UNITED STATES GOLF ASSOCIATION
GREEN SECTION
WESTERN OFFICE

P. O. Box 241 Davis, California Telephone: Davis 2492

CHARLES G. WILSON
Western Director

Western Turfletter

Vol. 2 No. 5 September-October 1954

THE TURF THINS OUT

The Golfer Knows What Caused the Trouble

When many of our golfers notice thin, bare, or brown spots where good turf should be they immediately voice an opinion on what caused the horrible condition. It is not uncommon to get the following varied responses from the membership for the loss of a portion of one green:

> "The superintendent must have been asleep...I knew he was using the wrong fertilizer...If he had only used more water...No wonder it happened, he was over watering...He has been mowing too close...This high cut will cause loss of turf every time...He never should have aerated...If he had only aerated one more time"...

Ad infinitum until the poor superintendent is ready to volunteer as a guinea pig for the next Bikini atom bomb test.

There Must be a Reason

Basically, there usually are one or two major factors that caused the turf trouble, and these factors are always influenced by the weather. West of the Cascades this year, grass that in normal years would have been thick and dense, started to thin out early in the summer because of the cold wet weather. Normal fertilizer practices were not sufficient to meet the grasses requirements. Courses that increased their nitrogen, calcium, potash and magnesium to offset the excessive leaching had little trouble with algae and moss where drainage was good.

In Southern California it was hot humid weather that contributed to turf troubles, and the member experts who said too much or not enough water were closest to being correct even though these answers seem to conflict. Under such conditions we have actually seen grass wilt when it was standing in water, and in areas where this is a common occurrence the superintendents have found that a light syringing will avoid loss of the grass. Thus, too much water is corrected by adding a little more during the heat of the day, and as often as three times a day (Sundays and Holidays included) where conditions warrant. Other "What to Do's" when troubles occur include:

1. Allow the soil to dry out if too much water was at fault. In heavy rainfall areas this may mean additional tile and better surface contours.

2. Hand water trouble greens during critical periods.

3. Keep close check for diseases and insect damage and treat as needed.

4. Skip every other mowing until grass recovers, or increase height-of-cut slightly.

5. Spike disc or aerate to improve moisture-air relationships.

6. Fertilize lightly to stimulate grass recovery.

7. Keep algae under control with light dustings of hydrated lime.

8. If grass appears chlorotic (yellow) try iron sulfate at 3-ounces to 1,000 square feet in no more than 5-gallons of water. Do not water in.

9. Apply lime (acid soil) or gypsum (alkaline soil) to remove toxic substances that may be developing under anerobic conditions.

10. Have composite soil test made by reputable agency. Also have water test made if alkalinity is a problem in your area.

WHY DID IT HAPPEN?

The above may be of help in answering what to do when the unexpected occurs. You can avoid loss of turf, or bring about faster recovery by such action if it is done rapidly. However, the job is by no means finished. The next step is to find out why the trouble happened. By asking ourselves WHY we can logically explain the reasons for suggesting what to do, as well as avoiding the all too common occurrence of blaming our superintendent for the trouble that may not have been his fault.

Why Was the Soil Saturated Where the Trouble Occurred?

Often this is a direct result of applying too much water, although we have seen overly wet soil to a depth of 3-inches while below this point the soil was bone dry. The reason was a sand, peat, thatch or different soil material layer which acted as a false water table to impede water infiltration. Heavy thatch may have caused water to run off the high spots and thus flood the low areas. Sub-surface drainage may be inadequate, or the night water man may have left a sprinkler set in one spot for too long. Any of these factors could further influence disease or insect damage.

Why Would Grass Wilt When Standing in Water?

During hot humid weather turfgrasses must have ample oxygen present in the root zone of the soil before they can absorb either moisture or nutrients. When the root zone is saturated in hot weather, and both grass roots and micro-animal life in the soil are making heavy demands for oxygen, saturation excludes air and thus the grass wilts. As we well know, this condition does not occur during cool weather because oxygen requirements are lower.

Why Does Syringing Correct the Condition?

Light syringing forces both air and water into the grass blades, and

also lowers the surface temperature. Heavy watering under saturated conditions would only add insult to injury, and cause further loss of the turf.

THE LONG RANGE PROGRAM

With cooler nights and shorter days as we approach the fall season in the south, and drier more sunshiny days west of the Cascades in the north, our trouble green recovers and everything once again is sweetness and light. Since the turf presents a fair playing surface most golfers are reluctant to allow their superintendent and green committee the necessary leeway to permanently correct the conditions that caused the grass to thin out.

