**Fred V. Grau's Turf Questions and Answers**

**How Risk Is Being Taken Out of New Construction**

Architects and builders continue to design and build new courses at an accelerated pace. Literally, there seems to be no end in sight. Harry Eckhoff of the National Golf Foundation assists newly-formed clubs and committees at the rate of almost one a day, Sundays included. His and the work of other Foundation men in guiding new clubs into a sound sensible plan of financing, designing and building is the most significant thing that has happened since the golf "boom" got underway.

It is particularly interesting that in all cases Eckhoff recommends that the clubs surround themselves with topnotch professional help. This includes a qualified architect, a consulting agronomist (if the architect does not have one on his staff), and a recognized builder who has had several successful experiences. By emphasizing the value of these professional services the Foundation has performed a service of incalculable and lasting value for the new club. It is like correcting a mistake before it is made.

**Gives Estimated Costs**

Typical of the thoroughness with which Eckhoff does things, he even has a list of the basic equipment that the new club will need together with an approximation of the cost. Estimated costs of equipment, lime, fertilizer, soil amendments, etc. necessarily must be general because of local variations.

The very important fact is that a new club has an idea of its probable financial involvement right at the start before irrevocable commitments have been made.

Professional assistance is the watchword in today's developments. It costs so little in reference to the good it can do. Time was when a group of dedicated amateurs could throw a golf course together and make it stick. The high standards demand-
ed today render success of such a course of action highly improbable. To us it is a constant source of wonder how a skilled architect can lay out one perfect golf hole after another through woods that the layman can’t even see through.

Technical Accuracy

The specifications upon which the course must be built are a work of art in themselves. Not only do they have to be legally sound as a basis for competitive bidding, but they must be technically and agronomically accurate. Physical and chemical characteristics of soils must be studied in relation to choice of grasses, lime, fertilizers, soil amendments, time and method of planting and many other details. Some architects arm themselves with the best professional advice in preparing specs. In some cases the club retains an adviser or consultant to supervise construction.

It is heartening to see that a qualified course supt. often is hired to assist with construction and to remain as the greenmaster when the course is opened for play. There is only one thing wrong with this practice — there are not enough supts.

to go around. Not enough young men are being trained for this profession.

This shortage will be corrected only so fast as the salary and other incentives become such that young men are attracted against competition from industry and other presently more lucrative positions.

New Methods Prove Selves

New technics that are being written into specs as “Proved Practices” include:

1. Hydroseeding and hydromulching, where seed, sprigs or stolons are blended with water and prepared mulch in a tank along with starter fertilizer and “spewed” over the area to be planted. Powerful engines and non-clogging pumps make this difficult operation simple. Followup watering insures rapid establishment with minimum erosion.

2. Incorporation of a season’s supply of maintenance fertilizer into the seedbed just prior to grass establishment. This new research-proved technic has experiment station backing. It relieves the supt. of the need for running equipment over young seedling turf for the purpose of supplying maintenance nutrients, thus releasing labor for other jobs so important to the open-
ONE source for ALL your needs

more $$$ for you in WATERED FAIRWAYS

DESIGN
We furnish complete plans and specifications.

INSTALLATION
Complete guaranteed installation or coop-installation whereby we furnish materials and supervision, you provide labor.

EXPERIENCE
Miller designed systems were installed in over 35 miles of fairways in a single season.

A. J. MILLER, INC.
"Midwest's Largest Underground Irrigation Contractor"
1320 N. CAMPBELL RD. ROYAL OAK, MICHIGAN

If Your Course Is Anywhere In The Midwest... Call—Write—Wire Miller For Free Survey!

ing of a new course.

3. Establishment of golf car traffic lanes and their development as a part of construction. Location of traffic patterns during the design stages can relieve many headaches later.

4. Location and establishment of adequate nursery sod for quick repair when needed.

5. Design and construction of adequate storage and repair facilities for maintenance equipment, topdressing, fertilizers, chemicals, etc. Temporary facilities have a bad habit of becoming permanent. The result is inefficient operation and disgruntled help.

