

Turfgrass Questions Answered

By FRED V. GRAU

Dr. Grau will welcome questions on course maintenance subjects from superintendents, green chairmen, club and public course officials. There is no charge or obligation attached to this service. Address Queries—Grau, Golfdom, 407 S. Dearborn St., Chicago 5, Ill.

EVERYWHERE we see new golf courses being built to meet the increased demand for playing facilities. The stimulus provided by the knowledge that the men at high levels in our country seek relaxation playing golf has meant a great deal to the game and to the building of additional facilities.

We are pleased to see that gradually the superintendents' associations are being given the opportunity to be on the architect-builder team in order to help write the specifications for the building and planting of new courses. No one is in a better position than the members of the superintendents' groups, with their practical knowledge and years of experience, to say what is the best way to construct a Bermuda or bent green for satisfactory maintenance, to plant tees, fairways, greens and roughs.

Somewhere along the way there is room for more cooperation and coordination between the architect and the superintendent. Then, the best information from the superintendent can be put into practice on the new golf course, avoiding mistakes that have been made. The ways in which construction can make subsequent maintenance more efficient and economical is one of the subjects on which the superintendent is an able adviser.

It is encouraging to see some leading architects at important turfgrass conferences. They are willing to learn about the superintendent's viewpoint of the course. It is only sensible that when a new golf course is to be built, it should be a part of the basic plan to hire the best-trained superintendent available to be aware of what goes into the construction, in order that he will have the background for future maintenance.

The National Golf Foundation reports that last year another record in golf

course construction during the post-war period was broken. Eighty new courses and 12 additions to existing courses were opened for play from January 1 to October 1, 1954. An even greater number is in the planning or construction stage at present. So it seems pertinent to devote this column to answering some of the questions that come up about the matter of construction.

Q—Our club has to move and we have purchased some property outside of the city where we want to build the golf course. What do we do now? (Md.)

A—Back up and start over. The selection of the site should be made in cooperation with your golf course architect who can help select the site which will best lend itself to the kind of golf course your members want. The assistance of the soils man from the experiment station should be sought because his knowledge of these soils can save you many future headaches.

Don't fail to have your superintendent check with the Park and Planning Commission concerning highway developments. Above all, avoid a "blind purchase" just because you saw a "bargain" in land—and give the superintendent the chance to help you build a course that is also designed for easy efficient machine maintenance.

Q—We have two years on our new property before we start construction of our new golf course. What can we do to get ready for the time of planting? (Okla.)

A—First of all, get all possible information from every source on the best choice of the grasses to use on tees, fairways, greens, roughs, lawns.

Then make the decision as to which grasses are to be used at each location and start preparing nursery bed areas and



MASSACHUSETTS GRADUATES 25TH WINTER SCHOOL

A feature of the University of Massachusetts Fine Turf Conference at Amherst was the graduation of its 25th class in the Winter School for Greenkeepers.

The graduating class of 22, one of the largest in the school's 27 year history, included representatives from 10 states and Canada.

As has been common in past years the average age of students was in the low 30's with the youngest 18 and the oldest 62. The alumni of the school now rank over 400 in number and are active in most all phases of the golf business from golf course superintendent to club manager and golf professional.

Prof. Lawrence S. Dickinson, founder of the University Winter School for Greenkeepers, has been, through the years, one of the strongest advocates of an educational program to train men in the practice and science of turf management.

This year's course schedule included lectures and exercises by Prof. Dickinson on practical problems in turf and club management, and lectures and demonstrations by Professor Eliot C. Roberts on the physiology and anatomy of the grass plant in relation to problems in turf maintenance.

Other courses taught by the university staff in the 10 weeks of intensive training included agronomy (soils and fertilizers), equipment (use, care and repair), engineering (water systems and drainage), entomology (insect pests) and Horticulture.

The Graduating Class and Faculty (left to right), Row 1—D. Figurella, B. Krueger, L. Ryall, J. Mileski, R. Tarr, L. Callaghan, E. Wolfgang, J. Schaefer, G. Artis; Row 2—D. Street, R. St. Thomas, R. Montanye, A. Perkins, H. Romanki, T. McAleer, W. Dest, J. Murphy; Row 3—Prof. Hendrickson, D. Mitchell, J. Driscoll, F. Grube, J. Abdolla, R. Moquin, Mr. Allen; Top row—Professors King, Blundell, Dickinson, Roberts, Colby and Kucinski.

locating planting material of the chosen grasses.

Develop the nurseries so planting material will be available at a predetermined planting date. This assures you of plenty of fresh planting stock on the site as it is needed.

