

# Lawn Care

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PUBLISHED FIVE TIMES YEARLY FOR LAWNTHUSIASTS

## MANY LAWNS NEED LIME

It has long been obvious that many lawn soils are too strongly acid for best grass growth. A tabulation of results of Scotts Soil Testing Service over the past five years confirms this observation. As the map on page 3 indicates, this overly acid soil condition exists particularly in the eastern half of the country.

One of the interesting observations in soil testing is that soil type or texture provides no clue to whether that soil is acid or neutral. Sands, clays, loams, or any other soil type may be too strongly acid for good turf growth.

Soils are said to be "neutral" in reaction if they test pH 7.0. Above seven, alkalinity is indicated; below that acidity. The accurate determination of pH is made electronically in a soil laboratory.

### Indications of Acidity

If a lawn soil tests pH 6.0 or above, acidity is usually not considered a problem; if the pH is lower, lime may be needed. Here are some of the indications of possible lime deficiencies in lawn soils:

- (a) Failure of grass to respond to fertilizer applications
- (b) Seeming lack of response to watering
- (c) Lack of color or vigor when growing conditions seem good

Some have the idea that moss indicates an acid or what they call a "sour" soil. Almost any poor lawn or soil can be described as "sour" because the adjective has many meanings. However, the presence of moss may or may not indicate a need for lime. It may appear because of lack of fertility or in a compacted, poorly drained soil. Soggy soils encourage moss, especially in the shade.

An overly acid condition may be corrected by the use of lime. A secondary benefit of lime is that it supplies the minor elements of calcium and magnesium, lacking in some soils. However, lime does not eliminate the need for regular use of fertilizer.

### Benefits of Liming

Lime helps make soil conditions more favorable for the growth of friendly bacteria which are needed to liberate plant food and help break down organic matter into humus. This latter feature is important in proper decay of the year-to-year accumulation of the dead grass roots near the soil surface. If lime is worked into the soil it may improve texture and aid the movement of air and water through it.

None of these will show up as immediate responses to liming. Instead it may be several months before any improvement is indicated.

### Soil or Surface

Acidity is best reduced when the lime is intimately mixed into the effective root zone of the soil, that is the upper six inches. Turning lime under is not advised because that buries it too deeply. Instead the soils should be plowed or spaded, the lime broadcast, then mixed in by cultivation.

Where a lawn is established the only choice is surface application. The disadvantage is that lime moves downward rather slowly, especially in clay soils. In spite of that, many cases of marked lawn improvement are traceable to surface applications of lime, so they are recommended unless the lawn is torn up and rebuilt.

## Timing

The preferred time to lime established lawns is late fall, winter or very early spring. Alternate freezing and thawing opens cracks in the soil to permit greater penetration of the lime.

Mid-summer is probably second choice. Some cracking of the soil may occur during dry weather to aid in penetration of the lime.

Actually lime may be used most any time. If applied during the growing season, there should be a delay of at least two weeks before sowing seed or applying fertilizer and then only if there has been an intervening heavy rain or watering.

There is increased interest in the use of various tools to perforate the soil surface. If perforation is done before or after liming, it will aid penetration of the lime.

## Forms of Lime

Either (1) Raw Pulverized Limestone or (2) Hydrated Lime is suitable for lawn use. "Quick" lime or oxide of lime is to be avoided because it is highly caustic.

In contrast neither Hydrated Lime or Raw Pulverized Limestone is supposed to be caustic to the skin. However, any who are susceptible to dermatitis should avoid skin contact with lime, especially in presence of perspiration and friction as between the foot and shoe.

Hydrated Lime is the quicker-acting form for mixing into the soil but it has little advantage in surface applications. Raw Limestone is probably better for established lawns. The finely ground grade is faster in neutralizing action than the coarser but it does not flow as readily through the spreader.

Either Hydrated or Raw Pulverized Lime is available in 50 pound bags at hardware, seed or builders' supply stores. The cost is low, usually less than two cents a pound.

### SPREADER SERVICING

A service bulletin on Scotts Spreaders is available without charge. This carries instructions for overhaul, gives prices on repair parts. To get a copy just drop a postcard to Scotts, Marysville, Ohio, asking for the Spreader Service Bulletin.

## Rates

For the purpose of this article the following will be considered NORMAL RATE application of lime to lawns:

50 lbs Raw Pulverized Limestone or 35 lbs. Hydrated Lime per 1000 sq. ft. (20 x 50 ft.) Stated on a per acre basis: 2000 lbs. Raw or 1400 lbs. Hydrated Lime.

