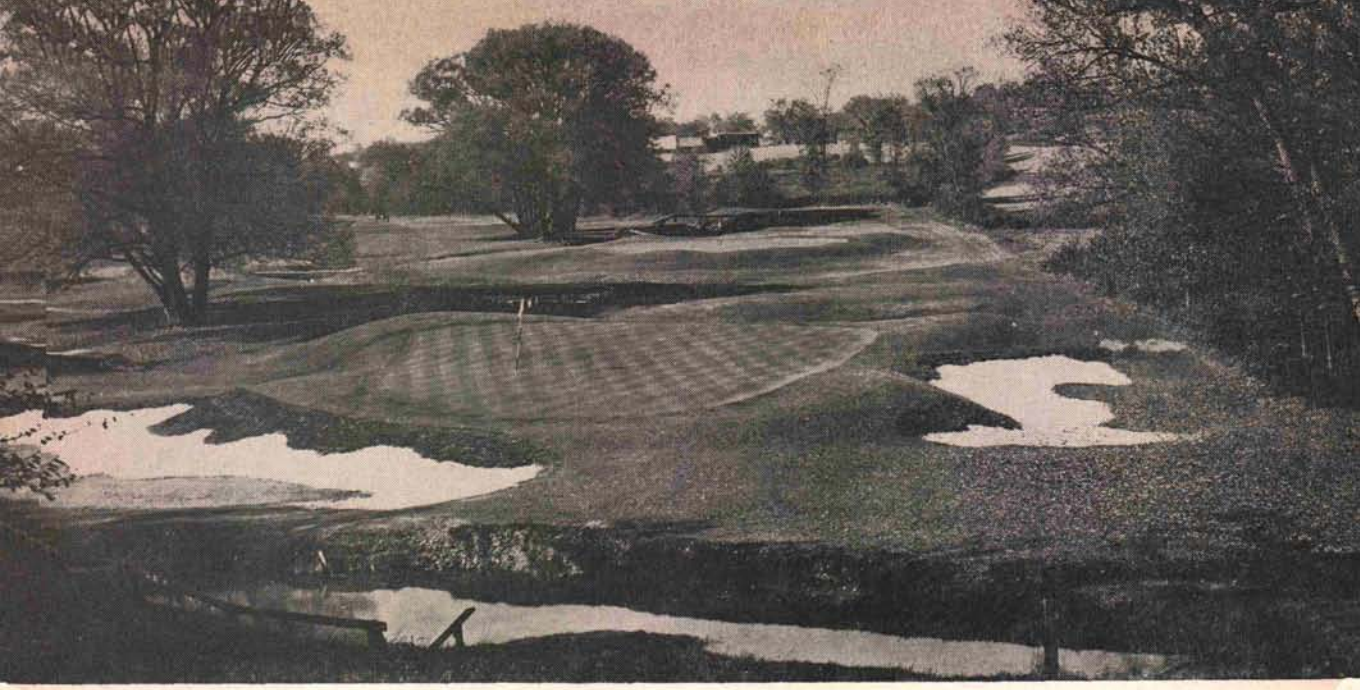


No. 13 hole at Yahnundasis Golf Club, New Hartford, N.Y. Correct mowing technique adds emphasis to the beauty of the green, makes the putting surface stand out, and inspires confidence in the player.

MAINTENANCE OF GREENS

How, Why, and When of Mowing and Irrigation

by RICHARD CRAIG, Golf Course Superintendent, The Camargo Club, Cincinnati, Ohio

Mowing

WHY — to produce a surface to putt on — a surface of grass, billions of grass blades growing straight up, not lying down, so that a putted ball rolls straight and true on the mowed tips of the grass blades.

HEIGHT — somewhere between 3/16 to 5/16 inch, usually 1/4 inch. This height of cut is made possible only by the use of bentgrass. If the varieties of bentgrass we are presently using were mowed closer than 3/16 inch, the mower would cut off all the grass blades and leave only the stems and runners to putt on. If bentgrass is allowed to grow higher than 5/8 inch, the grass would tend to lie down as a result of golfers walking on it, the rains beating down on it, and rolling action of the putting greens mower. Thus you would be putting on the side of the grass leaf or blade, putting would be slower and the surface would putt untrue. Also, I believe with the higher cut you would have more thatch formation.

FREQUENCY — Mow every day when you have developed a good fertilizer program which provides moderate, uniform grass response and there is sufficient temperature for growth. My program gives me approximately one mower basket of clippings per day on a 5,000-square-foot green. Again, by keeping the green mowed you encourage it to grow upright and not lie down.

TECHNIQUES — Mow in a different direction, or different angle every day.

Make big, wide turns on the apron of the green.

Use brushes three to four times a week except in extremely hot weather during July and August when bruising from the brush may cause wilt.

EQUIPMENT — Keep your mowers sharp. Lap your mowers every two to four weeks depending on your conditions.

Vertical Mowing

WHY — To reduce and eventually remove grain from the surface of a putting green, and to control and reduce thatch. When accomplished in conjunction with topdressing, this allows soil in the topdressing to come into contact with the soil of the green and a firmer green results.

Keeps grass or turf young. By cutting off the old runners and removing them, new shoots form and eventually a new, younger, healthier turf develops.

WHEN — When the grass is growing and all conditions will allow the turf to recover quickly. Temperature and fertilizer are prime factors in decision.

HOW — Thinning to remove the grain can be done almost any time when the grass is growing, except during periods of extremely high temperatures, as in July and August when bruising caused by the mechanical action of the reel could cause wilting. The cutting knives in the vertical mower are usually close together, approximately 5/16 inch apart.

