



GRAU'S Answers to Turf Questions

By FRED V. GRAU

Spring holds special significance for golf superintendents in the northern parts of the country. It is a time of reawakening for grass, trees, flowers and—most important—golfers. There are those who rushed the season and found the going rather “squishy.”

Superintendents diligently will inspect and assess winter damages such as weather's ravages, rodent activity, early play on dormant turf that was too soft, vandalism, winter sports, disease and so on. Rarely do these things occur in a pattern that admits of a standard organized approach. Each season demands a fresh individual study of causes, effects and remedies.

Freezing and Thawing — Alternate freezing and thawing is normal for spring in the North but few appreciate fully just what it does to soils and turf. Dense compact soils are loosened and aerated. Shallow-rooted plants are heaved out of the ground where they dessicate unless they are firmed into place by rolling.

Turf freezes at the surface during cold nights. When frozen solid enough to support golfers and their equipment, it is perfectly all right for play to proceed with minimum damage expected. But, when the sun waxes warm and the surface thaws, the soil assumes a loosened, wet (mushy) condition.

Play at this time can be ruinous. Traffic pressures will cement soil particles together, roots will be torn, footprints and wheelmarks will affect late play and the superintendent will be hard pressed to repair the damage.

In Memoriam

Marshall E. Farnham, 70, for 38 years superintendent at Philadelphia CC, died March 31 1967. The turfgrass profession has lost an articulate voice which has helped guide the destiny of this industry in many ways.

He held charter memberships in the GCSAA and the Philadelphia sections the Penn. Turf Research Advisory Committee, the Turfgrass Section of the American Society of Agronomy, the Delaware Valley Turfgrass Association and the Penn. Turfgrass Council. He also served as president of the national and Philadelphia GCSA'S. He served on the USGA Green Section Committee.

Marshall was one who, with remarkable accuracy and foresight, brought into being the Turfgrass program at Penn. State. Soon he also stimulated action which developed into a strong turfgrass extension program in Pennsylvania, the first in the world.

Marshall leaves his gracious wife, Jane, two sons and five grandchildren—and uncountable friends and associates, all of whom held him in the high esteem he so well deserved.

(Note: A Resolution of Tribute and Regret was entered in the minutes of the Pennsylvania Turfgrass Council Proceedings at its annual meeting as Mr. Farnham was laid to rest.)

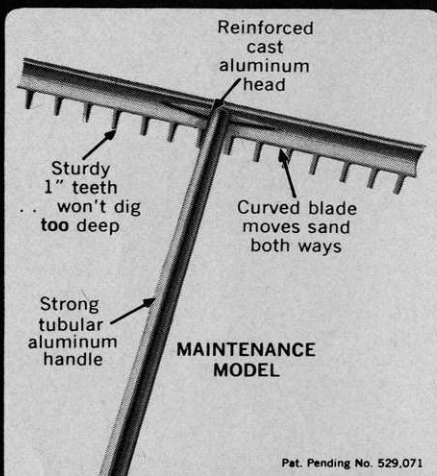
Topdressing — No other practice on the golf course has gained such universal acceptance for repairing breaks in turf. Low places are filled and turf is smoothed for the golfer's pleasure. Decomposition

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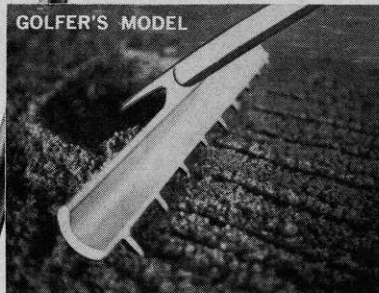
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of thatch is promoted. Grass seed mixed with the compost germinates quickly and changes brown to green, especially if the seed has been pregerminated. Fertilizers, especially the quick hot kinds, act more gently when mixed with topdressing. Just a thought — is *your* topdressing absolutely weed free?

Reseeding — Frost-cracked soil provides favorable lodging places for seeds long before tillage tools can be operated.

Hydraulic seeding is effective and permits simultaneous fertilization. Equipment can be left on service roads, reaching seeding areas with hose or nozzle pressure. Found on only a few courses, hydraulic seeders deserve consideration not only for seeding but also for fertilizing, liming (especially hydrated lime for summer), insecticides and fungicides.

Fine seeds such as bentgrass may be sown through regular power sprayers with all screens removed, using an adjustable garden nozzle for distribution.

Thatch Removal — Grass must be growing well when this operation is performed so that new shoots quickly can fill voids left by thatch removal. Incidentally, new shoots are highly resistant to most diseases.

For depth and severity of machine operation there is no standard gauge. This is up to the judgement of the superintendent, guided by the manufacturer's recommendations, the type of turf involved and by past experience.

Cultivation — Grass must be growing actively so that holes can fill and scars can heal. While holes are open it is time to topdress with a mixture designed to improve the physical condition of the soil.

It is a time to introduce slow-release long-lasting nitrogen materials so that they reach the root zone and are in intimate contact with soil bacteria which are essential for releasing the nutrients.

Turf that has been thinned by winter

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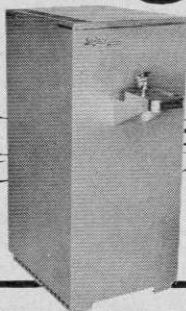
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sports needs cultivation to break the crust, to let air circulate and to let seed reach the soil.

Fertilizing — To do justice to this subject would be to write a book. Essentially there are three regimes or programs:

1) The hand-to-mouth inorganic program which builds no reserve and demands frequent light applications to avoid damage and to simulate steady feeding;

2) The natural organic concept which, in cool weather, needs to be supplemented with quick-acting materials since bacteria which decompose these organics are sluggish in cool weather;

3) The ureaform program which builds maximum reserves and carryover which starts grass strongly and naturally in spring thus eliminating decisions such as, "Shall I fertilize early and push the Poa or wait 'til the Poa has seeded?"

In actual practice many superintendents develop a combination program using the best features of all three regimes, tailored to their needs.

When buying a fertilizer mixture do

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you know how much of each kind of nitrogen is in the bag? "Organic" can mean 1) soluble urea, 2) natural organics (sludge, tankage), 3) ureaform.

Remember, potash helps to develop firm turf that resists wear and traffic and that is resistant to diseases. Potash aids in translocation of food in the plant. Where sulfur may be in short supply (and S is a plant nutrient) consider using sulfate of potash. For each 10 pounds of nitrogen it is a good practice to supply four to five pounds of potash.

Have you checked the phosphorus levels in your soils recently? High phosphorus favors *Poa Annua*, reduces effectiveness of arsenicals. Seedling turf needs ample P; mature turf does well on much lower levels. •

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