

TIMELY TURF TOPICS

Issued By The

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SPRING ROLLING: The heaving of soil as a result of alternate freezing and thawing loosens the roots of the grass and in many cases partially lifts the plants out of the soil, and rolling is necessary to firm them back in place as early as possible in the spring. Rolling, however, must be done with caution, since using too heavy a roller or rolling the turf when there is too much moisture in the soil is likely to pack the soil and do more harm than good. On the other hand, rolling turf when the soil is dry will not firm the roots into place and is therefore useless from this standpoint. Turf on clay soils will not tolerate as heavy rolling as will that on sandy soil. The water ballast type of roller is generally satisfactory for lawns because the weight of the roller can readily be adjusted for any particular set of conditions by removing or adding water.

The turf should never be rolled with the idea of removing irregularities in the surface due to faulty laying of the turf originally, to worm casts or other causes. Irregularities due to faulty surfacing or to settling should be taken care of by filling in the depressions with repeated topdressings rather than by packing the soil in the elevated spots with heavy rolling.

DRAINAGE: The need for improved drainage becomes particularly conspicuous in the early spring. Unfortunately, low spots on turf are too often handled in much the same manner as is the leaky roof by the shiftless home owner; -in wet weather the job can not be done and in dry weather it does not seem to be needed. During the wet periods in the spring there should be a thorough checking of low areas where water stands on the turf. Diagrams or careful notes made at that time will make it possible later to install tile drains where necessary or to regrade the areas by lifting the sod, filling in the depressions and replacing the sod. Such jobs done in the spring may prevent the development of large dead patches of turf on these areas in the summer.

BROWNPATCH IN THE SOUTH: Reports indicate that conditions have been favorable for the development of brownpatch on ryegrass greens over rather wide areas in the southern states.

Corrosive sublimate (bichloride of mercury) applied at the rate of 1 to 3 ounces to 1,000 square feet, depending on the temperature at the time of application may be expected to check the development of brownpatch. It may either be applied dry, mixed with sufficient screened sand or topdressing to make possible a uniform distribution, or dissolved in water and applied in a spray. The amount of water required in the latter method will depend on the type of spray equipment used but usually 3 to 5 gallons will cover an area of 1,000 square feet. In both cases the treatment should be followed by a light watering.

The corrosive sublimate is more readily soluble than calomel and may therefore be expected to give more immediate control. For somewhat more lasting results and less injury to the turf, calomel may be mixed with the corrosive sublimate in equal parts or in a proportion of 1 part of corrosive sublimate to 2 of calomel and applied at the rate of 3 ounces to 1,000 square feet. On hot, humid days the rate of application should be reduced to 1 ounce to 1,000 square feet in order to prevent any turf injury from the fungicide. Applications should be repeated as occurrence of the disease warrants.

WINTER INJURY TO TREES: Word has come to us from Ames, Iowa, that in the Missouri River valley from Wichita, Kansas to Ames and possibly farther east, all of the apple, cherry and peach trees and most of the pear trees were killed to the ground as a result of the unseasonable storm last fall during the second week in November. The storm followed in the path of equally as unseasonably warm, balmy weather which gave the trees no chance to harden off gradually for winter. Considerable injury was also done to the Austrian pine, white pine, spruces and junipers as well as some of the deciduous shrubs such as Spiraea.

In view of this fact people in that area are urged not to prune trees or shrubs if they have not already done so, until they know whether their plants have been injured and if so, to what extent. Similar advice should be followed in all other sections where unusually severe winter-killing of trees and shrubs occurred.

Most of our turf grasses commonly grown in this region are generally tolerant of any low temperatures to which they are ordinarily subjected. If any unusual winter-kill of the turf grasses has been observed in this region as a result of the unseasonable and sudden drop in temperature by which the trees were so severely injured, the Green Section would like very much to hear about it.

FERTILIZING LAWN TREES: There is experimental evidence indicating that shade trees as well as turf grasses require high nitrogen fertilizer and that such grades as 12-6-4 and 10-6-4 give the most favorable results with trees as well as with turf. It is recommended in the publication *The Shade Tree* for July, 1939, that for young trees, 6 inches or less in diameter, 1 to 2 pounds of either of these fertilizers be applied for each inch in the diameter of the trunk of the tree at breast height. For larger trees, more than 6 inches in diameter, these same fertilizers should be applied at the rate of 2 to 4 pounds for each inch in diameter of the trunk.

This fertilizer may be broadcast over the surface soil of the area traversed by the roots. In the article in *The Shade Tree*, however, it is recommended that in lawns the fertilizer be applied in holes 18 inches deep, allowing 10 holes for each inch in diameter of the trunk. In order to avoid injury to the grass a plug of turf should be removed, then the bore made and the fertilizer applied after which the bore should be refilled with soil and the plug of turf tamped back in place. The two best periods in the year for fertilizing are early spring and fall (October 15 to November 15). There seems, however, to be a difference in opinion as to which time of year is better.

