

TIMELY TURF TOPICS

Issued By The

UNITED STATES GOLF ASSOCIATION GREEN SECTION

ROOM 307, SOUTH BUILDING
PLANT INDUSTRY STATION
BELTSVILLE, MD.

CORRECT YOUR SUMMER TROUBLES IN SPRING AND FALL

SUMMER CARE OF BENTGRASS PUTTING GREENS: With the hot humid days of summer upon us extra care and planned maintenance practices are extremely important. The following partial checklist of important maintenance practices is submitted for the aid of all Turf Superintendents.

Watering: There are many different opinions on this particular phase of maintenance. The time of day during which watering should be accomplished always has been a subject of much discussion. The Green Section has determined that, for maximum freedom from brownpatch, watering should be accomplished during the early hours of the morning prior to mowing. A watering of this type has many advantages over night watering. Not only is the grass supplied with the necessary moisture for growth but early morning watering will break up the mycelium of brownpatch and also remove the dew, which, in itself is a perfect medium for the growth of the disease organism. Another advantage of early morning watering is that the grass dries more quickly so that mowing can be started sooner. By avoiding evening watering the grass goes into the night dry and is in a more favorable condition for resistance to brownpatch.

Watering when accomplished, whether in the morning or at night, should be thorough in order to promote deep root growth.

One exception to the above is during the period following a prolonged rainy season. Extreme care will have to be observed at a time like this to prevent "scald." Even though the soil may be saturated, several light sprinklings a day may be beneficial in order to reduce high evaporation rates and to keep the top layer of the soil moist. This procedure has been tried and has proved to be successful on many courses throughout the country.

Mowing: It is recommended that the mowers not be raised during the summer. If the grass becomes tender during these hot days, it has been proved that, by skipping a mowing and keeping a constant mowing height, excellent results can be obtained. One disadvantage of raising mowers during the summer is that a "nap" tends to develop which increases the watering problem and disease incidence. Where such a "nap" exists the control of diseases becomes more difficult. Applications of chemicals to the surface of the grass will stop the immediate growth of the disease organisms, but with a heavy mat the organism lives over below the surface and quickly reappears as soon as ideal weather conditions for the disease recur.

Disease Control—Brownpatch: Application of an inorganic mercury fungicide, applied at the rate of 1 to 2 ounces to 1,000 square feet at each application; or Tersan, applied at the manufacturer's recommendation, should give adequate control. The use of mercury compounds during hot weather may discolor the grass slightly and it definitely has a retarding effect on the growth rate. Tersan has been proved to be perfectly safe to use in hot weather.

Copperspot: The chemicals best suited for the control of this disease are Puraturf and Puratized 177. Other commonly-used available fungicides have been unsuccessful in its control.

Algae Control: Hydrated lime, applied at the rate of 2 or 3 pounds to 1,000 square feet, distributed as a spray or dust, has given rapid and satisfactory control of algae.

Fertilization and Topdressing: No application of fertilizer or topdressing should be made during hot weather except where abnormal conditions prevail.

Heavy Soils: Poor water percolation into the soils can be attributed to heavy soils and matted greens. Shallow rooting is also prevalent in heavily-compacted soils. Plans should be formulated for aerating such soils in early fall when the grass is in an actively growing stage.

TOPDRESSING SURVEY: The May issue of TIMELY TURF TOPICS contained a blank to be completed on "Topdressing vs. No Topdressing." To date 62 replies have been received. (There are now nearly 1,000 USGA member clubs.) It is the policy of the Green Section to continue these mail surveys, and it is hoped that in the future the response will be better. The information received will be published in an effort to assist our member clubs to improve their standards of maintenance, and to aid this office to plan a sound research and educational program.

<u>Number of Returns</u>	<u>Number Using Topdressing</u>	<u>Number Using No Topdressing</u>
62	56	6

RATES OF TOPDRESSING

The rates of topdressing vary widely, indicating that more attention must be given to this phase of putting green maintenance. Handling large quantities of soil is costly. The quality of the topdressing material is questionable in many cases. All figures in this survey have been converted to one basis:

<u>Area in Sq. Ft. Covered by One Cu. Yd.</u>	<u>Number of Clubs Reporting</u>
1,000	3
2,000	1
2,500	3
3,000	9
4,000	3
5,000	28
6,000	4
7,000	2
8,000	3

It is apparent that the cost of topdressing 18 greens on some courses is roughly eight times the cost on other courses. One cubic yard to 1,000 square feet applies a layer 1/3-inch thick. Three topdressings a year would build the green one inch. This amount of material applied on grass has the effect of partially smothering it. Unfortunately in this study, it is not possible to correlate turf quality with topdressing practices. This must be done by the greenkeeper and the committee.

