

Lawn Care

A discussion of the vital problems of lawn making and maintenance

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LAWNS DAMAGED BY JULY HEAT

THERE has never been a year in our recollection when lawns fared so badly in July as they did this year. We have had letters and have seen evidence of lawns going bad throughout the country. The usual occurrence is for the grass to wilt and turn brown in small scattered patches which gradually enlarge until, in some instances, whole lawns are literally burned up.

As was to be expected, we found that the trouble was not due to any one thing but to a combination of conditions partly ascribed to unfavorable weather. In addition turf has been badly damaged by worms and insects and by fungus diseases.

UNFAVORABLE WEATHER.

New grass, in particular, has suffered from the unfavorable weather of 1930 and 1931. Grass planted last fall did not have an opportunity to become well established because the drouth continued well into the winter. For that reason fall growth was slow, roots were limited and the turf lacked the usual healthy vigor of fall seeding. While such grass revived in the early spring it did not become sufficiently strong to withstand the sudden and unusually hot, dry weather of July.

Spring seeded grass suffered terribly. In fact any spring turf which survived is decidedly the exception. The reason for this is quite clear. Spring and early summer were favorable to the growth of grass with warm weather and plenty of moisture. Such a condition resulted in an excessive growth of blades and a consequently diminished root system. Results are almost always the same. While conditions are favorable the grass thrives

but as soon as it becomes very hot and moisture is scarce the grass immediately succumbs because the roots cannot supply the moisture requirement of the plant. While artificial watering will help such a condition somewhat it will not take the place of the natural rainfall which is needed to support young grass.

OWING to the serious damage to turf by various July visitations we are compelled to postpone the Knot Grass story until the September issue of *Lawn Care*. It appeared to us that a discussion of the causes for so many ruined lawns following the period of extreme temperature was more important.

DAMAGE BY WORMS.

Coupled with unfavorable weather has been damage by web, cut and army worms, which feed on grass roots and stalks. They have killed an enormous amount of grass. Some of these worms have not attacked the roots but simply cut the grass just at the crown so that after a day or two the entire lawn could be swept up with a broom.

Web worms have probably caused the



most damage. They have been reported throughout Ohio and through the east. According to Mr. George M. McClure of Ohio State University, web worms originate from little white and yellowish brown moths. They lay their eggs in early June on blades of grass and these are hatched in from six to ten days. The young worms move down into the soil where they form a loose silken web while feeding on the grass roots, and, during the latter half of July form cocoons in which they pass the pupal stage and from which the moths emerge a little later. These moths continue the cycle and the new larvæ become partly grown before winter, to become fully grown the following May. They then pupate and the moths hatched in June proceed to repeat the cycle.

The web worm in many instances has been confused with the army worm. The latter is usually about two inches long and of a dark gray or dingy black color with three narrow yellowish stripes on its back and a slightly darker and broader stripe on each side. In contrast web worms have no stripes but are covered with small tubercles each bearing a tuft of small hairs. They are from one-half to three-fourths of an inch long.

In average years web worms, like most other pests, are kept under control by natural parasites. But, for some unaccountable reason, these have failed to function properly this year.

As such damage has heretofore been practically unknown no sure control method can be suggested. It would seem, however, that poison bran mash may be effective. This is made by mixing 1 qt. bran, 1 level tbs. Paris green, 2 tbs. syrup and 1 pt. water. Mix the bran and Paris green dry. Pour the syrup over it and mix thoroughly. Scatter the mixture thinly where the worms are feeding.

TURF DISEASES.

Fungus diseases have offered a serious problem on golf courses for many years but until this season have never been much of a problem in lawns. The most common of these diseases is called brown patch. It ordinarily attacks grass in hot, humid weather and may appear in small patches about the size of a silver dollar or in larger areas sometimes a foot in diameter.

The first evidence of an attack of brown patch is the cobwebby or mycelium growth which may be observed in the very early morning. Following this the grass turns black and eventually becomes brown and dead looking.

In spite of the severity of diseases in lawns during 1931 we feel safe in predicting that home owners need not be greatly concerned about them. It is cheaper and less troublesome to let the disease spend its force, and, if necessary, to reseed and fertilize rather than to try to check the disease when it comes.

If it is desired, however, to treat brown patch a fungicide may be applied. Semesan, Nu-Green, Calo-Clor and Barbak are all good mercurial fungicides which may be obtained and applied according to the directions of the manufacturer. While any of them will check brown patch after it has started they are not long effective as preventatives. They will act to a certain extent as preventatives but the effect is limited to a very few days.

Bent grasses have ordinarily been considered more susceptible to brown patch than any other kind but during the past month blue grass and practically all other varieties have been injured also. A disease, quite similar, which attacks only bluegrass, is known as leaf spot.