6. Physical soil measurements to make certain that the prescribed mixture of materials will have a certain minimum porosity and infiltration rate.

Percolation Rate

The important factor is not "How much sand" but "How many inches of water will percolate in an hour after standard compaction." Suggestions made by the USGA green section for a certain minimum percolation rate often seem to be misconstrued as an effort to build a "sand green." The amount of sand to be added depends upon the quality of the native soil to be used as the base, so that a given percolation rate can be achieved after compaction.

The higher the clay content, the more sand must be used to achieve the end result.

These are only a few of the modern techniques now in use to assure the officers of the new club that they can start with a good course that will not need to be rebuilt in a few years. The supt. will have assurance that he will have a course as free as possible of "built-in headaches"—one that will be relatively easy to keep. The pro can have the satisfaction of playing and giving lessons on turf more mature for its age by virtue of scientific treatment from planting to playing.

Checking Disease Attacks

Q. Enclosed, find a plug of 328 bermudagrass. We think that this grass has either dollar spot or brown patch. It was planted in mid-July.

A. By the time the grass arrived in my office nothing was distinguishable. At this time of the year your worst trouble would be brown patch, especially if you have been fertilizing heavily.
INCREASE BATTERY LIFE TO 2 YEARS ON AVERAGE COURSES IN YEAR AROUND PLAY WITH Lester GOLF CART BATTERY CHARGERS

The *Lester* GOLF CART BATTERY CHARGER features:

- Minimum gassing of battery
- Reduction in frequency of adding water and cleaning of battery tops
- Extension of battery life
- Simple circuit of quality components to assure long life and minimum repair

SINCE 1946 • Available with most new carts when specified

**EQUIPMENT MANUFACTURING CO., INC.**
Manufacturer of the original golf cart charger
151 WEST 17TH STREET • LOS ANGELES 15, CALIFORNIA

with soluble nitrogen and if there has been a great deal of water from rainfall or irrigation. The best suggestion is to use as little water as possible and try to develop a feeding program that will produce steady, slow, uniform growth and cut down on disease attacks. You can check a disease attack with a dusting of hydrated lime at 2 lbs. per 1,000 sq. ft. applied in the evening and not watered in until morning. See your dealer for approved fungicides for the specific diseases.

**Dew on Greens**

**Q.** In Iowa I was never allowed to work on the greens until the dew was off, so I practice here without actually knowing why. Why? *(Kentucky)*

**A.** Dew on grass interferes with the proper operation of equipment. Wet grass, when crushed, can be injured and rendered more susceptible to diseases. Besides that, it is just plain “sloppy”. Today, with constantly increasing pressure from more and more golfers starting earlier and playing later supers, are lucky to find any time to mow grass. Considerable attention is being given to night work where play is very heavy.

**Grass in Traps**

**Q.** We have common Bermuda fairways. Is there any way to keep this menace out of sand-traps besides continual hoeing and pulling? *(Kentucky)*

**A.** Three materials can be used to reduce the Bermuda menace in traps: Fuel oil, Dalapon, or Maleic hydrazide. Give each a try (following manufacturer’s recommendations) on a limited scale until you are satisfied as to which one is best for you. Regular edging with a power edger will bring the grass under control. Then treat only the cut edges with a retardant to prevent the formation and spread of stolons and rhizomes.

**Nationwide Handicap System**

United States Golf Handicaps, Inc., P.O. Box 72, Pebble Beach, Calif., has organized a nationwide system for computing and recording electronically the handicaps of players on public and semi-private courses. The service, according to Bill Brown, a director of the USGH, will be based on processing players’ scores for three month periods, and will consider course ratings. Brown says the USGH handicapping plan will generally follow the USGA handicapping system with adaptations to provide handicaps for unattached golfers.

An additional nine holes will be opened in June at Fred Waring’s Shawnee Inn, a golf resort located in Shawnee-on-Delaware, Pa. This will give the 53-year old resort spot a total of 27 holes.