SPRING FERTILIZING: It is generally advisable to apply fertilizer more liberally in the fall than in the spring except where there is a possible danger from snow-mold. This is particularly true in areas where crabgrass and other summer weeds prevail. In all events, when fertilizer is to be used on turf in the spring it should be applied as early as possible in order to encourage the grass which has been injured during the winter to form a dense turf and thus give as little encouragement as possible to crabgrass and other summer weeds.

MOSS - AN INDICATION OF STARVED TURF: Contrary to the opinion held by many that the presence of moss in turf is a "sure-shot" indication of acid soil and the need of lime, it has been demonstrated repeatedly that the addition of lime will not check the growth of moss and in some cases may even encourage it. Moss is likely to thrive on soil which lacks sufficient fertility to support a good cover of grass or even of weeds. It can, therefore, usually be controlled by loosening the moss plants and breaking up the stand with a rake, and then applying fertilizer. Such treatment encourages growth of the turf grasses and at the same time discourages the moss. Where the moss has crowded out the grass completely, reseeding may be necessary.

In some cases, moss is associated with a water-logged soil resulting from poor drainage. Early spring is the time of year to note whether or not such areas are water-logged and in need of better drainage. If necessary, they should be properly drained when conditions become favorable for such work and before the above treatment for moss is applied.

'SNOWMOLD DISEASE: In sections of the country where the ground was frozen before snow fell and the snow melts but little during the winter, the snowmold fungi will have little chance to develop and consequently the turf will probably not be severely injured. In those sections, however, in which snow fell on soft ground or which experience prolonged thaws during the winter, the fungi may develop and result in a real injury to the turf, particularly when the turf is composed of susceptible species or strains of grass (See T.T.T., October, 1940).

Where the disease is found, it is well to treat the turf as soon as possible with corrosive sublimate at the rate of 3 or 4 ounces to 1,000 square feet in order to kill the fungus and prevent its further spread should the conditions be favorable for its growth. This treatment will not restore diseased turf but will prevent the spread of the disease.

Much of the turf attacked by snowmold will not be completely killed and will be restored as soon as new blades of grass are produced. Such recovery will be hastened by applications of inorganic fertilizers containing relatively large amounts of quickly available nitrogen.

Where the turf is found to be killed in spots, these areas should be patched as early in the spring as possible. Where this is not practical, the dead areas should be raked or disced lightly and seeded as soon as possible.

"WINTER-KILL" OF TURF: There are causes other than snowmold responsible for winter injury to turf. Damage frequently occurs when water remains on turf too long during a time of intermittent freezing and thawing. There is but one preventive measure for injury of this sort and that is to provide for proper surface drainage. When moist soil becomes frozen it becomes practically impervious to water so that all systems of subsurface drainage fail to function. Consequently, when rain or melted snow settles in depressions which have no surface outlets the water must stay there until removed by the gradual process of evaporation or until sufficient openings are melted through the frozen layer of soil.

During the thaws of February and March possibilities of such injury should be considered. In some cases the dam which causes the water to accumulate may be a bank of snow. In such cases drainage paths should be cut through the snow bank to provide adequate outlets for the melted snow and ice. If the obstruction is of a permanent nature, charts should be drawn and detailed notes taken so that when weather permits the sod can be lifted, the obstruction removed by regrading, and the sod replaced. Such a program will also prevent trouble in the summer since brownpatch and other summer disturbances are encouraged by faulty surface drainage.

SPRING SEEDING: Late summer or early fall seeding of northern grasses is much to be preferred to spring seeding, although with proper care good stands of grass may be obtained from spring seeding. Where turf is so thin that reseeding is justified, however, it is advisable to seed in the spring at as early a date as possible. While the ground is still frozen it is possible to get out on the turf without injuring the grass. By sowing seed at this time advantage can be taken of the "honeycombed" condition of the soil which frequently results from alternate freezing and thawing. The seeds sown on frozen soil will lodge in the cracks of the "honeycombed" structure, will be covered by subsequent thaws, and will germinate as soon as soil temperatures become favorable and before the soil dries out.

TURF PROGRAMS: Doctor Monteith and Mr. Bengston will represent the Green Section on the program of the fifteenth annual National Turf Conference of the Greenkeeping Superintendents Association. The conference will be held in Detroit on February 4 to 7, the educational program beginning Wednesday, February 5. Other turf programs in February on which the Green Section will be represented are the greenkeepers' short courses in Denver, Colorado, at the Park Lane Hotel, on February 18 to 20; Purdue University at Lafayette, Indiana, on February 25 and 26; and University of Chicago, February 27 to March 1, on which Dr. Monteith is scheduled to speak. On the program of the Maryland Nurserymen's short course, to be given at the University of Maryland, February 19 and 20, Mr. Bengston will represent the Green Section.