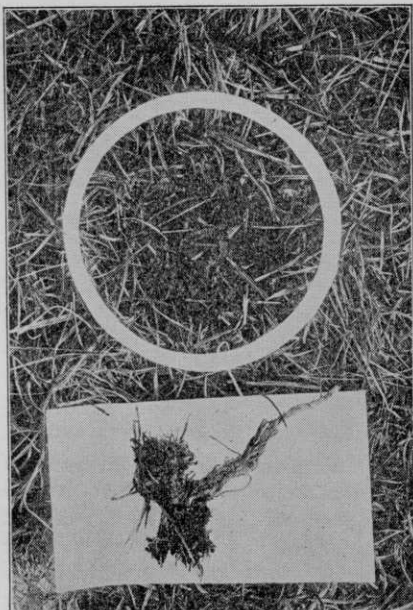
The Spotting Method of Weed Eradication

By E. P. DEATRICK,
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Morgantown, W. Va.

DIGGING weeds out of a lawn is a tedious job and if much of the crown is allowed to remain the weed reappears. The attention of those interested in eradication of weeds by use of chemicals has been directed mostly to eradication of weeds in fields rather than lawns although *LAWN CARE* has been reporting the results of numerous trials.

The action of most chemical eradicators is based on the toxic action of the chemical. A new method, which has been termed "Spotting Method" (See *Science*, Vol. LXXI, No. 1845, p. 487) by the writer has been described by Grimmett (See above reference). He claims that placing about an ounce of finely pulverized sulfate of iron and chloride of sodium (common salt) on the crown of the individual plants results in complete killing.

I have for years "spotted" weeds on my own lawn with a soluble fertilizer. The writer quoted in the article "More About Crab Grass" in *LAWN CARE*, Vol. III, No. 4, expressed the idea I had in mind. "If it [fertilizer in heavy applications] burns grass" it will burn or even kill weeds. The advantage of spotting with a fertilizing material instead of with a mixture such as mentioned by Grimmett is obvious—when the crown of a weed is covered thickly with the soluble fertilizer it is quickly killed by plasmolysis (i. e. the removal of water from the tissues) and then in the course of several weeks (when the fertilizer has washed away sufficiently from the zone of application to reduce its concentration to one of non-plasmolytic strength) fertilization results in a new and fuller



growth of grass surrounding and replacing the dead weed. If one does his "spotting" in late spring or summer he must be prepared to have a bare brown spot for a time. After a week or two, however, as mentioned, the spot where the weed grew is marked by a "fairy ring" of thrifty, dark green grass.

I have used both nitrate of soda and sulfate of ammonia, placing as much as one can hold between the thumb and fingers on the crown of weeds. Unless the weeds are too numerous a large lawn may be covered in a short time. In order to avoid the temporary rings of browned grass, the spotting should be done in early spring or late fall.

The accompanying cut is that of a photograph of a piece of blue-grass sod. The darkened area within the circle is the head of a dead narrow leaf plantain to which nitrate of soda was applied last fall. The plant on the left is a plantain dug out some distance from the one in



place. It is evident that complete destruction has occurred. Apparently the nitrogen fertilizer has aided in the process of making "artificial manure" of the weed.



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PETER MOLZEN,
Wood Ridge, New Jersey.

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Dandelions and Plantain Effectively Controlled

Joliet, Ill., June 24, 1931.

Dear Sirs:

Going through previous issues of "Lawn Care" and reading of the Iron Sulphate methods of eliminating dandelions and plantain, I decided to try the plan of hand digging and at the same time applying a small quantity of Iron Sulphate to the tops of the roots in powdered form.

For a trial I selected a space about four feet wide and fifty feet long, which seemed to have a larger amount of these pests than usual; used an ordinary carpenter's chisel $\frac{3}{4}$ of an inch wide and cut the weeds just below the crown, and applied a small pinch of Granulated Iron Sulphate to the tops of the roots, and covered with small amount of soil. This was done during April and while the other portions of the yard have had some dandelions

since then I have not seen a single one of these pests in this selected space.

I know that this is a back breaking method of disposing of these weeds, but with patience and taking small patches at a time, I expect to be almost entirely rid of these this season and the results seem to be well worth the effort so far.

Yours truly,
CHAS. HINDLE,
112 Sherwood Pl.
Joliet, Ill.



Scott Publications

The following may be had for the asking:

The Putting Green. An illustrated book telling how to construct, plant and maintain grass greens. The greens chairman, greenkeeper, or any golf club officer will find this a most instructive publication. Edition limited.

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Converting to Creeping Bent, a folder which explains four methods of remaking and improving an old lawn by using Bent.

Lawns, a small booklet of condensed facts about the making of a new lawn and the improving of an old one.

Scott's Seed Guide, a 72-page book of valuable information for the man who farms.

In addition to the above we will send to anyone a full set of the issues of *Lawn Care* which have preceded this one. There have been fifteen and the following lawn pests have been discussed: Plantain, Crab Grass, Dandelions, Moss, Grubs and Beetles, Chickweed, Buckhorn, Ground Ivy, Yarrow, Earthworms, Heal-all, Ants, Speedwell, Creeping Buttercup, and Moles.