



Charles Hosler, Bill Trogden, Granville Horn, Houston Couch, Bob Dunning, Stan Fredericksen and Bob Wiley, Roger Thomas (in the background).

supt., only to come out on the latter dates to find that the greens had been freshly topdressed."

The only solution Ellen sees to the whole frustrating problem is that women simply are going to have to learn how to putt on topdressed greens.

Southern Accented Philosophy

Monday afternoon's final performer, effusive Frank Goodwin, who apparently bubbles with a special brand of oratorical lox when he comes within 50 miles of a speaker's pad, gave his audience repeated chuckles with excerpts from his Southern accented philosophy. Here are some of them:

It's not what you say that leaves an impression on people. What really count are the actions, gestures and expressions that reinforce your words;

Of every five people you deal with, one is an agreeable person and one, a stinker. The remaining three will either go along with you or oppose you, depending on your attitude when you approach them;

The first impression you make permanently types you in the mind's eye of the other person. Nothing you do thereafter ever really changes that impression.

Specialists Take Over; Discuss Heavy Topics

At the Tuesday afternoon meeting, Harry McSloy, supt. of the CC of Virginia, Richmond, introduced these speakers: Houston Couch, plant pathologist, Pennsylvania State U.; Granville Horn, turf technologist, U. of Florida; William Trogden, soil and crop science dept., Texas A & M College; Charles L. Hosler, meteorologist, Pennsylvania State U.; and

a panel composed of Robert C. Dunning, pres., Bob Dunning, Inc., Tulsa; S. A. Fredericksen, Mallinckrodt Chemical Co., St. Louis; Roger Thomas, Jacobsen Mfg. Co., Racine, Wis.; and Robert H. Wiley, Aero-Thatch, Inc., Rahway, N.J.

Couch Is An Author

Houston Couch, the young Penn State pathologist who is more of a toothpaste ad than a professorial type, revealed that he had just completed a book, "Disease of Turfgrass" (Reinhold Press), after five years of work and rather unabashedly suggested that the supts. buy it even if they don't read it. Couch asserted that perhaps the biggest obstacle to disease control comes from improper identification of the organism that causes the trouble. He urged that the greenmaster make an intense enough study of turf pathology to know under what conditions, and in what locality and seasons, specific diseases may occur before he plunges in with a control that may or may not be the correct one. "If diagnosis is correct," Couch said, "the battle is 90 per cent won because there remains only the application of the proper fungicide to head off the disease."

Couch called particular attention to certain things that may largely counteract or totally defeat treatments. They are: Failure to follow the manufacturer's directions, the most common; Use of fungicides that have their potency reduced because they have been stored too long; Use of spray equipment that hasn't been thoroughly cleaned following application of a fertilizer, herbicide or some other fungicide. Particular stress was put on the latter point because there is a tendency to blame poor product performance when a fungicide doesn't work rather than the condition of the equipment with which it is applied.

Treatments Too Intense

In discussing the proper amendments for green construction, Granville Horn, the U. of Florida turf specialist, said that it is pretty well established that the familiar USGA formula is a reliable one to follow because it meets the important tests of permeability and porosity. Horn pointed out that even though the requirements of near ideal green configuration probably are being met in today's construction, subsequent maintenance has a defeating effect. He emphasized that this is not the fault of the supt. The use of fertilizer is too intense and application of fungicides and herbicides too frequent because of putting demands. If these deleterious things aren't enough, close, daily mowing with heavy machines and constant traffic further aggravate the situation.

"Considering the conditions under which he has to maintain bent and fine Bermuda grasses," Horn said, "the course supt. commands a great deal of respect among people in the agronomic field."

In describing tests that have been going on at the U. of Florida since 1959, Horn said that a mixture of vermiculite (20 per cent), colloidal phosphate (5 per cent), calcined clay (10 per cent) and peat (10 per cent) with the native loamy, fine sand has provided the best base for putting surfaces. So far, 36 different combinations of additives to the native soil have been tested.

Food Balance Is Goal

Texas A & M's Bill Trogden stated that a better understanding of the nutritive and regulatory elements of fertilizers helps the supt. in determining when to apply the correct amount of plant food at the right time. "Not only should he know what is put in the soil when fertilizer applications are made," Trogden declared, "but he should take note or be aware of what is removed by such things as leaching and clipping removal. Both are vital to proper food balance. This is the thing we are trying to achieve or retain in our plant feeding programs."

