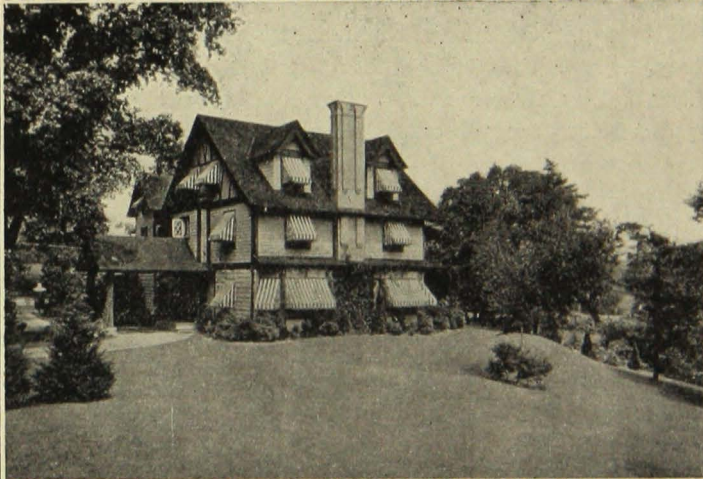


# Making the Home Lawn

L.E. Longley  
Division of Horticulture  
Agricultural  
Experiment  
Station



## UNIVERSITY OF MINNESOTA AGRICULTURAL EXTENSION DIVISION

Published in furtherance of Agricultural Extension, Acts of May 8 and June 30, 1914. W. C. Coffey, Acting Director, Agricultural Extension Division, Department of Agriculture, University of Minnesota, Co-operating with U. S. Department of Agriculture. 10M-6/35

**I**N establishing a lawn one should think ahead of the actual date of planting and plan the process so that each step may be performed in logical sequence and far enough beforehand to insure the best results.

Before the actual construction of the lawn is begun, it is important to determine how the lawn will be fertilized. If part of the fertilization is to be by the application of compost, making a compost pile about a year before the fertilizer is needed is the first important step. Fertilizing with compost is one of the best methods of feeding the lawn, and by its use a good lawn can be obtained without the expensive deep preparation of soil.

### GRADING AND DRAINAGE

Grading is the first step in the actual construction of a lawn and means more than the addition of a few inches of soil in any place. The top soil should first be removed and set aside until the grading is completed; then it should be spread over the newly graded places. This is necessary to obtain a good stand of grass on most soils.

If the soil is wet it should be tile drained. Lines of 4-inch tile should be laid so as to intercept and draw off the seepage. In most cases the lines of the tile should be placed 2 feet below the surface, 20 feet apart. Seepage down a hillside can often be intercepted by a line of tile laid on the impervious layer that is holding the water from soaking down into the subsoil. A shallow ditch, grassed over, along the upper edge of the lawn, will help to turn surface water away from the lawn.

### PREPARING THE SOIL

For best results, the preparation of the soil should be started several months or a year before sowing the seed. However, a good lawn can be secured more quickly. The important consideration is to apply a large amount of decaying organic matter. A cubic yard of manure for 1,000 square feet of lawn will suffice, but more could be used to advantage. If the fertilizer is applied only a short time before the seed, it should be well rotted; if applied several months before the seed, fresher manure may be used. The fertilizer should be plowed or spaded into the soil, at the same time destroying all such taprooted plants as dandelions. Decaying organic matter worked into the soil greatly increases the water-holding capacity, which is very important from the standpoint of watering and of seed germination.

Because of the great capacity of peat to hold water, the addition of about two or three inches of it is desirable. Peat may be substituted for part or even all of the manure. It is preferable to use some manure, tho the amount may be reduced to one-half or even one-fourth

of that indicated above. Peat should be finely pulverized and thoroly mixed with the upper six inches of soil.