It is best to have a soil test made to determine lime need. In the absence of this and if lime has not been used in the recent history of the lawn, the following chart may be used as a guide as related to the map on page 3 indicating areas of lime need.

**Lime Probably Needed**—If lime is to be worked into the soil, use up to twice Normal Rate. If a surface application to established lawns, use no more than Normal Rate. In either case, repeat at half to Normal Rate every second year.

**Lime Possibly Needed**—Use at half or Normal rate. If favorable response is noted, repeat in a year or two.

Surface applications of lime should be limited to Normal Rates and not repeated in less than six months.

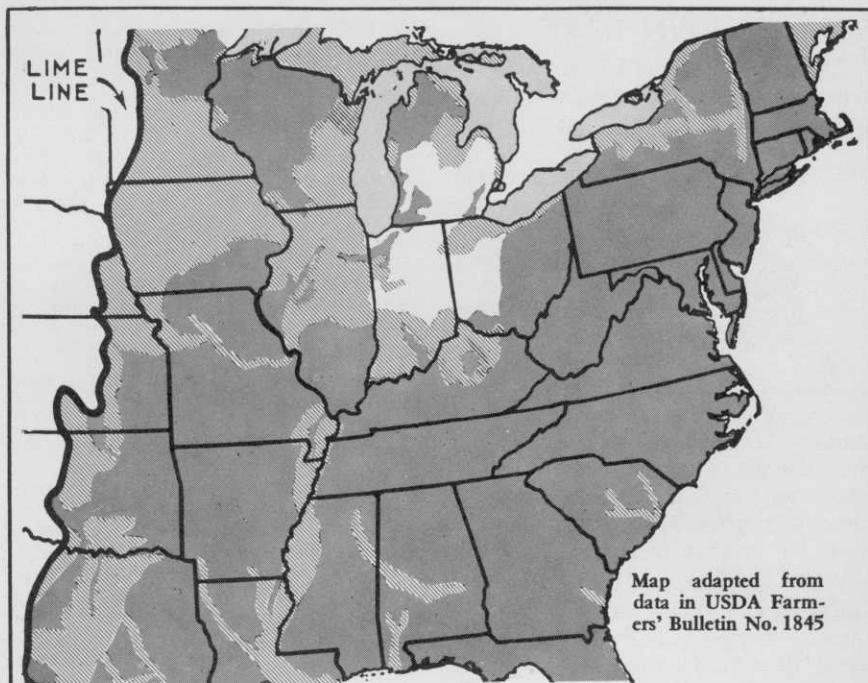
## How to Apply

Probably most lime is scattered by hand or with a shovel. The disadvantage is that such application is bound to be uneven. And results will be, too, since there is little lateral movement of the lime. An excess on some spots will not help nearby areas that receive none.

The mechanical spreader is not the perfect answer either because some forms of lime are so fine they pack in the hopper so the flow is scant and uneven. Dry sand mixed with lime will insure better spreading or it may be possible to find a "gritty" form of lime in contrast to the usual "floury" texture.

In using a spreader to apply the finer grades of lime, it may be necessary to arrange for extra agitation to prevent the lime from clogging the feed holes. One way is to install wood cleats crosswise on the tires. These should be as long as the tire tread is wide and  $\frac{1}{4}$  inch thick,  $\frac{3}{4}$  inch wide.

Six cleats will be needed on each wheel. They may be affixed to the tire by using good quality black friction tape, the kind electricians use. Lay out the tape, stick cleats at proper intervals, then wrap around the perimeter of the wheel. Use at least three extra winds of tape to provide extra strength. The tire should be cleaned first with gasoline or cleaning fluid as otherwise the tape won't stick.



Note "Lime Line" dividing the country about in half. Lime seldom needed to the west of this line. Many sections to the east need lime, others do not. Here is a general guide according to the map shadings, subject to local variations.

- A. **DARK GRAY**  
*Probably* Regular applications of lime probably needed unless sprinkling water is high in lime (hard). Soils in this area are usually of non-calcareous origin, viz: sandstone, shale, quartz, granite, peat, muck, woods earth.
- B. **CROSS HATCH**  
*Possibly* Soils are typically limestone or marble derivation. Not likely to need lime, especially if watered regularly with "hard" water.
- C. **WHITE AREAS**  
*Doubtful* Doubtful if lime ever needed on lawns in these sections, unless woods earth, peat or muck added in large amounts.

