slight breeze. Soil temperature at a 1 to 2-in. depth was 64°F.

In plant development, Forsythia was in petal fall; flowering dogwood, *Cornus florida* L., and redbud, *Cercis canadensis* L., were in full bloom, and *Poa annua* was in full head.

Growing degree-day accumulation from April 1 through May 5, 1972 with a base mean temperature of 40°F for New York City was 437 compared to a 10-year normal of 444 (personal communication with Dr. B. Pack, ESSA Weather Bureau Office, Cornell University, Ithaca). Therefore, season development to this date in 1972 was considered to be about normal.

Various golf course superintendents reported that very few weevil adults had been observed prior to May 4. Also, no evidence of injury was present. Light to heavy precipitation following application occurred during May 7-9.

Injury to the untreated grass at the edges of the fairways adjacent to the roughs became apparent during the week of May 29. Turf samples were obtained on June 6, 1972. Injury, as browning grass, was still present only along the edge of the 14th fairway but no apparent differences were observable among the plots. Therefore, the plots were not rated as to index of injury.

Exploratory examination of several plugs 4.12 in. in diameter and approximately 1 in. deep, taken with a standard golf cup cutter from untreated plots revealed the presence of *Hyperodes* adults and larvae of various developmental stages, both in stems and in the roots very near the soil surface. Larvae were also found in plugs from untreated plots in the center of the fairway. Seven plugs were removed from each untreated plot and five were removed from each treated plot.

Since Cameron and Johnson¹ report that all large larvae are above the soil in the thatch or within 0.3 in. of soil and that 99% of the pupae are within 1 in. depth, it was not necessary to collect soil cores to a greater depth. All were obtained at least 3 ft. from the borders and placed separately in plastic bags for transportation to Geneva. Other plugs cut from sod were inserted in the holes.

At Geneva, the plugs were placed individually in 1-qt. clear plastic cups and covered with lids possessing a 2-in. diameter screen and held at 77°F for growth of larvae to facilitate examination and counting. By head capsule measurements, larvae were determined to be in the 2nd to 5th instars.

By June 12 practically all were mature 5th instar larvae or pupae. The temperature in the rearing rooms was reduced to 65°C to decelerate insect development and examinations of all plugs were made during June 14-19. The plugs were picked apart by hand under a 3-diopter magnifying glasslamp to remove the weeviles. The soil was screened, then soil plus grass were submerged in 2 qts. of water to float any remaining larvae and adults to the surface during a 20-30-min. period. Out of 668 individuals counted, 40 larvae, 8 pupae, and 7 adults were found by floating. This constituted 8.2% of the total counted and was therefore considered an essential procedure.

* The active ingredient in DURSBN* insecticide.

Results and Conclusions

The results of the treatments are shown in Table 1. A single application of chlorpyrifos as DURSBN insecticide and pirimiphosethyl (PP-211, Imperial Chemical Industries), both at 2 lb. AI/acre rate, provided satisfactory control. All three formulations of diazinon at 4 lb. AI/acre fell short of satisfactory control and confirmed earlier results by Cameron and Johnson² that a single application of diazinon is inadequate.

Granular formulations of both chlorpyrifos and diazinon performed better than the emulsifiable formulations. The following is offered as the most probable explanation for these differences. Granules probably sifted into the thatch and were protected from sunlight while emulsifiable formulations remained predominantly on the blades and stems for more rapid ultraviolet degradation. Both chlorpyrifos and pirimiphos-ethyl applied as granular formulations provided sufficiently high kill of the weevil to indicate the feasibility of turfgrass weevil control with a single, properly timed application.

Acknowledgements

We are grateful for the assistance provided by Francis Consolie, N.Y.S. Agricultural Experiment Station, and Robert O'Knefski, Nassau County cooperative Extension Association, in the conduct of these studies. The cooperation of E. Latini, Superintendent, Brookville Country Club, is also acknowledged.

Literature Cited

1. Cameron, R.S. and N.E. Johnson, 1971. Biology of a species of *Hyperodes* (Coleoptera: Curculionidae), a pest of turfgrass. Cornell Univ. Agr. Expt. Sta., Ithaca, Search Agriculture 1(7): 31 p.
2. Cameron, R.S. and N.E. Johnson, 1971. Biology and control of turfgrass weevil, a species of *Hyperodes*, New York State Co. Agr. Cornell Univ. Ext. Bul. 1226. 8 p.

TABLE 1. *Hyperodes* weevil control on fairway *Poa annua*. Brookville Country Club, Glen Head, N.Y. Treated 5/4/72, turf plugs obtained 6/6/72, examined 6/14-19/72.

Insecticides & Formulations	Lb. AI /acre	Total weevils from 5 plots†	Mean/plot*	% control
Chlorpyrifos 0.5G	2	3	0.6†	98.8
Pirimiphos-ethyl 2.1G	2	17	3.4†	93.0
Chlorpyrifos 2E	2	36	7.2†	85.1
Diazinon 2G	2	106	21.2*	56.2
Diazinon 14G	4	120	24.0*	50.4
Diazinon AG500	4	144	28.8*	40.5
Untreated	0	242	48.4	—

† Plugs 4.12 in. dia. and 1± in. deep obtained with golf cup cutter

* Plots 20 x 20 ft. 5 replications/treatment, 5 plugs/plot

* Means followed by the same letter are not significantly different at 5% level according to Duncan's multiple range test.



Ed Binsse Al Moore

Westchester Classic: Bob DePencier has arranged for complimentary daily tickets at the up and coming Westchester Classic. The complimentary daily ticket will be issued upon presentation of your current MGCSA or GCSAA membership card. Tickets will be handed out at the "Will Call" booth.

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