If time for long preparation can not be spared, a shorter period will do, especially if the soil is naturally fertile and in good physical condition. Recourse can be had to feeding later with compost. A better lawn will result if the soil is plowed or spaded over and weeds are kept out by cultivation during two or three months previous to seeding. It is possible to make a fairly good lawn by seeding almost immediately after spading or plowing, but weeds are more likely to cause trouble if this procedure is followed.

In any case, it is desirable to make an application of phosphorus in some form before seeding. About 25 pounds of superphosphate or bonemeal to 1,000 square feet of lawn should be worked into the upper four inches of the soil. The other fertilizers can be readily added in the form of top dressing, but phosphorus does not readily wash down into the soil and should be added before sowing the seed.

### SEEDING THE LAWN

The best time for seeding a lawn differs, depending on the kinds of grass used and on the soil and climate of the locality. Probably the best time, in Minnesota, is from the middle of April to the middle of May, and again in late summer, providing the seed is sown by the first week in September. Later than that is not desirable. A lawn can be seeded any time during the summer, but greater care in watering is necessary during the hottest weather to insure germination. If bent grass is to be grown from stolons, planting somewhat later than September 1 is as successful as spring planting and often more so.

Fall seeding is better from one standpoint, that is, the grass grows well and most weeds do not. In this climate, however, if seeding is delayed much after September 1 the grass does not usually get well started before cold weather sets in and winter-killing results. A lawn seeded in late fall is likely to become rough and full of pockets, owing to weather conditions at this time and in early spring. For these reasons a more even lawn usually can be obtained by early spring seeding. Of course, the irregularities of a lawn can be leveled by top-dressing, but most people are unaccustomed to this procedure.

After the preparatory work has been completed, rake the ground to a final grade; then use a roller, lengthwise of the lawn. Next rake the surface to fill the depressions made by the roller, and roll in the opposite direction and rake again. Repeat these operations until a perfectly smooth surface is obtained; then divide the seed estimated to be needed into two equal parts. Broadcast one part either by hand or with a grass seeder, sowing strips in one direction as wide as can be

readily covered by the method used. When the whole area has been covered, broadcast the other half of the seed at right angles to the first sowing, again covering the whole surface, strip by strip. This will insure a more even seeding than if the sowing were done in only one direction. Some of the small lawn fertilizer distributors are very satisfactory to use for sowing lawn grass seed.

After sowing, rake the lawn to cover the seed. At this time an application of compost may be applied evenly and raked over the seed, using one cubic yard for 1,000 square feet of lawn. Follow the raking or application of compost by rolling in both directions.

If the weather is at all dry after seeding, sprinkle frequently. A light sprinkling every day, preferably in the evening, will keep the surface soil moist enough to promote germination. At this stage the incorporation of humus in the lawn surface shows its importance. If the surface has sufficient humus, it will be easy to keep moist enough to insure germination. However, later watering, when the lawn is fully established, should be heavy enough to soak the ground to a depth of several inches at each application. Light sprinklings tend to keep the roots near the surface, resulting in grass unable to endure drouth.

In the late fall of the first season, whether the lawn was sown in spring or fall, it is advisable to apply a top-dressing. As its purpose is to fill up depressions and even the surface, it should be well raked.

### TYPES OF LAWN GRASSES

The standard lawn grass for the northern states is still Kentucky bluegrass, tho red fescue and bent grass are important and have special uses. Kentucky bluegrass (*Poa pratense*) will do well on a wide variety of soils but is not well adapted to those that are light and dry. Red fescue (*Festuca rubra*), better known by its variety name, "Chewing's fescue," is well adapted to light, sandy soils and will do better in shady places than Kentucky bluegrass. Bent grass is also adapted to the lighter, more acid soils. Kentucky bluegrass has a slightly bluish-green appearance and the leaf has a boat-shaped tip. Red fescue has a bristle-like leaf and a wiry stalk, making it difficult to cut. Bent grass has taper-pointed leaves and is of two types, one strongly creeping and the other less so. Creeping bent (*Agrostis stolonifera*) and velvet bent (*Agrostis canina*) are the greatest creepers and make the best turf. They form long stolons or above-the-ground stems which make a dense mat. To prevent the stems from showing above the grass blades, it is necessary to top-dress with compost or soil. The top-dressing causes the stolons to root and stay close to the ground. These types of bent require frequent cutting, tho the velvet requires less than the others.

