

Lawn Care

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THE PROBLEMS OF SHADED LAWNS

IN THIS issue of *Lawn Care* we are beginning a discussion of what is sometimes the most exasperating of all lawn problems, namely, the growing of grass in shade.

The causes of failure to get good turf under trees are many, most of which are interrelated. Thus it is not possible to state positively that this thing or that thing is at fault when grass does not thrive in shade. Almost always a chain of circumstances is responsible.

For our discussion of the shade problem we have divided the contributing difficulties into four groups listed in the order of their importance:

1. Lack of sufficient plant nutrients.
2. Shortage of moisture during summer months.
3. Absence of sunlight.
4. Other unfavorable factors.

Strangely enough what at first thought might be considered most important is almost the least important. Absence of sunlight is the factor most easily solved. The seedsman can do this by supplying a mixture of grasses that are actually adapted to growth in shade. But, unfortunately, because of lack of information, the cost of seed, or because it is a little extra trouble, the proper seed is seldom provided.

The other difficulties are not so easily solved. To overcome them it is necessary to understand the trouble, so we will

consider the various causes in detail and then prescribe what have been found the best corrective measures.

Lack of Plant Food

There is strong competition between trees and grass for the limited supply of plant food. The tree man says grass robs the trees of nutrients, while the grass man says the tree, being more aggressive, gets all and little remains for the grass.

However that may be, we have it on good authority that a medium sized tree each year requires nutrients equivalent to 20 pounds of a high analysis complete fertilizer. Sod under this same tree would need about the same quantity per year if it were to make a satisfactory growth, factors being favorable. Thus a plot of ground 30 x 40 feet on which a tree is growing and which is in sod must supply each year plant nutrients in the amount contained in approximately 40 pounds of commercial fertilizer.

It is, of course, better for trees if they can find sufficient nutrients located fairly deep in the soil. But if it is not there they will send their feeding roots toward the surface and thereby enter into direct competition with the grass. Usually the tree will emerge victor, take most of the available surface plant nutrients and leave nothing for the lawn.

A permanent remedy for such a condition requires (a) regular and correct

feeding of the tree roots, (b) regular feeding of the grass.

The best methods of feeding trees were discussed in the September, 1929, issue of *Lawn Care*. Further instructions will be presented in one of the subsequent issues dealing with shade problems.

Feeding grass is not a difficult matter. To insure a constant and adequate supply of nutrients, shaded lawns should be fertilized three times yearly, namely in spring, early summer, and fall.

Moisture Conditions

As previously indicated, the supply of nutrient materials is only one of many factors affecting the shade problem. In some ways the moisture condition, deficiency or over-abundance, exercises a greater influence because of its close relationship to mechanical and chemical soil composition.

Botanists tell us that trees as well as grass require much larger quantities of water than we might suspect. A medium sized tree might well transpire some 500 pounds of moisture over a period of twenty-four hours in a normal summer day. From the soil under this tree we could reasonably expect an evaporation and transpiration loss of about 700 pounds of water which must be replaced if the tree and grass are to be kept from suffering. This would total a monthly loss of about six inches. Compare this with the average summer rainfall in the north central states of about 3.5 inches per month. In

general it seems that for turf under trees an average of at least one inch of water per week should be supplied (to keep turf growing vigorously). This would be equivalent to an application of about 5000 gallons on every 1000 square feet.

The illustration on this page gives some idea of the extent of a tree's root system. Obviously grass roots are not a



Illustration courtesy of Davey Tree Expert Co., Kent, Ohio.

match for such roots and so if moisture is deficient, trees get the surface soil moisture leaving little or none for the lawn.

Another condition affecting the water supply available to tree shaded lawns is the action of the tree foliage in divert-



ing water, so that such areas do not get even their share of the scant late spring and summer rainfall.

Many Other Problems

So far we have only considered a few of the many conditions affecting shaded lawns. Space will not permit a complete treatment of the problem in this issue so it will be continued in June.

At that time the matter of soils will be considered, particularly their relation to moisture supply. Other difficulties to be discussed include damage by the heavy wash of rainfall down tree trunks and the dripping of large drops of water from tree branches and leaves. The problems of acid and toxic soils, unfavorable bacterial environment, moss and grass smothering by leaves will also be considered.

We welcome your letters on this subject of shade, particularly a description of any successful maintenance practices.