FREQUENCY OF TOPDRESSING

Number of topdressings a season	1	2	3	4	5	6	10	12
Number of clubs reporting	4	14	13	10	1	9	1	1

(3 not reporting)

The value of topdressing largely is for producing a smooth true putting surface. Another value is to build the putting surface up and away from an undesirable soil condition. Today, with equipment for removing cores and for aerating and changing the soil, this use of topdressing is no longer valid except to refill the holes left by the machine and to true the surface.

SOURCE OF ORGANIC MATTER

The purpose of organic matter is to provide resiliency so that a pitched ball will hold the green even when the soil is dry, to make a clay soil more friable (mellow), to hold moisture, and to provide a reservoir of plant nutrients.

<u>Type of Organic Matter Used</u>	<u>Number of Clubs Reporting</u>
Peat	26
Manure	10
Mushroom soil	5
Compost	4
Leaf mold	3
Muck	1
Cotton motes	1
Woods soil	1
(5 not reporting)	

The quality and quantity of the organic matter in the various materials is very important. The longest-lasting type is found in peat and muck. These materials also contain the largest percentage of organic matter. The organic matter in manure, mushroom soil, leaf mold, and other materials listed, is low in quantity and decomposes more rapidly than do peat and muck, leaving more or less the original condition of the soil used in the mixture.

TOPDRESSING MIXTURES

The variations in the proportions by volume of the different ingredients is very great. This is to be expected because some soils naturally are sandy and, therefore, require less added sand to produce the desired texture. In no case is the organic matter content of a normal field soil (usually from two to four percent) sufficiently high to eliminate the need for organic matter except where the course is built on natural peat and muck soils.

PROPORTIONS BY VOLUME

<u>Soil</u>	<u>Sand</u>	<u>Organic Matter</u>	<u>Number of Clubs Reporting</u>
1	1	1	19
2	1	1	13
3	1	1	4
2	1	2	3
2	1	0	3
2	2	1	2
1	7	3	1
1	4	1	1
1	3	2	1
1	1	2	1
1	2	3	1
3	4	3	1
4	1	2	1
5	1	0	1
(4 not reporting)			

COMMENTS

- 1. The quality of a topdressing material can be judged by these factors:
a. A ball of moist material squeezed tightly in the hands should break apart readily upon the release of pressure
b. Minimum clay content, sufficient only to give "body" and "character" and to aid in retaining fertility
c. Maximum content of coarse sand to provide maximum drainage and aeration, to provide the "firmness" which is essential to a perfect putting green
d. Sufficient long-lasting organic matter to provide resiliency and to hold moisture for plant growth.
2. Too much clay "seals" the surface and prevents drainage and aeration.
3. Peat is the best form of long-lasting organic matter that we know of at the present time.
4. Manure breaks down too quickly to be of value as a source of long-lasting organic matter.
5. Fine sand packs as tightly as does clay.
6. Clay and sand, without organic matter, pack tighter and get harder than does either material used alone.
7. Until further research (which is in progress) finds a different answer, the best topdressing mixture recommended is a 1-1-1 (by volume) mixture of, respectively, a clay loam soil, a coarse sand, and a peat. This holds for bent or Bermuda grass greens.
8. Frequency of topdressing should be the minimum, consistent with producing a smooth, true, firm but resilient putting surface.

The Green Section expresses appreciation to the clubs and to the greenkeeping superintendents who returned information on this survey.

July, 1947

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MOWING SURVEY

- 1. At what height do you mow your greens? Spring _____; Summer _____; Fall _____
2. How many times a week do you mow? Spring _____; Summer _____; Fall _____
3. Indicate below what kind of grass is used in establishing putting surface:
Bent _____ Stolons _____ Strain (s) _____
Seed _____ Strain (s) _____
Bermuda _____ Stolons _____
Seed _____
(Check those applicable and list strain (s) if known).
4. Do you brush your greens? _____. If so, how often? _____
5. Indicate below the severity of dollarspot attacks:
Very severe _____ Severe _____ Light _____ None _____
6. Can you control dollarspot - Easily? _____ With Difficulty? _____
7. Remarks _____

Name and Address of Your Club

Signature and Title

Fill out this blank and mail it to: U.S.G.A. Green Section, Beltsville, Maryland.