The vegetative strains of creeping bent, such as Washington and Metropolitan, that have given such good results on putting greens, may be used for lawns if proper care is given them after planting; that is, top-dressing and fertilizing must be practiced, and frequent cutting, at least every two or three days, is necessary. Otherwise, the lawn will become ragged and brownish, owing to the stolons growing above the surface. Another strain still better for lawn purposes is the one known as Minnetonka bent.

Of the bents that are not strongly creeping, the group now known as Colonial bent is valuable. This includes the Rhode Island bent, Prince Edward Island bent, New Zealand bent, and a new type from Oregon marketed as Astoria bent. This group makes a very fine-textured lawn, not so velvety as the creeping varieties, but good for a home lawn. There is some indication that these types may be more subject to winter injury, but during the last few years they have wintered well in the Twin Cities. They are propagated by seed, but seed of some types is scarce, tho seed of some is easily obtained.

#### LAWN MIXTURES AND RATE OF SEEDING

The reason for mixtures is two fold: (1) Most lawns vary in places, and grass of one variety is not good in some places while other varieties thrive there. For example, Kentucky bluegrass does well under many conditions but does not thrive where it is shady or on light, dry soil. Red fescue will endure shade and also light soils. Rhode Island bent and other bents do fairly well in the shade. These conditions make a mixture of several grasses desirable. (2) For quick results, it is often best to have a grass or clover that will cover the ground quickly and serve as a nurse crop for the permanent grasses. White clover is valuable for this purpose as is also perennial rye grass, which makes a coarse growth the first season, but dies or is crowded out by the second year. Redtop is often used in mixtures to secure a lawn in a short time. By the second or third season, if conditions are made favorable, white clover, rye grass, and redtop will be crowded out by the Kentucky bluegrass, fescue, or bent grasses. If the conditions are not favorable for bluegrass or other good grasses, the lawn will be better because a mixture containing clover is used. By proper fertilization a bent, bluegrass, or fescue lawn can be made practically to crowd out clover and the other nurse grasses.

To obtain a bluegrass lawn, a mixture of 6 parts Kentucky bluegrass, 2 parts redtop, 1 part perennial rye grass, and 1 part white clover is advisable. Use 3 to 4 pounds for 1,000 square feet of lawn.

If a red fescue lawn is desired, substitute fescue for the bluegrass in the above mixture and sow 4 to 5 pounds for 1,000 square feet.

A mixture suitable for shady places is: 3 parts of Kentucky bluegrass, 2 parts redtop, 2 parts Chewing's fescue, and one part white clover. Sow at the rate of about 4 pounds for 1,000 square feet of lawn.

If a creeping bent grass lawn from seed is desired, a mixture of bent grass seed, 2 parts; redtop, 4 parts; and white clover, 1 part, may be used. Sow at the rate of  $2\frac{1}{2}$  to 3 pounds for 1,000 square feet of surface. South German bent is good, but expensive. Seed sold as South German bent is a mixture of about one-tenth true creeping bent and the remainder Rhode Island bent and other grasses. In the course of two years after seeding, the creeping bent in the mixture crowds out most of the other grasses. Rhode Island bent seed may be used in the above mixture. There are also two other bents, varieties from the Pacific Coast, that are real creepers. One is marketed under the name Cocoos, or Seaside, bent; the other as Astoria bent, or Golfalawn. The former is considered a variety of the true creeping bent and the latter is a strain of the Colonial bent. Seed of these can be readily obtained.

