

34th International Turf-Grass Show Draws 1300;

Delegates Study Soil Fumigation, Turf Diseases

Who appreciates fine turf more than the men and women who play on America's lush golf greens?

Probably the golf course superintendent, whose job consists largely of maintaining these healthy stands of grass. And nowhere was this concern more apparent than at the 34th International Turf-Grass Conference and Show, February 11-14, in San Diego, Calif.

Nearly 1300 delegates gathered at the El Cortez Hotel's convention center for the annual affair, which is sponsored by the Golf Course Superintendents Association of America.

While attendance is primarily confined to golf superintendents, the meeting features yearly a regular series of educational lectures and seminars devoted to study of turf diseases, insects, fertilizers, and maintenance equipment. For this reason, much of this year's program contained information useful to contract applicators, particularly those who treat golf courses, or act as advisers or consultants.

Also of interest to CAs is the annual trade exhibition, which shows off the latest in chemicals and equipment for turf care. In San Diego this year, delegates were treated to a lavish display of new spray rigs, aerifiers, verticutters, chemicals, and related materials.

This is the largest turfgrass show in the world, according to Dr. Gene C. Nutter, GCSAA Executive Director.

A practical discussion of con-

tract soil fumigation on golf greens was one conference highlight significant for golf men and contract applicators alike.

Explanation of this relatively new technique (*W & T*, Feb., p. W-8) came from Donald E. Leaman, Technical Director, Agricultural Chemical Sales, Neil A. Maclean Co., El Monte, Calif.

Leamen described the soil fumigant methyl bromide as "a tremendous herbicide which permeates very fast."

It is important that soil be properly tilled and moist before fumigant is applied, Leamen reminded his audience, or some seeds will not germinate and thus be killed. While most weeds are vulnerable to MB, the Californian continued, the chemical will not kill seeds of either cheeseweed or clover.

Chloropicrin Good Fungicide

Many chemical preparations now used for soil fumigation contain chloropicrin, a good fungicide, Leaman said. In combination with MB, which kills the weeds, chances for healthy turf are greatly enhanced.

Large equipment that automatically lays tarps, under which soil is fumigated, and especially designed injectors, have been developed for soil fumigation jobs, Leaman went on. Drawback here is that on some courses, heavy machinery may cause compaction of the soil, which reduces the opportunity for vigorous grass growth.

"Top Turf Tip" Panel

A unique feature at the 34th Turf-Grass Conference was a panel

of university experts from western states which offered turfmen their latest research findings.

Featured on the panel were Dr. Leland Burkhart, Director of Horticulture, University of Arizona, Tucson; Dr. Norman R. Goetz, Extension Weed Specialist, Oregon State College, Corvallis; and Dr. Charles J. Gould, Plant Pathologist, Washington State University, Puyallup.

In the Pacific Northwest, Dr. Goetz said, prolonged winter rains and mild temperatures create turf disease epidemics. Proper winter treatment is necessary, particularly in turf planted in areas of high altitude, and especially that planted to fescues and ryegrass.

Another big problem is thatch control. "After all, in the Pacific Northwest, we raise the best thatch in the U.S.," the Corvallis scientist joked. Reason for this, apparently, is that low soil temperatures make thatch hard to decompose.

Four Big Diseases in the West

Dr. Goetz was followed by Dr. Charles J. Gould of the Western Washington Experiment Station in Puyallup.

"In the Pacific Northwest," the plant pathologist began, "our four major turf diseases are *Fusarium Patch*, *Corticium Red Thread*, *Typhula Snow Mold*, and *Fairy Ring*."

Nationwide, the diseases of most concern are *Brown Patch*, *Dollar Spot*, *Helminthosporium Blights*, and *Fairy Ring*. (See *W & T*, Nov. 1963, p. W-1).

While cultural controls are naturally obligatory, Dr. Gould believes it is still necessary to depend largely on a fungicide for disease control.

