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TURF INJURY FROM EXCESS MOISTURE

IN CERTAIN localities the appearance of grass during summer months is often disappointing in spite of abundant rainfall. Many times turf shows damage because of too much water.

Many lawns have poor surface or subsurface drainage, sometimes both. Such a condition may be improved by installing drain tiles or correcting the natural surface drainage by improving the grade so as to permit more rapid run-off of excessive rainfall.

The first noticeable effect of too much moisture is a yellowing of the grass. A soggy soil condition prohibits air from reaching the roots. The grass roots actually drown for lack of oxygen. A saturated soil is also destructive to certain beneficial soil bacteria. Without these, plant nourishment is reduced and the starving grass blades turn yellow.

When the soil is saturated either by rain or by too frequent and heavy watering it is not long until the deeper roots are drowned and the grass is left with only a shallow root system. Even a brief interruption in the supply of water, whether from natural or artificial sources, places the lawn in a most vulnerable position, thereby producing the paradox of grass on an overwatered soil dying because of a lack of moisture.

As soon as a shallow rooted situation is discovered it is advisable to nurse the lawn back to health by daily watering with a fine spray. As the excess water drains from the subsoil, the grass roots will begin growing downward again. Then sprinkling should be less fre-

quent and more thorough while returning to the regular watering program, designed to encourage a drouth resistant root system.

When a shallow root system is permitted to develop unnoticed the grass is quite likely to be attacked by fungi. The organisms which cause fungus diseases require moisture and usually warmth before they become active. Periods of excess moisture are ideal for the spread of grass diseases, a few of which will be discussed here.

Damping-Off

When a stand of young seedling grass is spotted with dead, brown patches varying from 1 to 4 inches in diameter, it is likely that Damping-Off has occurred. Sometimes this fungus disease kills the seed sprouts just as they emerge from the ground, but before they have become large enough to be noticeable, making it appear as though the seed germination is faulty. At other times the disease comes after the grass is well started. The young grass turns dark as the blades seem to melt together, then wither and turn brown.

Although not mentioned so often as responsible for seedling failure, it is probable that Damping-Off causes more injury to new lawns than folks suspect.

The growth of Damping-Off is favored by an ample supply of water near the surface of the ground. Following an attack of this disease there is nothing to do but let it spend itself and then repair the damage by reseeding.



Mildew

At times a nice stand of grass suddenly takes on an appearance of having been dusted with flour. This is caused by powdery mildew, which resembles the mold that grows on old shoes left in a damp place. If the mildew is brushed off the surface, it will usually be found that the grass blades are still green. Fortunately, Mildew causes little real damage and soon disappears.

Algae

It is not uncommon to find a green scum on wet lawn soils. This growth is caused by Blue-green Algae. When conditions are favorable, the scum may make such a growth as to form a tough parchment-like coating over the ground which the grass cannot penetrate. This growth seals the root zone from the air. It is important to rake the scum carefully as soon as it appears and before it hardens into a black leather-like covering. After raking from several different angles, a light topdressing with sandy loam soil also proves beneficial in relieving the situation.

The formation of this scum can also be checked by spraying the area with a solution of Corrosive Sublimate, using one ounce of the fungicide for every 1000 square feet. A very light application of lime may halt the development of the Algae causing this growth.

Leaf Spot

The appearance of the fungus disease known as Leaf Spot is one of the first injuries to be reported following a wet spring season in any section of the country. This disease shows up as tiny brown specks, like freckles, over the grass blades. As they enlarge they may extend right across the leaf with the center becoming straw colored. The bordering

area varies in color from dark brown to black. The result is many small eyes burnt in the leaf. For this reason Leaf Spot is often called Zonate Eyespot.

Usually grass will recover from such an attack, but sometimes this fungus is so severe that it infects the stem and root, destroying the entire plant. This disease is usually at its height during the cool weather of late spring. It leaves the lawn in a weakened condition at a time when a sturdy turf is needed to resist hot summer weather.

The best way to combat an attack of Leaf Spot is to follow cultural practices that will induce a stronger grass. At times a light feeding to stimulate greater growth is necessary. Higher clipping is also advisable because that means a stronger plant. In fact, mowing might well be neglected entirely until the disease has subsided.

Preventing Summer Injury

In cases where lawns suffer regularly in the summer, a checkup is advisable to determine the reasons why the turf is susceptible. The soil condition should be analyzed both as to subsoil and surface soil.

Possibly tile drainage is needed, or it may be that only the surface grade needs correcting. If the topsoil is sticky when wet and bakes hard when dry, it probably needs to be turned over and a quantity of sand and organic matter incorporated. Under certain other circumstances an application of lime may be beneficial.

The following issues of LAWN CARE are suggested for reference in connection with summer turf problems:

| Summer | Injury | Number | 36 |
|---------|--------|--------|----|
| Grubwor | ms | Number | 44 |
| Soils | | Number | 46 |

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