Extra agitation may not be necessary on rough, frozen ground. In either hand or machine distribution it is advisable to apply the lime in at least two directions, crosswise to each other for better uniformity. Since the texture of lime varies with brands, it is not possible to prescribe spreader settings.

It is important that lime be kept away from acid-loving shrubs and flowers, particularly broad-leaved evergreens. The danger of lime washing from hillsides should be considered.

Too much lime is not good for grass either because it may lock up certain

fertilizing elements and unduly encourage alkaline loving plants. The overuse of lime is to be avoided.

SIRS:

Last fall I used my Scotts Spreader to put lime on my lawn and found it worked better than any other method I have tried. I made it about half full because lime does not flow so well if there is too much in the hopper. I set the Spreader wide open and used a sort of rhythmic tapping of the handle bar for extra agitation. Going over twice gave me about 30 lbs per 1000 sq. ft., the rate I wanted, evenly distributed.

ALLAN DIXON.

Flushing, N. Y.

## SPRING LAWN CARE

Longtime readers of **LAWN CARE** will remember this publication has always urged an early spring start. Several



jobs can be completed while the weather is still cold, one being liming as described in this issue.

Bring out the spreader for a feeding while the grass is still dormant. As long as the lawn is brown, there is little danger of burning but it is still important to effect even coverage. Otherwise, growth will be spotty because of variation in feeding.

When the grass is brown, it is advisable to exert extra care in using the spreader because of the difficulty in seeing the spreader tracks. Possibly the best way is to maintain the pivot wheel in position as the direction of operation is reversed. Some use small flags as markers.

**Feed, Feed and Feed.** Every lawn should receive a feeding in late winter or spring. More and more are realizing the advantages of repeat treatments through the year on this schedule: (1) March-April, (2) May-June, (3) July, (4) August-September.

**Grub Control** Entomologists report that some sections of the East can expect severe damage from grubs this coming year. This is true where Jap and Asiatic beetles are common. One reason is that the unusually wet summer was conducive to egg laying in moist sod covered soil.

Generally the grubs hatch in the fall, burrow deeply for winter but come nearer the surface in May and June to feed on grass roots. The turf damage does not show up until hot, dry weather.

If the lawn is located in or near a Jap beetle area, it should be grub-proofed with the right amount of a Pest Control containing either DDT or Chlordane. Late winter or early spring is a good time to apply.

**Save on Seeding** The same advantages of early liming and feeding apply to sowing seed. Alternate freezing and thawing will help bury the seed so it can get needed moisture and protection for germination and seedling growth as the soil warms. Good seed, like most commodities, seems costly per pound but it need not be expensive per lawn. Most folks sow too much seed because of the mistaken idea that an extra heavy seeding will offset poor growing conditions. Any lawn with a fair turf needs only a light over-seeding or possibly only a touch-up of bare spots. On the other hand if the lawn was ruined by Crabgrass in the past summer, then a rate more like a new lawn is needed.

**Raking** About the only reason for a spring raking or sweeping of the lawn is to remove the accumulation of debris such as leaves, sticks and twigs. Some give the lawns a vigorous raking to remove dead Crabgrass and similar weeds. This does no good because the Crabgrass seeds have already dropped to the ground. Severe raking may dislodge good grass or at least expose surface roots to drying. The one exception to bodily removal of Crabgrass is when compost or soil is to be used as a topdressing. Then matted patches of Crabgrass should be raked out or scarified so the topdressing can make contact with the ground. Otherwise seedings in such spots may fail because they dry out so quickly.

**Delayed Seeding** If seeding is not done until frost is out of the ground and the surface is beginning to dry, then some effort should be made to roughen or scarify the soil. It is important that there be openings in which the seed may lodge or that it be covered lightly with screened soil.

**Rolling** Except in soil preparation and seeding of new lawns, there is not much use for a lawn roller. It is a mistake to use a roller to flatten soil irregularities. That compacts the soil and results in a poor growing condition. A light roller will help firm heaved grass plants to some extent. It is of little use in firming seed into the soil of an established lawn because the turf holds up the roller and no contact with the seed is made. A light rolling after seeding of newly prepared ground presses soil around the seed and hastens germination.

**Early Mowing** It is a good idea to start cutting the grass as soon as it starts to grow. Such mowings in cool weather should be fairly short to remove matted growth and give the seedling grass a better chance. Cutting height is best raised as the weather gets hot in early summer.

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