

Lawn Care

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SUMMER INJURY TO TURF

ALL through this summer, in nearly all parts of the country, nature has again been unkind to those who like to have attractive lawns during hot weather. Unlike 1934 there has been too much moisture instead of too little. While new lawns suffered most, old lawns were also considerably damaged.

Readers of *LAWN CARE* from nearly every northern state have written us about this problem. A typical experience of a Chicago lawn owner and customer is here related in his own words:

"I have a situation in my lawn at the present time on which I would like to get your advice. This spot happens to be a very sunny one and last fall I dug up the entire plot and left it in this condition all winter. I added about a foot of good, black dirt, and seeded it this spring. Your grass seed and the Turf Builder produced the most beautiful lawn that I have ever seen, and naturally, I was very elated. You, no doubt, know that this spring here in Chicago we have had considerable rain, and following the rain we have had some very hot weather. In practically a week's time my lawn converted itself from a beautiful green carpet to an ugly brown patch.

"In several spots the grass has absolutely died out, leaving the bare ground, and during the past few days I have noticed a considerable growth of what I

believe to be crabgrass. Do you suppose the hot, muggy weather we are having on top of all the rain is responsible?"

This man has diagnosed his difficulty accurately. So long as the weather continued wet and cool the soil could support this luxuriant growth. But when the grass was suddenly subjected to extreme heat, with or without excess moisture, it wilted down and became an easy victim of the heat, turf diseases, or insects.

As the grass blades were very soft and succulent, the plants wilted rapidly when exposed to high temperatures, because the breathing pores were open and could not quickly close. As a result the leaves transpired moisture faster than it could be supplied by the diminished root system.

To understand why grass was weakened we must consider growing conditions during the past spring. These were seemingly ideal in most parts of the country, at least for the production of leaves and stems. There was a superabundance of rainfall, and in the area affected by the 1934 drouth, a high accumulation of plant food in the soil. All of this resulted in a soft lush blade growth and more plants on a given area than could be supported under ordinary conditions. Where drainage was poor and the soil saturated with water there was no chance for the roots to extend

deep into the soil. Instead the growth remained shallow.

All of this did not have any injurious effect upon the grass as long as growing conditions were favorable, but when hot weather suddenly arrived many turf plants were unable to survive. The change from cool weather was so fast that there was no chance for them to gradually adapt themselves to their new environment.

Newly seeded turf suffered more than did old. This was to be expected because these young plants had not had time or proper weather to develop a deep or extensive root system. Fall seedings came through much better than spring seedings but even they showed the effect of hot weather. Some grass was injured because of the presence of too much available nitrogen. An excess of this material tends to produce a too soft and succulent growth of leaves.

It is sometimes difficult to tell exactly what causes a lawn to turn brown and frequently to die during periods of unfavorable weather. Usually it is a combination of factors. Sometimes the work of insects is very obvious but this hardly accounts for the greater portion of hot weather turf injury in seasons like this. The major causes are probably poor soil and cultural conditions and attacks of fungus diseases.

Fungus Diseases

The most common turf disease is the so-called "Brown Patch." It develops during periods of extreme heat coupled with high humidity. A fungus growth penetrates the blades of the grass and feeds upon the cells thereby causing their destruction. The grass soon turns brown but as the roots are not usually attacked the turf will generally revive if given time. A peculiarity of this disease is that it attacks grass in definite patches which are roughly circular in outline. Brown Patch is most active on the Bent varieties of grass but it does

plenty of damage on other kinds in some seasons.

The control of Brown Patch is effected by applications of mercurial fungicides such as Semesan, Nu-Green, Calo-Clor, Curex and Pfizer's Mixture. These will not restore the damaged grass but simply serve to check the disease for short periods of time. In spite of occasional attacks of Brown Patch on all grasses it is hardly worth while to attempt to control the disease except on putting greens or lawns of Bent grass. In other cases it is just as well to let the disease spend itself and then to repair the damage the following fall by re-seeding the injured areas.

Another fungus disease that has caused extensive injury this summer is known as Pythium disease or Spot Blight. This develops only during periods of extremely high temperatures, above 90 degrees F., and high humidity. In the early morning stage of attack the disease appears as a circular spot of blackened grass intertwined with a sort of cob-webby growth of mycelium. Later as the grass dries from the effect of sun and winds, the dark blades wither and become reddish-brown in color.

While the disease kills turf in spots, large areas may appear as having been damaged because of the merging of several spots. Sometimes the injury shows up in streaks, due to spreading of the fungus by lawn mowers.

An attack of Pythium is usually stopped by a lowering of temperatures, or by a dry atmosphere. As the grass roots are usually killed it is necessary to reseed the injured areas.

While most fungus diseases will attack practically all turf varieties, there is one which seems to concentrate on bluegrass. This is known as Leaf Spot. This disease usually appears in cool weather and when it does it leaves the grass in such a weakened condition that it succumbs in hot weather. The first notice-

able injury is the appearance of small brown spots scattered over the grass blades. At times the whole leaf becomes involved and in severe cases the disease invades the crown causing destruction of the plant. The same fungus causes "foot-rot" in bluegrass. Quite often the two diseases occur simultaneously.