Open Season on the Dandelion Extended

A LAWN enthusiast in Columbus, Ohio, is Mr. Joseph K. Bye, 22 Bullitt Park Place. He is known among his friends as an authority on grass culture. In a recent letter he expressed himself as follows on the subject of Dandelion destruction:

"The 'Simplex Method' of eradication as described by Major W. F. Kamm in August LAWN CARE has my full approval; however, I believe his method could be improved or simplified as follows:

"For stabber or spear use a 30 inch metal plant stay, which can be purchased at many seed stores or from gardeners' supply houses and which is already sharpened and has a ring opening at other end for handle or hanging up.

"For acid container, use an empty

mayonnaise jar with full open top holding from one-fourth to one-half pint.

"Container should be set in a cradle made by bending one-eighth inch wire down one side, across bottom and up other side to nearly top of container. The other end of wire should be looped for a handle and for hanging up.

"Container should be wired in cradle by finer wire and should hang about 30 inches from top of handle (same length as stabber) so as to avoid stooping when applying treatment.

"Container should be filled two-thirds full of concentrated or 1800 gravity sulphuric acid. Commercial grade of acid is much less costly than chemically pure, just as effective, and is obtainable from wholesale drug concerns.

"Acid dipped stabber or spear should be inserted one inch in crown of plant and held there about three seconds. I repeat once before leaving plant. During the past five years, I have experimented with iron sulfate, gasoline, and carbolic acid, but concentrated sulfuric acid has proven by far the most effective. A plant 'cooked' by sulfuric acid is through.

"The dandelion has ceased to be a problem with me and I easily keep my lawn free of this pest."

Page General Johnson!

Several letters have been received from friends who were intrigued by the announcement in February LAWN CARE that dandelion seed was listed in several seed catalogues. We like this the best because it promises aid to unemployment:

"I was interested to learn that dandelions are for sale. How we have fought them! Will you kindly tell me on the enclosed card what concerns are offering a price for the seed? It has made me quite curious. I have four youngsters who like to make extra spending money." Martinsville, Ill.



New York Flower Show

For the second consecutive year we will exhibit Scott's Seed, Turf Builder, and Creeping Bent at the New York Flower Show. As usual this will be held at Grand Central Palace, during the week beginning Monday, March 19th.

Our exhibit will be in booth Number 134, located on the second (mezzanine) floor. Those who visited us last year will find our display just a few feet east of where we were then. This is about in the center of the building on the north (47th Street) side, and adjacent to an exhibit of Steuben glassware.

We hope our Eastern friends will come in and bring their lawn problems with them.



White Clover is Controversial Subject

SOME aspirants to beautiful lawns admire White Clover and either sow it separately or take pains to see that it is an ingredient of their lawn mixture. Others dislike clover, refer to it as a weed, and see to it that none is included in their lawn mixtures.

To feel the pulse of our own customers on this matter we selected a small cross-section and sent them a questionnaire. The results were something like this: One-third did not want clover at all, and the remainder either preferred it in their mixture or wanted White Clover separately. That explains why our price list shows Scott's Lawn Seed (Regular Mixture) with and without clover this year and further provides for the separate purchase of White Clover where an extra heavy sowing is desired. There is no clover in Scott's Shade Mixture because clover positively will not grow in the absence of complete sunlight. During the spring season we will fill orders

for Regular Mixture with a small amount of clover included unless otherwise instructed. It is not included during the fall season as clover winter-kills badly so should not be sown in the fall months.



The next issue of *Lawn Care* will contain some novel ideas on applying fertilizers in hot weather, the object being to prevent burning. More data on this subject will be appreciated.



Scott Publications

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

Bent Lawns, an illustrated booklet which tells how to make and maintain a Creeping Bent Lawn.

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

Lawn Making and Maintenance. Sixty pages of specific information that will be especially helpful in the building or care of large lawn areas.

The Care of Creeping Bent, an eight page bulletin of *Lawn Care* size explaining exactly how to maintain a lawn of Creeping Bent. Of interest only to those who have Bent lawns.

There have been twenty-five previous issues of *Lawn Care* 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, Sod Web-Worms, Moles, Knot-Grass, Sorrel, Quack-Grass, Spotted Spurge, Yellow Trefoil, Goose Grass, Nimble Will, Knawel, Shepherd's Purse, Chinch Bugs, and Sedge. The June-July issue explained how to grow grass on terraces. For the complete series please allow 10 cents to cover mailing costs.