Now is the time to face facts. If your club's greens have a sand layer that stops root penetration in hot muggy weather, or the major turf species in the south is annual bluegrass, the trouble that occurred or just missed you this year can occur next year if the right climatic conditions prevail. It is not sound reasoning to hope that adverse weather conditions may not happen again. When one lives in the tornado belt he builds a strong basement even though he hopes he may never be called upon to use it. Also we must appreciate the fact that most turf troubles occur on the weekend when the labor force is off duty. If a shallow rooted turf starts to wilt at Sunday noon who will be present to syringe the green? In other words, we must correct the primary causes of poor turf rather than continually carry out costly treatments for secondary symptoms.

Is the Green Section Suggesting a Plow?

In many cases it would be far better to reconstruct a problem green rather than continue to "baby it along" and still not have it provide the golfer with quality playing turf. Naturally, such action leads to questions concerning costs and inconvenience. Much of the scare campaign on these points is highly over rated and not justified. Adequate planning can make the job almost painless to the golfer and of nominal cost to the club. In order to accomplish painless construction while play continues, consideration should be given to the following:

1. Start an increase nursery of an improved bentgrass. Why use costly seed when increase material of a proven superior stolon bent is available for the asking, or can be purchased outright from a nursery? Regional Director Radko reporting in the April 1954 USGA NORTHEASTERN TURFLETTER states that: "In one season one bushel of stolons will increase from 1,000 linear feet of nursery row to provide enough material to stolonize approximately 20,000 square feet of putting green area." If the nursery site is sterilized with cyanamid or methyl bromide to destroy weeds the only maintenance needed will be watering, fertilizing, and occasional mowing to prevent seedhead formation.

2. Prepare area for putting green sod nursery. The most important point in this operation is the building of a uniform soil profile that will be exactly the same as the soil mix in the green to be rebuilt. Since the nursery will later be used for cup replacements to patch other greens and to introduce a better grass, the soil mixture should be uniform to a depth of 10-inches.

3. Establish temporary green well in advance of plowing up the old site. By giving the golfers a perfect temporary green many objections will be eliminated. In some instances it will be possible to construct the temporary "hole high" to the present green. Where this is not feasible, consideration should be given to building a temporary tee as well in order that the hole will play approximately the same length.

4. Eliminate built-in headaches in refitting old green for sod. Make certain that your cultivating operation mixes old sand and thatch layers intimately to provide a uniform soil to a depth of 12-inches. Incorporate sufficient sand, or peat, or soil to make the finished mixture exactly the same as your nursery soil. Correct poor surface drainage by eliminating low spots, and through alternate wetting and drying allow sufficient time for surface to settle before transplanting sod from nursery. In heavy rainfall areas provide adequate sub-surface drainage.

5. Cut nursery sod thin. One theory your Green Section has helped to debunk is the fallacy of cutting thick sod. Thin cut turf (1/2 to 3/4 inch) will root and knit rapidly, and lay evenly to eliminate the need for excessive topdressing to true the new surface.

Will it Take Forever?

By starting an increase nursery this fall or as late as next spring, the nursery green could be stolonized next fall. The sod would be ready for transplanting the following spring, and in as little as three weeks the green could be opened for regular play. Next fall would be the time to fit a good temporary green for use the following spring. Total elapsed time on the long range program would be 12 to 18 months. Players would be on a good temporary 6 weeks to 2 months.

Is it Absolutely Necessary to Rebuild?

A rebuilding program should receive careful consideration if adjustment of standard maintenance practices fails to improve the problem green. We know of many instances where a good aeration program; frequent light topdressings to build away from a sand layer; elimination of tree roots; increased fertility; careful water management; and vegetative introduction of a better grass has gradually accomplished the desired results. In any event you will still need the putting green nursery of an improved bentgrass. Such a nursery is the best turf insurance a course can have. It is a wonderful testing ground for new materials and practices. Even though your present greens leave little to be desired, one should appreciate that vandalism or mechanical injury may call for the immediate replacement of sizeable turf areas.

ANNUAL TURFGRASS CONFERENCES

Shortly the Green Chairman and Golf Course Superintendent of our member clubs will receive notices of our next group meeting which is held in conjunction with our annual turfgrass conferences. Your Green Section helps to arrange the program, speakers and subject matter to be of the utmost benefit to its member clubs. They are now decentralized to the extent that any club can ill afford not to send its superintendent. In addition to superintendents we hope to see a good representation of club officials at these important meetings.

VALLEY PRESS
707 2nd Street
Davis, Calif.

This Is Your

Western Turfletter

USGA Green Section

Sec. 34.66 P.L.&R.
U. S. POSTAGE
1½c PAID
Davis, California
Permit No. 23

Mr. O. J. Noer
Milwaukee Sewerage Commission
Jones Island
Milwaukee, Wis.