However, a better bent lawn can be obtained by seeding pure bent seed rather than a mixture; or at least by omitting the redtop from the mixture. If pure bent seed is used, sow 3 pounds per 1,000 square feet.

### USE OF STOLONS FOR A BENT GRASS LAWN

When the strongly creeping bents are used for obtaining a lawn, stolons rather than seed are usually employed. These stolons are the creeping stems of the grass which grow out in all directions from the parent plant. These stolons have numerous joints (nodes); when cut into pieces of one to two inches in length each piece will produce new roots and a new plant if given proper growing conditions.

The soil for sowing stolons is prepared in the same manner as outlined above for sowing seed. In sowing, it is better not to try to plant the whole area in one operation, as the stolons would dry out before being covered. Mark the lawn off into areas approximately 10 feet square, fully planting each area before proceeding with the next. Broadcast the stolon pieces evenly over the area. Sow the stolons thick enough so that the pieces touch each other. A square foot of bent grass sod, after being torn up, should cover 8 to 10 square feet of lawn surface. It is desirable, if possible, to roll the stolons before covering them. Then cover with compost, well sifted, to a depth of not more than half an inch. Then roll again and water well to prevent drying out. If dry weather follows, water the lawn lightly twice a day for a week or two. If the weather is not bright and dry, once a day will be sufficient. Within a week, the lawn will begin to show green and in three weeks will be well covered.

A bluegrass lawn can be changed to a bent lawn by the method known as plugging, without the necessity of respading or destroying the bluegrass. Plugs of bent grass sod two or three inches in diameter are inserted at intervals about a foot apart in the bluegrass lawn. After a year or two the bent has spread so much that the bluegrass is largely or entirely crowded out and an almost pure bent lawn results.

A creeping bent lawn requires frequent top dressing with compost. Twice a year is the minimum if a good lawn is desired, and three or more times per year is better.

**Nursery propagation.**—If but a small quantity of creeping bent is bought and one does not mind waiting until sufficient material has accumulated, propagation in nursery rows may be practiced. To do this, the land should be plowed and worked thoroly and all weeds removed. Mark out as many rows as may be thought necessary, remembering that one square foot of good young bent sod will, when pulled apart, plant a nursery row 100 feet in length. The rows may be three or more feet apart according to the land at one's disposal. Six or 7 feet apart is necessary if it is to be occupied for some time and more than one strain of bent is to be grown. After marking out, draw a hoe through the soil to a depth of not more than  $1\frac{1}{2}$  inches, lay the pieces or stems in the trench, allowing the ends to overlap somewhat, and then cover with soil. The tips of each piece should be drawn up slightly and not covered, as the leaves will be of greater use to the plant above ground than below.

As the growth is made, top dressing with soil from the compost pile must be applied. "Little but often" should be the rule. Half an inch is quite sufficient at one time. Roll and water thoroly, keep the surrounding soil well cultivated, and the whole plot weeded. The greater the attention to cultivation, top dressing, rolling, and watering, the more rapid will be the growth of the stolons. Nursery rows planted at the end of April have made a growth of from 4 to 6 feet by September.

The lawn can be planted from this material in early September or it may be deferred until the following spring. To prepare the sod for planting, take it up, shake out the soil, and cut in pieces with a knife. An old lawn mower, with some of the blades removed and mounted on a table, will make a good chopper if considerable planting is to be done.

### FERTILIZING WITH COMPOST

The use of compost is one of the best methods to maintain a good lawn. It is composed of soil combined with some organic material, usually manure, and left to rot in a pile for several months.

The compost pile should be made on level ground, on soil heavy enough to prevent the liquid manure from leaching away. The heap

is made by piling alternate layers of soil and manure in a ratio of about 3 or 4 parts of soil to one part of manure. If the soil is heavy, it is advisable to add enough sand to make it one-third or more sand; if the soil is very sandy, it is advisable to add heavy clay. To secure the correct lime requirement use acid sand in preference to neutral. Compost should be thoroly rotted before it is used. There are several ways to hasten decomposition: (1) make the pile flat on top, or preferably bowl-like, to hold moisture; (2) if the manure contains much straw, add 100 pounds of ammonium sulphate per ton; and (3) keep the pile wet and at intervals chop down to admit air. Before using, chop finely and pulverize by passing through a  $\frac{1}{4}$ -inch sieve.

