

SUMMER TURF TROUBLES

Scald

During the hot summer months, many greenkeepers will have trouble with "scald" on greens. The basic cause of such trouble is usually poor soil conditions, hence poor drainage and poor aeration. The "trouble season," during the heat of summer, is not the time to take drastic steps toward the correction of these fundamental faults. The grass must be kept alive until a season when weather conditions are more favorable.

Scald usually occurs first in small, localized dry spots. These spots are sometimes caused by lack of thorough mixing of the soil, by uneven surfaces, or by allowing the grass to form so dense a mat that water does not get down into the soil in sufficient quantity. When the soil becomes completely dry, the soil particles resist wetting, and the water is likely to run off instead of soaking into the soil.

Deep forking, preferably with a hollow-tine fork, will allow water to soak into the dry spots. After the soil is "re-wetted," it will take water in a normal manner. The use of tree sub-irrigators is sometimes effective in "re-wetting" these dry spots.

If the greens are poorly drained or have been kept too wet by rains or over-watering, the turf is likely to be shallow-rooted. Under these conditions, greens often start to wilt during the heat of midday. In this case, the wilting is more general and may first be detected by a marked foot-printing of the greens. The grass becomes bluish-gray in color and will eventually die unless the wilting is checked.

There is seemingly a paradox in this case, because the soil is saturated with water and yet the grass wilts because of drought. The shallow-rooted turf dries out in the surface half-inch and wilts even though water may be standing in the cups.

Frequent light syringing to moisten this surface layer will cool the grass and prevent it from dying. As the excess water in the soil moves out, the roots will start going deeper. Forking aids aeration and

may help to get the roots down more rapidly.

When grass is weakened by wilting and the roots are shallow, no heroic efforts should be made to force it into growth. Topdressing and fertilizing should be avoided until the grass begins to recover. The thinning out of grass on greens allows invasion of clover and many other weeds that seem to spring up overnight. One might be tempted to apply an herbicide, but the grass is very likely to die completely if treated with an herbicide while it is in such a weakened condition.

Algae

The first indication of algae in putting greens is a thinning of the grass and the appearance of a greenish or brownish-black scum on the surface of the soil. If the condition is allowed to develop, the grass will sicken and die completely and the algae will cover the area with a thick scum which, when wet, is slippery. When dry, it will crack and flake.

Algae is a green plant which grows only in the presence of abundant moisture. On

SUGGESTED READING

The Connecticut Agricultural Experiment Station has just published a bulletin entitled *Control of the Japanese Beetle*. It is Circular 166 and was published in May, 1948.

Chemicals, Humus and the Soil, by Donald P. Hopkins, is a book in which the controversial matter of the value of chemical fertilizers versus the value of compost is discussed quite thoroughly. The two major divisions of the book are composed of "The Case for Fertilizers" and "The Case Against Fertilizers." The book may be obtained from Chemical Publishing Company, Inc., Brooklyn, N. Y.

Result of Poor Drainage and Aeration



USGA Green Section Photo

Spots such as this commonly are called "scald." Actually, it is a dry spot. The dead turf in the light area is matted, and water does not penetrate into the soil. The turf may be saturated on top while the soil one inch below the surface is bone-dry. Frequently, algae will develop in these areas.

putting greens, it is troublesome only under conditions of heavy clay soils, usually badly compacted, where water is unable to

penetrate and percolate. In other words, drainage and aeration are poor. The algae is able to thrive because the conditions have been unfavorable to the growth of good turf.

CONFERENCE DATES

January 13-14, 1949.....Maryland

Mid-Atlantic Association of Greenkeepers, at Lord Baltimore Hotel, Baltimore, Md.

Ernest N. Cory, University of Maryland, College Park, Md.

February 21-24.....Pennsylvania

H. B. Musser, Pennsylvania State College, State College, Pa.

March 7-9.....Indiana

G. O. Mott, Purdue University, Lafayette, Ind.

When algae is observed, steps such as the following should be taken at once to correct the conditions:

1. Dust the areas with hydrated lime at the rate of 2 to 3 pounds to 1,000 square feet. Hydrated lime quickly raises the pH of the soil and checks further growth of the algae.

2. Tine-fork the affected areas *deeply* to admit air into the soil and to break the smothering scum.

3. Apply minimum quantities of water to discourage algae and to allow the drowned grass roots to renew growth.

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CONTRIBUTIONS TO TURF RESEARCH WORK DURING 1948

Augusta National Golf Club (Masters Tournament).....	\$1,000.00	
Augusta Women's Golf Association.....	10.00	
Carolina Golf Association.....	50.00	
Clapper, O. O. (The John Samuel Clapper Memorial Grant).....	500.00	
Florida State Golf Association.....	150.00	
Forest Park Cemetery.....	100.00	
New England Golf Association for:		
Connecticut State Golf Association.....	\$300.00	
Maine State Golf Association.....	100.00	
Massachusetts Golf Association.....	300.00	
New Hampshire Golf Association.....	100.00	
Rhode Island Golf Association.....	300.00	
Vermont State Golf Association.....	100.00	1,200.00
St. Louis District Golf Clubs.....		400.00
Southern Golf Association for:		
Alabama Golf Association.....	\$100.00	
Athens Country Club.....	50.00	
Greenwood Country Club.....	25.00	
Nashville District Golf Association.....	100.00	
Savannah Golf Club.....	25.00	
Sea Island Company.....	100.00	
South Carolina Golf Association.....	25.00	
Southeastern Section of PGA.....	200.00	625.00
Southern Turf Association.....		100.00
USGA Green Section (through "Education Fund") to:		
Florida Agricultural Experiment Station.....	\$300.00	
Michigan State College.....	375.00	
Pennsylvania State College.....	1,500.00	
Rhode Island State College.....	300.00	2,475.00
		\$6,100.00

Thus far during the fiscal year 1948 the Green Section has sent to cooperating experiment stations checks to the amount of \$10,660.00. This sum represents some contributions received from contributing organizations in 1947 but has not been drawn until this year. The contributed amount was allocated to the following cooperating organizations:

Florida Agricultural Experiment Station.....	\$ 300.00	
Georgia Coastal Plain Experiment Station.....	3,235.00	
Michigan State College.....	1,125.00	
Oklahoma A. & M. College.....	2,500.00	
Pennsylvania State College.....	1,500.00	
Rhode Island State College.....	2,000.00	\$10,660.00

Summer Turf Troubles

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It is known that algae (clover and crabgrass, also) frequently develops in areas where the grass has been weakened by brown patch, dollarspot, snowmold and other diseases. Insects, too, can weaken grass and predispose it to algae growth.

In the long-term program, it is well to remember that algae has not been known

to damage healthy, dense turf which has been grown on sandy soil of open, porous texture in which drainage and aeration are good. Where algae is known to recur year after year, it may be well to plan a program to recondition the soil during the cool seasons.

This suggested program applies to Bermuda greens and to bent greens wherever they are grown in the United States.