The Texas turf specialist gave an interesting description of how the grass "factory," as he refers to it, operates. The elements found in fertilizers, N, K and P, he said, plus others such as sulfur, magnesium and calcium and, of course, oxygen, are absorbed by the plant and become a part of its structure. At the same time, some of these elements, in ad-

dition to iron, copper, boron, etc., help to regulate its growth. Trogden also pointed out that the overall role of soil in sustaining plant life probably isn't fully appreciated. If it were, more attention would be paid to it. "We think of it as being nothing much more than anchorage for grass roots," he stated. "Its important function, though, is to act as a custodian for the food which it feeds to plants through a well regulated control system. We should try to acquire a better understanding of the various roles soil plays if we are to grow better turf."

Debunks Forecasting Methods

Meteorologist Charles Hosler debunked long range forecasts, saying that they aren't scientific and aren't reliable for even a week in advance. They are based on an historical data method, he said, that involves little more than going back one, two, or five years and checking what happened on a certain date and then forecasting that the weather will repeat itself. Hosler also warned against depending on TV weathermen, saying that many of them garble the forecasts that are written out for them because they don't have the slightest conception of why we have rain or what causes the sun to shine.

The future of forecasting, the Penn State man said, probably is in the satellites. "We're sitting on the bottom of a big ocean of air," he explained, "and have been trying to figure out what goes on above with the help of observations, charts and more recently, radar. These things are good, but not adequate. When we learn to use the radiation data that the satellites send back, probably a big advance will be made in forecasting, both short and long range." Hosler supplemented his talk with a radar movie showing how cloud masses move. The film revealed, as he repeatedly stressed, that forecasters are severely handicapped because storms and clouds actually form in any given locality only about two or three hours before they occur or appear.

The four panelists on the Tuesday afternoon program made the following "turf tip" contributions:

Money Can Be Saved

Bob Dunning: In green construction it is extremely unwise not to first check with experts at soil laboratories to determine the best mixture to be used in a particular area. Too often this is neglec-

ted, resulting many times in putting surfaces that are nothing but continuous sources of headaches and, in many cases, have to be torn up and rebuilt. Greens should be designed and contoured so that drainage occurs in many directions. This covers surface, lateral and internal drainage as well as drainage by diffusion and evaporation. If greens are properly constructed, the amount of money saved in irrigating them adds up to a very impressive sum in a year's time. Sprinkling time is reduced so that it consumes only about 1/10 of the hours that are spent in watering greens that are poorly built.

Work with Dealer

Stan Fredericksen: Disease often is the result of built-in problems. When you are trying to determine the source of turf trouble, do not leap to the conclusion that it is being caused by disease alone. Study the construction of the green, if that is the area affected, and review your maintenance practices to see if they, too, aren't partly responsible. Develop a complete fungicidal control plan that will see you through the entire year, working with your dealer, if necessary, to carry it out.

Roger Thomas — A supt. should train his employees to constantly keep an eye open for trouble, and to attune their ears to detecting it, especially where machinery is involved. The eye test comes in noting, for example, whether a mower is tearing up turf; the ear test comes in listening for sounds that may tell when equipment is not performing as it should. The biggest failure in handling course equipment is the result of poor instruction in its operation. Rainy days should be set aside for familiarizing employees with machinery by showing them how it should be used, what its function or capabilities are, and how it should be repaired.

Care in Topdressing

Bob Wiley: Topdressing shouldn't be handled in a haphazard way. Preparation should involve thorough discing to get the ground opened up; the topdressing material should be evenly distributed; and the final operation, dragging, should be thorough enough to get the material worked into the ground. The best thatch control program is started in the spring. Then, grass grows most vigorously and, as a consequence, the incidence of thatch



Gordon Sims



Al Caravella

is at its peak. None of us would be surprised to learn that we probably are watering greens too much. Maybe we should give more thought to the benefits of more cultivation and simple hand watering as a substitute for frequent soaking.

Al Suggests Hideout for Troubled Turfmen

Paul J. O'Leary, supt. at Ekwanok CC, Manchester, Vt., was chairman of the Wednesday morning 'Northern Maintenance' program and had these speakers on his roster: O. J. Noer of Dick Wilson & Assoc., Deerfield Beach, Fla.; Ted Woehrle, Beverly CC, Chicago; Alfred Caravella, Middle Bay (L.I.) CC; Beryl Taylor, Iowa State U., Ames, Ia.; John Gallagher, American Chemical Products, Ambler, Pa.; and James R. Watson, Jr., Toro Mfg. Co., Minneapolis.

Damage to Dormant Turf

Since winter and early spring are such critical periods in the survival of Northern grasses, O. J. Noer suggested that more study should be made of the damage caused by drought, water logging, ice accumulation and other factors that can be harmful to turf in its dormant state. The veteran agronomist cited drought, in particular, as being a source of injury to greens that the supt. must guard against. Deep roots that can feed on a water source through most of the cold months, dense turf that holds sufficient moisture, and either a snow cover, or brush, tree limbs, etc., that trap whatever snow that falls, give the best protection against the ravages of drought.