Turfgrass Questions Answered by Grau

If you've got a question you want Dr. Fred V. Grau to help you answer in this department, please address it to Grau Q&A, Golfdom, 407 S. Dearborn, Chicago 5, Ill.

WHERE sound principles have been followed in the construction and planting of greens the job of maintaining the greens is made much easier. Still, certain basic principles of maintenance must be carried out in order to keep the greens as perfect as new.

Soil management to maintain physical and chemical fertility is essential. The productive soil must contain needed plant nutrients plus sufficient oxygen that plant roots can function to take up nutrients. Adequate fertilization is a principle that everyone should recognize by now. Clippings are removed from putting greens so all the plant food used for growth must be replaced by fertilizer. Nitrogen is the most vital element for grasses. Frequent, light applications throughout the growing season usually are preferred. Phosphorus and potash may be applied spring and fall.

Lime influences both chemical and physical soil conditions. It neutralizes soil acids, thereby raising the pH. In clay soils it has the physical effect of improving structure by aggregating small particles.

Use Aerating Tools

Physical soil condition is maintained by mechanical loosening of the soil to overcome compaction. Aerating tools, used regularly, keep soil porous and well-ventilated.

Proper use of water is another fundamental principle. Water deep but water seldom is the general rule to follow. Light sprinkling that wets only the soil surface restricts root growth to this shallow moist layer. Frequent watering that keeps soil saturated suffocates the roots, encourages disease and breaking down of soil structure. Water deep and then don't water again until the grass needs it. Water in the early morning, rather than at night, to reduce disease. Keep soil open to prevent wasteful runoff and assure deep penetration.

Control of disease is a basic principle. Disease can weaken or destroy large areas of turf on putting greens. If good cultural practices are carried out the disease problem is less severe. Even so, it is wise to protect the turf with preventive chemicals when weather conditions are critical.

Control of insects is another fundamental. Insects weaken the turf and allow weeds to invade. Fortunately, we have excellent insecticides to give protection from insect pests.

Control of weeds is basic. Proper watering and the control of diseases and insects that weaken turf will go a long way in preventing weed invasion. Tight, vigorous turf is the best defense against weeds. If turf becomes thin enough to prevent weeds to come in, then chemical control may be necessary.

Grain and Thatch Control

Control of grain and thatch is a basic principle. Close, frequent mowing and the use of brushes and combs help to prevent grain and thatch. Regular use of vertical mowers is the surest way to prevent grain and thatch, and to ensure a true putting surface at all times. Vertical mowing to remove surface accumulation makes disease control easier and it helps to limit the spread of weeds, too.

Proper mowing is another fundamental. Proper mowing on putting greens means close cutting to keep a tight, smooth turf. It must be frequent so only a small amount of leaf length is removed at each mowing. The greens mower is a precision tool. Blades must be sharp enough to cut clean without bruising. Machines must be kept in perfect condition to provide a uniformly smooth cut.

Trained labor also is basic. The men who work on putting greens must be capable of careful workmanship. They must understand the importance of using the proper quantities of chemicals and the necessity for keeping machines in good operating condition. They must be trained to use sprayers and distributors properly so

there is no skipping or overlapping. They must be taught to handle machines skillfully, to make turns off the putting area, to adjust machines correctly for the existing conditions.

Even though we know the basic principles of maintaining turf, few people could maintain perfect putting greens simply by reading the rules. The alert care of an experienced superintendent is an important factor. The ability to recognize unusual conditions, to interpret and to treat them correctly is the quality that makes a good superintendent indispensable.

Q—We wish to improve our tees. Would you advise seeding them with Merion bluegrass or with Bermuda? (N. C.)

A—I would not recommend seeding either Merion Kentucky bluegrass or Bermuda. I am a firm believer in sodding tees with a good solid sod from a nursery. The areas are small enough so it is practical and the tees can be used within a week or ten days after sodding. Unless tees are heavily shaded, I doubt that Merion would be the best grass. One of the improved Bermudas which are grown from sprigs or stolons would be much better. Among these are Tiffine, U-3, Uganda, Gene Tift. Once established, a sod nursery is a never-ending source of planting material.

Q—We wish to establish bentgrass greens. Which strain would you recommend for our area? (N. M.)

A—A bent that is giving good results in high temperature areas is Cohansey (C-7) bent. Heat resistance is one of its outstanding characteristics. Pennlu is another good strain of bent but it has not yet had its "baptism of fire" in the high-temperature areas.

Q—Pearlwort on putting greens is our problem. What do you advise? (Wisc.)

A—Research at Penn State has shown that the better strains of creeping bent are effective in crowding out pearlwort. The most aggressive we know of to date is Pennlu creeping bent. Congressional (C-19) is another good one for your area; also Toronto and Old Orchard.

I would recommend that you establish a sod nursery (maintained like a putting green) of bents from which you can take sod plugs to replace plugs of pearlwort that you remove.