Top-dress the lawn with compost in late October, using about 1 cubic yard to 5,000 square feet of lawn. Roll and top-dress again in the spring, and in early June make another application of compost. Adding 15 pounds of ammonium sulphate to the amount of compost used to cover 5,000 square feet of lawn, promotes growth.

### FERTILIZING WITH COMMERCIAL FERTILIZERS

Unfortunately, in many localities it is becoming increasingly difficult to obtain manure for compost. Also, the small home owner often finds it difficult to maintain a compost pile. Consequently, the use of commercial fertilizers is increasing.

**Sulphate of ammonia** has proved to be one of the best commercial fertilizers for lawns. It furnishes only nitrogen, but as most of our soils apparently have enough phosphorus and potash for the growth of lawn grasses, it may be used alone, at least for a time. Sulphate of ammonia has an acid reaction on the soil, especially if used continually for several years. As all good lawn grasses, particularly bent grasses, grow well in acid soil and most weeds and clover do not, the continued use of ammonium sulphate will help to keep a lawn free from weeds and clover.

If sulphate of ammonia is used as a fertilizer, be sure that it is well soaked into the soil with water immediately after applying, to avoid burning the grass. It may be applied during a rain. The danger of burning often makes it advisable to use some of the combined fertilizers that have part of the nitrogen in a slowly available form. The rate of application of sulphate of ammonia is 3 pounds for 1,000 square feet of lawn surface. There should be three applications a year, one in early spring, the second in June, and the third after the rains begin in September. To obtain a more even application, mix it with three or four times its bulk of sand or dry soil.

**Nitrate of soda** contains about 16 per cent of nitrogen as compared to 20 per cent in sulphate of ammonia. It should be applied at



the rate of 3 pounds for 1,000 square feet of lawn. It is quickly available and must be washed into the soil immediately after applying, in the same manner as indicated for sulphate of ammonia. Its reaction is alkaline and tends to encourage the growth of weeds.

**Tankage** contains 6 per cent to 9 per cent nitrogen and 8 per cent phosphoric acid. It should be applied at the rate of 15 to 20 pounds for 1,000 square feet of lawn, depending on the analysis. The nitrogen in tankage costs more per unit than that of ammonium sulphate, and is less quickly available.

**Cottonseed meal** is a safe, complete fertilizer. It contains 7 per cent nitrogen, 3 per cent phosphoric acid, and 2 per cent potash. There is no danger of burning unless applied too heavily. Use at the rate of 15 pounds for 1,000 square feet of surface.

**Milorganite**, a sewage sludge product from Milwaukee, contains 6 per cent nitrogen and 2 per cent phosphoric acid. It is slightly acid, slow-acting, and safe to apply. Apply at same rate indicated for cottonseed meal. This is one of the best fertilizers for the home lawn.

**Sheep manure, pulverized**, is a well-balanced, slow-acting fertilizer. Apply at the rate of 25 to 35 pounds for 1,000 square feet of surface. The nitrogen in this fertilizer will cost much more per unit than that of sulphate of ammonia.

**Poultry manure, pulverized**, is similar to sheep manure, but higher in nitrogen. Use at the rate of 25 pounds for 1,000 square feet of surface. Heavier applications are likely to cause burning.

**Bonemeal** is sometimes used as a fertilizer. Its greatest recommendation is that it is safe. It is generally used in the "steamed bone" form, which has much of the fat removed. It contains about 1½ per cent nitrogen, 25 per cent phosphoric acid, and considerable lime. If used at all, it should be in conjunction with a quick-acting nitrogenous fertilizer, such as sulphate of ammonia. Because of its lime content, it tends to destroy the acidity of the soil and thus promotes the growth of clover and weeds.

