# Wartime Methods Studied At Purdue Turf Meet 

By FRED BERGGREN

## (Continued from April Golfdom)

Carl Fenner, Lansing, Mich., told how and how not to prune park trees and illustrated his lecture with slides. Fenner also discussed subsoil fertilization of green trees and the protection of wounded trees. He warned the turf caretakers that basswood, red oak and linden may look healthy but be rotten inside. Fenner closed with the remark that tree work in winter enables park superintendents to employ golf course workers over the entire year.

Dr. J. C. Carter, plant pathologist at U. of Illinois, discussed tree diseases and how to treat them. He used colored slides to illustrate symptoms of diseases over the seven-state area of Illinois, Indiana, Kentucky, Michigan, Missouri, Ohio and Wisconsin. Dr. Carter illustrated the procedure of supplying liquid fertilizer to trees under pressure through a feeding needle. He also told of possible injury to trees by chemicals used in weed and disease control on turf.

Prof. T. E. (Ted) Shaw of Purdue's Department of Forestry spoke on uses of the different varieties of trees. He believes that too few species of trees are used on grounds of golf courses, cemeteries and parks. Since elm, chestnut or oak those subject to tree diseases - are dying out, he suggested other varieties to use. Shaw said that a tree can also be selected to fit the area and the soil. He elosed with the observation that true forest soils are the most porous of any, and with the warning that trees shouldn't be planted too far from their native habitat.

## Testing for Better Grasses

Dr. R. R. Davis, turf specialist at Ohio State Agricultural Experiment Station, said he'd found that good greens had three times more roots than did poor greens. Another observation of Dr. Davis' was that the best greens contain less organic matter than poor greens. Also, the best greens have good percolation. Another finding was that lack of fertility was not a limiting factor on the poor greens.

Al Linkogel, St. Louis, told that U-3 Bermuda has crowded out crabgrass on the tees of his course, so he has established a U-3 nursery. This bermuda-grass works exceptionally well in St. Louis, he reported.

Don Likes, Hyde Park GC, Cincinnati, discussed the ability of grasses to heal over divot scars; the watering of fairway grasses and the performances of many different grasses. His talk was based on his work at Purdue University during the summer of 1949.

## Insects and Diseases

Under this section, Prof. Glenn Lehker, Purdue entomologist, said that DDT has great residual action, but that Parathion may be quicker acting. Lehker warned that eight deaths have occurred in 1950 from the use of this insecticide. Precautions for the applicator to take are to use a respirator, rubber gloves and clothing that completely covers him.

Dr. John R. Vaughn, head of the Department of Botany and Plant Pathology, Michigan State College, described the properties of acticidone, a new antibiotic fungicide. The new chemical shows much promise for the control of "melting out," but it is unavailable to the greenkeeper as yet. Dr. Vaughn also illustrated the percent control of "dollar spot" and "melting out."

Dr. Eric G. Sharvelle, of Purdue's Department of Botany and Plant Pathology, stressed the importance of using the appropriate treatment to control each disease.
R. H. Wasson and Frank Guido, representing the Fairbanks Morse Co., lectured on irrigation pumps. They emphasized the importance of buying the right type of equipment for the job that is to be done, installing it properly and giving it the best possible maintenance. They presented illustrations of types of pumps, and demonstrated maintenance practices.

The annual turf banquet was held Wednesday evening. The main features of the evening were a presentation of a desk pen set to Merton L. Clevett, founder of the Purdue Turf Conference in 1937. This was followed by the Purdue Glee Club's singing. Dr. J. B. Peterson, head of the Department of Agronomy, Purdue, was toastmaster.

At the final session M. E. Farnham spoke on Athletic Field Management. He told turf workers to choose appropriate proportions of soil materials, then mix them thoroughly when building athletic fields and similar areas. Otherwise pockets of certain materials may form to the detriment of the turf grasses.


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Farnham explained that too much organic matter may make soils hold more water than is desirable for use of athletic fields.

Farnham recommended that grass be cut often so that only a small amount of clipping is taken at one time. This is more important than height of cut. This was likened to shock following amputation of a finger compared to that of an arm.

Farnham said that phosphorous is important with new seedings, and that potassium is more important than it was long thought. He likes organic nitrogen, and has been using it more and more from June on.

Farnham fertilizes with nitrogen 10 days before aerification so that the turf will grow rapidly when it is aerified. He commented that aerification may be a good practice to follow all the year round instead of just seasonally. It would help water absorption and lessen compaction. As for water applications, Farnham said that it has been found that too much water applied may result in less water being absorbed than with lighter applications.

This turf authority said that applications of as low as 1 pound of sodium arsenite per acre of turf has given striking results in the control of crabgrass. Farnham advised that even though chemi-

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cal control measures may not appear to be 100 percent effective in eliminating crabgrass, very often the seeding of the plants was considerably reduced by the treatment. Therefore permanent grasses were favored.

Dr. Musser took the group through research and production of a new grass strain via colored slides. It takes a minimum of 10 to 12 years to develop a new grass variety and begin producing its seed on a commercial scale. Dr. Musser explained the scoring method that is used to rate experimental grasses, and the moisture and temperature records that are kept while the research is going on.

Fertilizers and Chemicals
Dr. A. H. Bowers of Swift \& Co., Chicago, spoke on the present fertilizer outlook. He disclosed that sulfur shortages have cut down on the amounts of superphosphate and triple superphosphate that can be manufactured.

Joe Marzak of Mallinckrodt Chemical Co., said that the chemical outlook is clouded by the supply of basic raw materials. Fungicides containing cadmium, mercury and copper were all restricted during the last war and may be this time. Currently they are available. Marzak remarked that mercury comes mostly from Spain. A 76 pound flask of mercury that formerly cost $\$ 85$ now costs $\$ 224$, so the price has risen on fungicides containing mercury. Cadmium and copper deposits both are located in the United States and South America. Cadmium is somewhat restricted by the U. S. government, but it still can be used by fungicide manufacturers.

Two films, one on recognizing turf diseases and the other made by the time lapse photography method on the budding of trees, completed the 1951 turf conference held in Purdue University's Memorial Union.

## Central Pa. Greenkeepers Set Season's Program

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