USE OF LIME

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Excessive soil acidity is one of the reasons for poor root systems. Normal grass roots are deep and white in color. In soils which are too acid the roots are usually brownish in color, shallow and restricted.

Matted turf usually is found on acid soil. It results from an accumulation of undecomposed stems, leaves and roots at or near the surface with a peat like layer underneath. These layers develop because there is not the soil action for the decay of organic matter in an acid soil. An excessive mat is bad for maintenance. It is difficult to prevent the formation of localized dry spots during hot dry weather on matted turf, the surface mat impedes the absorption and penetration of water. Root systems stay close to the surface to obtain needed oxygen.

Soil reaction affects the soil population of fungi and bacteria. Over-liming especially with hydrated lime, may depress turf growth. The lime makes all the trace elements such as iron, manganese, copper, etc. insoluble and therefore unavailable. But the other extreme of too much acidity may create a deficiency of calcium and magnesium. Calcium and magnesium are leached out of soil where there are heavy rain falls.

Lime is not usually considered an essential plant food element, its function is an indirect one, to make conditions favorable for growth by changing soil reaction.

Ground limestone, hydrated lime and quick lime are kinds of limes use to correct acidity, ground limestone being the safest to use in most cases.

Soils which are more than moderately acid definitely need lime and its use is usually justified with out regard to any other factor. Before using lime on a large scale, trial applications on test strips can be made. Rates of 25 and 50 pounds per 1000 square feet can be made on test strips.

Liming of turf on fairways if needed will improve the turf and keep it greener longer in dry weather. Turf on acid soil is more sensitive to chemical injury. Lime counteracts turf diseases. The prevalence of diseases such as dollar spot, snow mold, and brown patch may be due in part to insufficient lime. The failure of bent turf on greens to respond following an application of ammonium sulfate is strong evidence of the need for lime provided other conditions are favorable for growth.

The rates for applying lime is affected by the kind of soil and grass. Less lime is needed on a sandy soil than on a heavy soil to produce the same change in P. H. Blue grass requires more lime than fescue or bent grass.

Late fall, winter or early spring are best times to apply lime. Fall and spring rains carry the lime into the soil. The use of lime on greens should be based upon the soil P H. A finely ground limestone is the safest and easiest to apply. When there is a soil reaction of from 6. to 6.5 P H. the use of 10 pounds per 1000 square feet is used and graduated down to a P H. of from 4. to 4.5 where 60 to 80 pounds of finely ground limestone is used.

Hydrated lime may be used to kill algae and counteract toxic conditions on water logged soils. The rate of application varies from 2 to 5 pounds per 1000 square feet. Greens may be benefited during a prolonged spell of bad weather by applying 10 pounds per green per week of hydrated lime. It should be washed in when applying.

MOSTLY ABOUT TREES

Among the trees that heve been found desirable for planting on the golf course is the honey locust. The ordinary or common honey locust is covered with sharp thorns not only among the branches, but all the way down the trunk of the tree to the ground. There is now available, however, a thornless variety which seems to be a good tree for our purpose. The tree grows to a good size, the leaves are small and the habit of growth rather open, allowing a certain amount of sunlight thru to the ground beneath. This is important for the growth of turf around the tree.

The hackberry is another tree which should receive more attention as a shade tree. These are the trees that produce the small, round, purplish red fruit with the big seeds. A hackberry tree is always popular with numerous kinds of song birds because of these sweet and tasty fruits. It is said more than 25 species of birds like to feast on the berries. The hackberry has other advantages, however, that make it worthy of consideration as a shade tree. In form and foliage it resembles the elm. It commonly attains a growth of 50 to 60 feet and some may be 100 feet tall or more. The resemblance to the elm is responsible for giving the tree the nickname of false elm. Because of this similarity, some arborists believe the hackberry should receive more attention as a shade tree, particularly in areas devastated by phloem necrosis and Dutch elm disease, the two worst diseases to which elms are susceptible. These diseases have not been found in the Chicago area, although they have caused widespread destruction in several downstate areas. The hackberry is a hardy tree with a neat appearance. Its growth is is relatively rapid and it thrives well in drouth. It is not subject to the two elm diseases, but there is one disease to which it is susceptible. This disease is called witches' broom. It causes deformed growths among the small twigs of the crown. In severe cases these deformities may be regarded as unsightly, but the disease does not kill the tree or destroy foliage.

One of the trees that puts on an excellent color display in the autumn is the Ohio buckeye. The buckeye in spring rates a poor second to its cousin the horse chestnut in the beauty of their respective tree flowers. But in the autumn, the buckeye ranks first by a wide margin over the horse chestnut, which, because of its yellowish-green foliage, must be included among the less spectacular trees of this season.

Worth mentioning also is the highbush cranberry tree. This plant is more like a shrub than a tree. It grows only about 12 to 15 feet tall. It is also known as snowball tree, white dogwood, pincushion tree, red elder, and cherrywood. Fruits of the highbush cranberry are popular with winter birds. There are a lot of berries and they remain on the tree a long time. Berries that ripen in September and October may hang on the trees until May.

Buckthorn is another plant that furnishes fruit for birds. It is a shrub that can grow as tall as 20 feet. It is a native of Europe and Asia, but it has been widely planted in this country as a hedge plant and with the help of birds escaped to the woods. Seeds of buckthorn fruit eaten by birds and voided have helped the plant to spread into the woods and elsewhere away from formal plantings. Buckthorn fruits are similar in appearance to wild black cherries.