### Combined Fertilizers

Most of the experimental work with lawn fertilizers at the Minnesota Experiment Station does not indicate the need of much potash and phosphoric acid. For this reason a combined fertilizer should be high in nitrogen. A good fertilizer is one having a formula of approximately 10-10-10, that is, of 10 per cent nitrogen, 10 per cent phosphoric acid, and 10 per cent potash. This should be applied at the rate of 6 pounds for 1,000 square feet of surface twice a year. A third application might well be sulphate of ammonia at the rate of 3 pounds for 1,000 square feet. Several brands of commercial fertilizer have a formula of about

4-8-4 or 5-10-4. These can be used at the rate of 15 pounds for 1,000 square feet, three times a year. Or, for one or two applications, a nitrogenous fertilizer such as ammonium sulphate or nitrate of soda may be substituted, using 3 pounds for 1,000 square feet.

Lime is seldom needed as a fertilizer, as most soils have a sufficient quantity for the best growth of grasses. On the other hand, the addition of lime is often a detriment as it decreases the soil acidity and tends to encourage the growth of weeds and white clover. Unless a soil is exceptionally acid it is usually unwise to apply lime.

### WEEDS AND OTHER PESTS

Weeds can be discouraged by making the soil somewhat acid and by using fertilizers high in nitrogen to promote a heavy vegetative growth of the grass. Heavy growth helps to crowd out most of the temporary weeds that appear in a new seeding and they disappear after the lawn has been mowed a few times. A few weeds, especially dandelions, plantain, yarrow, and crab grass, often persist as troublesome pests. Pulling the weeds by hand will help to control them. Crab grass, especially, should be kept pulled to prevent spreading and forming a dense mat that will smother the permanent grasses. Where it has become very thick, use an iron-toothed rake to pull up the creeping branches, so the mower will cut them. Then rake and cut in the opposite direction. What is left pull out by hand. Above all, fertilize the grass heavily with sulphate of ammonia or other nitrogenous fertilizer, using only two applications, one in early spring and one in late August. The early fertilizing encourages the bluegrass and the omission of the one in late June tends to starve the crab grass which does not germinate till mid-June.

Taprooted weeds like dandelions may be cut off low down with a long-bladed knife if they are not very plentiful. They may be destroyed by applying sulphuric acid to the crown. The bottle of acid should be placed in a wooden box. Dip an ice pick into the bottle and jab it into the crown of the dandelion, thereby killing the dandelion without injuring the grass. Be careful not to spill acid on the grass, hands, or clothing, as it will burn anything it touches.

The "Rattlesnake Fang Dandelion Killer," which injects a chemical into the crown of each dandelion, has recently been put on the market and is quite effective in killing dandelions and similar weeds.

**Dandelions** and other broad-leaved weeds can be greatly reduced in numbers by spraying with iron sulphate solution. Dissolve 1½ pounds of iron sulphate in 1 gallon of water and apply with a sprayer that makes a fine mist spray. Three gallons will cover about 1,000

square feet of lawn. It is more effective if applied just when the dandelions are budding. A second application ten days later will be valuable. After the spraying, the lawn will have a blackened appearance for several days, but if properly applied, the grass itself will not be injured greatly and will soon recover. Wash out the sprayer thoroly, as the iron sulphate solution has a corrosive action on metals.

**Earth worms** and grubs, larvae of various beetles, can be controlled by mercuric chlorid, 2 ounces to 50 gallons of water on 1,000 square feet of space; or lead arsenate, 5 pounds mixed with 25 pounds dry carrier or soil, sand, or organic fertilizer. Spread with fertilizer distributor. Earth worms are not often troublesome.