Another fungus disease is Zonate Eye-Spot. The damage is quite similar to that of the Leaf Spot fungus but it is not confined to bluegrass. Practically all grasses are susceptible.

Seedling grass is often attacked by several different species of fungi which cause the disease called "Damping-off," one of the worst problems in growing flowers in greenhouses. The organism attacks grasses in either small or large patches, usually killing the plants outright. The spotted and uneven catch of new seeding is often the result of damping-off. Sometimes the seedlings are killed before they emerge from the ground, leading to the erroneous conclusion that the seed failed to germinate.

After the disease has struck there is no way of saving the grass. The chances of having attacks can be lessened by avoiding over-watering and over-feeding.

This article on summer injury will be concluded in the September issue of LAWN CARE. At that time the matter of insect injury will be discussed along with suggestions for proper maintenance to avoid some of these hot weather difficulties.

Weeds Not Pro-American

"You will note that my remittance is being mailed to you from Great Britain. I find that, although they have the most beautiful lawns over here that I have ever seen, they are troubled with a similar assortment of weeds that are so annoying to us in Connecticut."—PORTER M. FARRELL, Green Acre Lane, Westport, Conn.

Omaha Dentist Reports Crabgrass Experience

The following letter reached us after Dr. Sears had received April LAWN CARE.

"I enjoyed reading this issue especially as it dealt with a curse which I have had the pleasure of fighting for the past five years. The method I have finally arrived at after numerous experiments is one of continuous and diligent work but which rewards one with the best of results. I rake and clean the lawn first with an ordinary garden rake then with the heavy iron rake with short teeth, to get everything out except grass; fertilize, wet down well and then seed the bare spots. From then on it is one continuous practice of watchful waiting. As soon as the first small shoots of water grass appear I am out there every evening hard at work.

"One thing I have found out and I think is a good plan, is not to spray at all after the water grass starts—about once a week I wet the lawn down well by allowing the hose to run without the spray until the whole lawn is completely soaked. The way I found this out was that I noticed where my little boy 5 years old played with the hose and had the ground completely soaked there was a fine healthy stand of grass whereas the rest of the lawn, no matter how much I sprinkled never had the same appearance. Consequently I encouraged him in this sport but to change his theatre of operations, so to speak.

"If one really enjoys working on a lawn trying to make it look decent there is something fascinating in pulling this dirty little pest out—and it isn't hard work either if one will get at it soon after the lawn has been soaked down."—DR. SIGSBY S. SEARS, 1117 Medical Arts Bldg., Omaha, Nebr.

Covering of Burlap is Found to be Effective

"Referring to your last publication on 'Lawns and Their Upkeep,' I was so interested in a letter from one of your correspondents on the idea of covering seeded ground with burlap for protection that I tried it in several places and at regular intervals last fall, from September 10th to November 1st. Some of your readers may wish to know of my experiment. The results were surprisingly effective. The grass germinated much more quickly and subsequently continued to grow faster than patches planted immediately next to it. There was almost an entire absence of weeds, and the amount of seed that germinated, judged by the surface showing, seemed to be almost twice as great.

"At one time a large seeded patch, on a considerable grade, was subjected to 9.47 inches of rain in about sixty hours. The burlap protected it with only small lines of washing whereas the seed on the uncovered portion next to it was entirely washed away, necessitating resurfacing and reseeding. The golf course on which the experiment was made is at Eastham on Cape Cod, where, in the past, losses from high winds alone often made it necessary to reseed two or three times."

—QUINCY A. SHAW, 12 Ashburton Place, Boston, Mass.



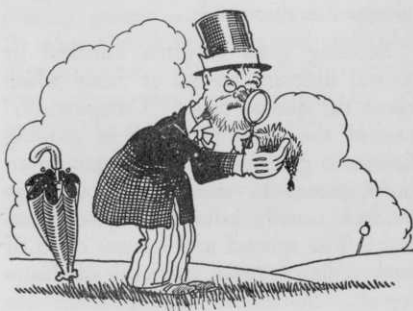
Lawn Care Binders

A loose-leaf binder of imitation leather containing all back issues of *Lawn Care* with an index, is available. Kindly send 50

cents to partly defray costs. This binder will serve as a convenient file for all lawn information.

Can You Name It?

YOU may have a variety of grass in your lawn which is highly regarded. Perhaps you would like to know what it is and to have seed of the same variety for resowing. Conversely you may have a grass you don't like at all. You'd like to know what it is so you can speak of it slightly by name and possibly learn how to get rid of it. Below we picture ourselves identifying grass specimens for



our friends. If you have an "unknown" in your lawn, take up a small section and mail it to us for identification, wrapping it in oiled or waxed paper. When sending specimens, if possible get them in the seeding stage. It is impossible to identify some grasses until a seed head has been produced.

"Horse Sense"

An unusual story about a smart horse comes to us from Mr. P. C. Vogler, 163 Kimberly Avenue, Springfield, Mass.:

"Please send me a receipted bill for the Turf Builder and seed as I have to present it for an insurance claim. Seems strange but it's true.

"A General Baking Company delivery wagon (horse drawn) parked outside my house. From the color of my grass (Scott's Creeping Bent) the horse decided it must taste as good as it looked and tried to sample it. Of course he took the wagon across my lawn. Now I know what is meant by *horse sense*."