The depth of the knives should penetrate only to the grass runners — not into the thatch.

Each green and each variety of grass will respond differently to vertical mowing, so the operation should be checked frequently.

Thatching or deep vertical mowing to remove thatch should be done only in the spring or fall. The blades on the vertical mower are usually spread farther apart — approximately ½ to ¾ inch. The machine is set deeper so that the knives are cutting through the thatch and into the soil below. You must get all the way through the thatch, not just part way, to do a good job.

Removal of the clippings as a result of this operation can be done many ways: with the putting green mower, with leaf sweepers, with drag mats, or with blowers.

Irrigation

WHY — Water is essential for growth of every living plant, and as stated before, the only way to have a healthy, true-putting green is to have the grass growing in an upright manner where the grass tip can be mowed off. Irrigation simply supplies the water to the grass as it needs it, when it needs it.

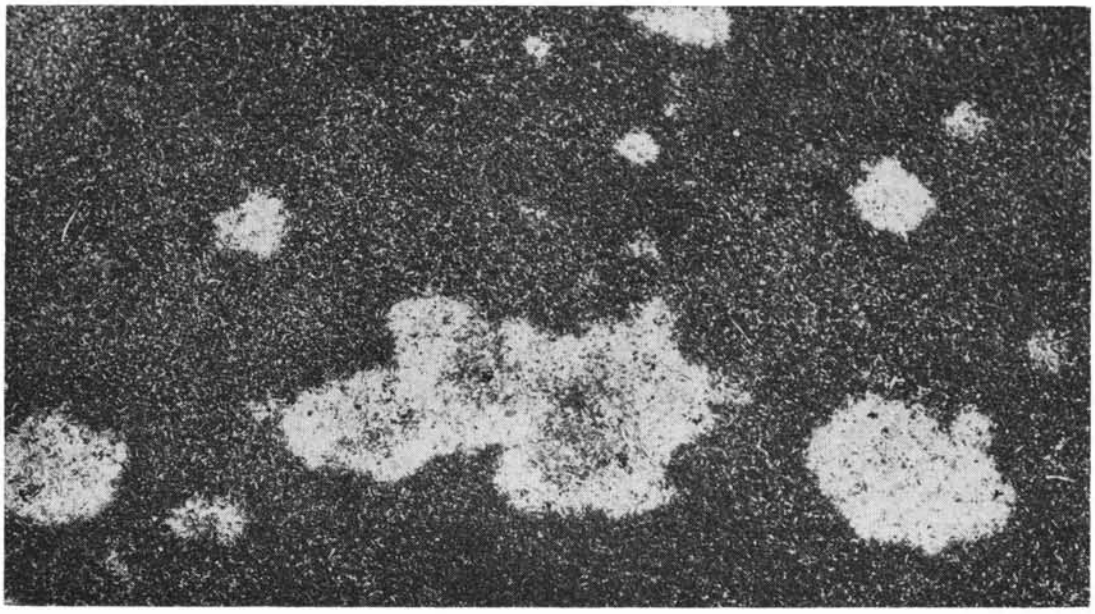
WHEN AND HOW MUCH — This cannot be predicted. It is a decision based on your judgement of each green individually. This decision is based on:

(1) Green construction — type of soil used in construction, whether tiled or not.

(2) Weather at the time and predicted for the next few days, how much will be lost to temperatures, humidity, and wind.

(3) Thatch present — how deep, how will player traffic affect surface, when does play normally start.

Are we applying our preventive spray soon enough?



Soil is uniformly spread over the green and then dragged and spread with a steel mat.

We superintendents abuse our job of water management. The only way to make a good decision on when and how much water should be applied is to look at each green individually. Inspect in the morning before you start your men where dew has or has not formed on the grass. The area where no dew has formed is usually a dry spot on the green. Later in the day check the soil under each green by removing a plug of soil and examine it. Squeeze the soil between your fingers. Educate not only your eyes but your fingers to the degree of moisture in your soil.

Try to keep uniform moisture throughout the green soil profile. By doing so, you will tend to to keep better roots on your grass, and with better capillary action in your soil, you can eliminate syringing greens except on very windy, hot days when evaporation from the leaves exceeds the amount of water the roots can take up.

Amounts of water required daily or weekly is impossible to foretell. The amount has to be based on all factors mentioned before—soil type, existing moisture, weather and the kind of sprinklers you have to use. I have found that low volume sprinklers with multi-application gives the water maximum opportunity to percolate into the green. I would suggest that whatever sprinklers and method you are using, try putting pans or cups around over the green to collect the water applied and see if you are applying your water uniformly.

Hand-watering of spot areas is essential. Poorly built older greens exhibit areas that form isolated dry spots. These must be watered individually by hand so as not to get the rest of the green too wet.

Remember, never have your green so wet that you can't add more water, or absorb a rain. You can always add more water, but you can't take off too much.

Ways to Minimize Traffic Damage

Through Management:

Produce healthy turf by setting up programs that are well planned and thoughtfully carried out on each of the topics previously discussed.

Through Education:

Encourage the golf professional and the Golf Committee to develop an educational program to show and explain your club's particular problems to the members.

Through Equipment:

By the use of—

Signs: Traffic Control Signs.
Golf Etiquette.

Movable rope or chain barriers.

Through Remodeling:

Minor changes to the traps and green banks can, more times than not, reduce a traffic problem around a green to the point where grass can be grown.