**Ants** often cause great damage to a lawn and are difficult to destroy. There are some commercial ant poisons and repellants that are effective. Large ant hills can be destroyed by carbon bisulfide. Holes, ten inches apart and six inches or more deep, should be punched in the hill and immediately surrounding it. Put one or two tablespoonfuls of carbon bisulfide in each hole and close it, using damp soil. Small colonies of ants can be eradicated by putting a few drops of carbon bisulfide into each hole. An oil can may be used for this purpose. Extreme caution must be taken that there is no fire or lighted cigar near where this liquid is used as it is more explosive than gasoline. It is likely to cause some injury to the grass and for that reason some poison is often preferable, such as the following: sodium fluoride 75 parts, fresh buhach powder 15 parts, and granulated sugar 10 parts. Mix the ingredients and sprinkle freely around the flower beds or ground where the ants are plentiful, when the ground is dry.

Another formula that depends upon a rather strong poison for its effectiveness is the following: sugar 1 pound, arsenate of soda 125 grams, water 1 quart, honey 1 tablespoonful. Dissolve the sugar in the water, then add the sodium arsenate. Boil the mixture until the arsenate is dissolved, then add the honey. Soak bits of sponge in this mixture and place it on shallow dishes. The ants will carry them into the hole. In this way, the whole colony, including the queen, may be poisoned. This mixture is poisonous and should be placed so that children, animals, and birds can not reach it. A commercial preparation called "Antno" often is effective in destroying ants on the lawn.

## DISEASES

Brown patch is the type of disease most likely to cause trouble.

There are two types of brown patch disease. One is called large brown patch, the infected area being from 4 inches to 18 inches in diameter; the other form is called small brown patch, in which the in-

fectured areas are the size of a silver dollar or smaller. This disease kills the foliage, turning it brown in patches, but does not kill the roots. It affects creeping bent, redtop, and fescue grasses, but not Kentucky bluegrass. One of the various mercury compounds, such as Semesan, calomel, or corrosive sublimate, may be used to control it. Semesan at the rate of 1 pound per 1,000 square feet has proved effective for both forms and does not burn the lawn. Corrosive sublimate (mercuric chloride) also controls both forms of the disease at the rate of 2 to 3 ounces per 1,000 square feet. On a small scale it should be mixed with moist soil or some form of organic fertilizer and allowed to stand over night before applying. It is deadly poison and care must be taken in its use. On a larger scale it may be applied with a fine spray, dissolving 1 ounce in 50 gallons of water. This amount should be applied to 1,000 square feet of lawn. A solution of  $\frac{1}{2}$  ounce to 50 gallons of water is often effective. Unless carefully applied it is likely to cause burning. During the hot part of the summer it may be advisable to make frequent applications at intervals of 7 to 10 days.

Calomel is most effective against the small brown patch. It is not so likely to cause burning. The rate of application is the same as that for mercuric chloride when mixed with soil and should be applied in the same manner.

### REJUVENATING AN OLD LAWN

When a lawn becomes poor and thin, either in spots or over its entire surface, it is often necessary to give it special treatment. In some instances, especially when the grass has been crowded out by taprooted weeds, the best plan is to spade the lawn, add manure or other fertilizer, and then seed it. It is often possible, however, to renew an old lawn by fertilizing and reseeding or often by an application of fertilizer alone. First make an application of sulphate of ammonia or a complete fertilizer. Then if the surface is irregular and full of pockets, apply a coating of soil or compost and rake over to fill all depressions; next sow a good lawn grass mixture and rake the seed into the soil. When the grass has a good start, make regular applications of commercial fertilizer. On lawns where the grass has been starved because of impoverished soil, often indicated by a heavy growth of moss, the use of sulphate of ammonia or a complete fertilizer will often bring it back to a healthy condition in one season. If the soil is very poor, a longer time is required to restore a good lawn surface. Continued applications of compost and fertilizer, or commercial fertilizer alone, will eventually build up a fine, even turf that will compare favorably with a lawn one or two years old.