But the best fungicide, applied improperly, is of no use. For this reason, the scientist continued, watch carefully how applications are made. For example, (1) use a suitable measuring cup (not a metal one which is so beat up it no longer holds the amount it once did, and certainly not a soft drink bottle); (2) use a meter for proper calibration of spray equipment; (3) mow before ap-



Intent on improving turf care techniques, delegates to the 34th International Turf-Grass Show listened to introductory speeches by Dr. Gene C. Nutter, GCSAA Executive Director (at podium) while association president, Sherwood Moore (seated, right) and San Diego Mayor Charles C. Dail, (seated, left) waited to address the 1300 delegates.

plying a fungicide so maximum penetration results; and (4) watch out for proper coverage, because a distracted sprayman may miss a section.

Impurities from dirty water will inactivate many mercurial compounds, Dr. Gould warned, so use clean (but not necessarily distilled) water for dilutions.

Another problem is rusted equipment, also of particular harm to mercury compounds.

Dr. Gould concluded that these guides, followed closely, would not be effective unless the individual in charge of a turf area is familiar with the regional differences and peculiarities which affect local grasses.

In Dr. Burkhart's discussion, particular attention was focused on types of trees for golf course ornamentation.

More attention to the Northwest came from another Washington State University expert, Dr. Roy L. Goss, Assistant Agronomist and Extension Turf Specialist at the Western Washington Experiment Station in Puyallup.

There is a great variety of soil

type and climate in Dr. Goss's region, and this is one of the reasons why he insists on the importance of a soil test.

Many devices are available for conducting such tests.

Dr. Goss said compaction and drainage problems are partially responsible for the loss of bent-grasses and invasion by *Poa annua*.

But at least, he continued, dandelion and plantain are not much trouble since the advent of 2, 4-D.

Five kinds of fertilizers, which through various devices give off nitrogen for longer periods than ordinary growth stimulants, were reviewed by Dr. O. R. Lunt, Associate Professor of Agronomy, University of California at Los Angeles.

These slow-release fertilizers are one of the following types: (1) coated; (2) low solubility; (3) organic; (4) synthetic organic; and (5) ion exchange.

Dr. Lunt said the last method, which he called a somewhat obscure chemical process, is only of "academic interest."

Success has been achieved, the

scientist went on, with soluble fertilizers which have been coated with a membrane. When such a coated fertilizer is placed in moist soil the nutrients diffuse out at a very steady rate for two or three months, depending on the soil compaction.

Materials with limited solubility, such as metal ammonium or potassium phosphates, are capable of supplying nitrogen, potassium, or several micronutrients to the soil at slow rates.

"But the high phosphorus-nitrogen ratio of metal ammonium and potassium phosphates makes these materials best adapted to single or occasional use," Dr. Lunt warned.

Trade Show Adds to Conference

Educational programs at the International Turf-Grass Conferences are run for half-days only, to give delegates a chance to explore the extensive trade show area, where suppliers are on hand all day to give out samples, demonstrate equipment, or talk about current turfgrass problems.

While some equipment on display, such as golf carts and green markers, are of little practical interest to custom sprayers, the major portion of the exhibits are concerned with care of turf.

Manufacturers of such chemicals as insecticides, fungicides, weed-killers, and fertilizers were on hand, as were the companies which make sprayers and dusters to apply the compounds.

GCSAA Elects Nelson

Included in the conference also is the annual business meeting of the Golf Course Superintendents Association of America, which this year elected Roy W. Nelson as 1963 president.

Nelson is from the Ravisloe Country Club in Homewood, Ill.

Philadelphia was chosen as 1963 meeting place, Dr. Nutter told *Weeds and Turf*. Convention site is the Sheraton Hotel, and dates are Feb. 9-14.

Contract applicators who want to attend the meeting to hear the educational discussions and view the suppliers' exhibits are welcome, Dr. Nutter said. All delegates are expected to pay the usual registration fee, the GCSAA Executive Director informed *W & T*.



Hypro
PUMPS

HOLLOW SHAFT
MOUNTS ON
YOUR MOTOR
OR ENGINE

GARDEN
HOSE
THREAD

Also available
with motor or engine

**A Portable Pump you can
use for: TRANSFERRING
or low pressure jobs**

Two sizes; Ni-Resist case. Choice of Roller Impeller or Flexible Rubber Vane Impeller to fit your pressure and use requirements.

WRITE FOR FREE CATALOG

Hypro Engineering, Inc.
706 - 39th Ave. N. E., Minneapolis 21, Minnesota