Q—There is a difference of opinion as to how the soil on our greens should be prepared. Some say to mix the materials in place on the greens. Others say it is best to complete the mix off the site and haul it to the prepared base. What is your answer to this problem? (Conn.)

A—Recognizing the effectiveness of several machines for mixing materials in place we are still forced to adhere to our statement that the most thorough mixing will be accomplished off the site. The chances are great for the development of pockets of sand or humus when the soil is prepared in place, in spite of the most careful operation of the equipment.

If the soil is agitated in place too vigorously it sometimes happens that the fines are floated to the surface and good structure is destroyed. The green then becomes very hard and compact soon after it is put into play.

Mixing off the site has been done successfully with a motor patrol grader rolling windrows of material over and over until mixed. It has been done also with a drag line or clamshell by repiling materials until mixed. Well-mixed material hauled to the site of the green and dumped and spread on the prepared base offers the best possibility for maximum uniformity and ultimate satisfaction.

Q—Please explain the different kinds of drainage that should be considered in building a golf course? (Ind.)

A—The first is surface drainage. The greatest sin in design and construction is to create, or to permit to remain, pockets which hold water which quickly scalds

grass and makes satisfactory play impossible.

Grade to remove excess surface water quickly, using wide shallow channels to carry water off in several directions. Avoid carrying surplus water to the approach.

The second is sub-drainage. Water that enters the soil must either be used by the grass or it must escape by underground drainage. This means that the subsoil must be porous or that tile must be laid to carry excess soil water away.

The third is internal drainage. In order for water to percolate through the soil where roots can have both air and water, it is necessary to have large pores in the soil. This is a function of the physical condition of the soil which must be granular and porous or it may be opened mechanically from time to time to let water enter and percolate through.

The fourth is air drainage. Greens that are built in a pocket surrounded by dense brush or trees will have difficulty. Free movement of air across a turfgrass area will help to reduce disease attacks and will facilitate maintenance.

Q—Should we install tile drains in our greens? Our subsoil is quite sandy. (Fla.)

A—Save your money. A sandy porous subsoil is ideal for the base of a green. If your subsoil were impervious clay you would do well to install tile drains.

Q—Is it all right to spread wood chips on our new fairways? In our clearing operations we use a wood chipper to grind everything that has no value as fire wood or lumber. Some say that the wood chips will make the soil so sour we can't grow grass. (Va.)

A—Spread the chips and disc them in with plenty of lime and complete fertilizer. They will help to condition the soil and you will have better grass as a result.

The "souring of soils" refers to the sickly yellow stunted appearance of grass that tries to grow on soils that have not sufficient nitrogen to balance the excess of carbohydrates in the wood. One of the good materials to use in soil preparation in your case is cyanamid which supplies nitrogen and lime and destroys weed seeds at the same time. It hastens the decomposition of the woody material.

Q—Where can we get a list of equipment that we can purchase on construction funds so that we are able to operate

properly before the course is opened for play? (Ks.)

A—Such a list has been available from Golfdom and we understand that a revision is in the making. We consider it wise to completely outfit the course with good standard equipment on construction funds. In later years it is much easier to keep up-to-date by simple replacement.

Q—We are planning construction of a fee course. We want to have good quality greens, but we also feel that we should use a grass that can take a lot of wear. Would Tiflawn bermuda be a good grass to use? (Ala.)

A—If greens are properly maintained, Tiflawn will make an excellent, wear-resistant putting surface. It is a vigorous, drought-resistant, disease-resistant grass with a wonderful appearance when properly maintained. Because of its vigor and aggressiveness, greens will become "puffy" and matted unless growth is controlled by the right management. Frequent vertical mowing is needed to maintain a good putting surface with Tiflawn. Include adequate vertical mowing equipment on your construction funds list.

You may be wise to consider other types of improved bermudagrasses such as Tif-fine, Bayshore, Everglades.

Q—Everyone says that a golf course should be designed for easy machine maintenance. Could you be more specific as to what that means? (Tenn.)

A—Good drainage is an important factor in machine maintenance. Soil should be sufficiently well-drained that it will be ready to bear traffic of mowing and aerifying equipment in the spring.

Avoid steep slopes and abrupt changes in levels that are difficult or impossible to maintain with machines. Aprons and collars around greens should be wide enough to allow turning of machines outside the putting area. Traffic lanes for carts must be designed to avoid damage to critical playing surfaces. At every turn ask yourself, "Will this require hand labor?"

"GOLFER'S CREED"

Jack Level of Golf Book Service, 42-05 Layton St., Elmhurst, N. Y., has some highly attractive color reproductions of David A. Forgan's classic "Golfer's Creed," which are going fast as clubhouse decorations.