



THE *Care* OF
SCOTTS BENTGRASS

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THE proper care of a Bentgrass lawn is very similar to that required for keeping lawns of other types in top condition. The main difference is in the height of mowing and the frequency of watering. These points are discussed in detail in following paragraphs. It is not so much extra work as an accurate knowledge of how and when to do a few things, that keeps a Bent Lawn continuously beautiful. In many ways a Bent Lawn is less trouble than other types of lawns. Weeds are less of a problem because of the thick solid turf, less reseeding is required and recovery from injury is much faster.

No Bentgrass lawn will require all the treatments set forth in this publication. It is intended as a reference manual for those who wish to be fully informed.

MOWING After a Bent lawn is established it requires mowing oftener than once a week in good growing weather. The rate of growth governs the need for cutting. When there is a half-inch or so of new growth, it is time to cut. There is no harm in even more frequent mowing. Some golf greens of Bent are mowed every day in order to keep a smooth putting surface. If it is desired to set up a definite schedule for a lawn this could well be every four or five days.

Close cropping is harmful to most grasses (LAWN CARE No. 54) but Bent-

grass thrives on it. The manner of growth is such that its spreading is encouraged and its texture made finer by clipping as short as $\frac{1}{2}$ to $\frac{3}{4}$ inch.



Most lawn mower companies have special models for cutting Bentgrass. These mowers have high speed cutting reels and seven blades to give the most even cut. In many instances, however, an ordinary five blade mower is used with satisfaction when adjusted to cut $\frac{3}{4}$ inch high.

It is well to begin mowing as soon as there is growth in the spring and continue as late as there is any growth in the fall. Clippings do not easily work down through a thick Bent sod but remain on top and discolor the lawn. They should be collected in a catcher or removed by a wood, bamboo or rubber rake.

If Bent should grow quite tall between mowings, do not try to restore the normal height in one mowing. Set the mower as high as possible for the

first cutting, repeat every day or two, gradually lowering the mower until the right height is reached. If this is not done the turf will show brown after cutting. It is best not to mow while the grass is wet. (See also **LAWN CARE** No. 54.)

WATERING The proper watering program for Bent differs little from that for regular grasses as described in **LAWN CARE** No. 60. More frequent sprinkling is required but the total amount of moisture necessary to keep the grass green all year is no greater. As the upper inch of soil dries, enough water must be applied to moisten it thoroughly. Moisture is used faster by Bentgrass because there is much more stem and leaf growth in the thick, solid turf it produces.

Except in very sandy soils, it is not necessary to water every day. In extremely dry weather two or three waterings a week may be called for. Adequate soil moisture helps keep grass fresh and sparkling by insuring a steady movement of water taken up by the roots, passed through the plant and transpired from the leaves.

Sprinkling may be done safely at any convenient time of day though it is probably better if the grass is not watered late in the evening. The use of a rotating or revolving sprinkler is better than trying to water by hand. The water must be applied no faster than the soil can absorb it because flooding is harmful to any lawn. Underground sprinkler installations are satisfactory for Bent if they are not over-used but it is so easy to turn on the water every day and just let it run that the tendency is to put on too much. Investigation reveals that cold water is not harmful to Bentgrass, and neither is the amount of purifying chemicals placed in city water systems.

FEEDING Bentgrass makes such vigorous growth that a regular feeding program is essential to replace the food



consumed. Scotts Turf Builder is the ideal food for a Bent lawn and should be applied at 10 pounds per 1000 square feet each spring, preferably in February or March before growth starts, and again in September. A light feeding of 5 lbs. per 1000 square feet is advisable in June if the grass appears to be losing color. The fertilizer should always be applied evenly and should be washed in well with the hose except when the ground is frozen.

USE OF LIME Bentgrass tolerates acidity, in fact it will thrive in soils too acid for other grasses. Generally there is no reason for being concerned as to whether the soil is alkaline or acid in reaction, unless there is reason to suspect excessive acidity. Evidence of this might be a shallow root system, lack of response to fertilizer or a continued lack of vigor.

The use of lime when it is not actually needed may encourage weeds and Clover. Either the soil should be tested or a trial application of lime made on a small area as suggested in **LAWN CARE** No. 48.

ROLLING There is only one time of year when any established lawn needs to be rolled and that is in early spring after frost is out of the ground.

Then a rolling is very important to press back into the ground surface runners and shallow roots which have been lifted by frost action. A medium weight roller should be used but not when the ground is soggy.

TOPDRESSING To produce thrifty perennials in the flower garden or make a success of vegetable growing it is necessary to follow a regular program of cultivation and mulching. It is not possible to cultivate a lawn, but a Bent-grass lawn or any other kind will be helped by an occasional treatment similar to mulching. This consists of topdressing the lawn with a $\frac{1}{4}$ inch layer of good screened soil or compost. This requires about 1 cubic yard (20 bushels) for each 1000 square feet. The grass is not covered but only the surface runners so they will be kept in contact with soil. A second benefit of topdressing is that it helps true the surface by filling in the low places.

There is a distinct difference between feeding a lawn and topdressing it. Fertilizer supplies needed food elements while the action of topdressing is to improve the physical growing condition at the surface of the lawn.

The ideal topdressing material is a friable loamy soil such as would make a good flower or vegetable garden. Compost is best and this can be made at home in a corner of the garden by allowing a mixture of soil, partially decayed organic matter and sand to decompose together. Some form of animal manure is possibly the best source of organic matter, but satisfactory substitutes include peat, mushroom soil, cultivated humus, muck, and sewage sludge. Grass clippings are usable but only after they are well on the way to decay. The proportions of raw materials will vary according to availability but an average formula

would be four parts soil, two parts humus and one part coarse sand. A few handfuls of Turf Builder and a little lime will hasten decomposition.

Any garden loam of good physical condition is a suitable substitute for compost although such soils are certain to harbor weed seeds. Sometimes spent bench soil is available from greenhouses. While plant food may be lacking in such soils it is easily provided by fertilizing the lawn. The important characteristic is good physical condition. Many reliable nurseries can supply suitable topdressing materials, some offering soil which has been made sterile of weeds by steaming.

Whatever topdressing is used should be screened through $\frac{1}{4}$ inch mesh screen. It is spread lightly over the lawn by various means. A careful workman can broadcast with a shovel. Another way is to dump the material in regularly spaced small piles on the lawn and then spread it out with the back of an iron or wooden rake. A flexible steel door mat, or other improvised drag can be used to level the soil and to work it down into the grass.

Topdressing may be applied any time during the growing season but fall is the best time considering that there will then be less trouble with weeds springing up from the topdressing material. It is best to topdress when the grass is reasonably dry and the job is easier if the lawn is mowed just before treatment.

Layers of any materials are to be avoided in lawn construction or maintenance. They act as an insulating medium preventing proper movement of air and moisture. Therefore topdressing with pure peat, muck or sand is never advisable. For further details about topdressing and compost see **LAWN CARE No. 46.**



RENOVATING Bent turf may get too thick for its own good and develop a loose matted growth because of high or infrequent cutting. Early evidence of such condition is when footprints do not readily disappear, and the turf shows brown after cutting because the stems are bleached for lack of sunlight. If not corrected the Bent may die out in spots.

A drastic but simple treatment is called for when this matting develops. The excess growth must be removed by vigorous raking. Use an iron rake to pull up the matted growth, then mow the lawn closely, catching the clippings. If necessary rake and mow from several directions to eliminate the excess growth.

It takes courage to do the job right, especially since the lawn will look sick a few days and friends will insist it has been ruined. To the contrary, if it is done at the right time the lawn will come back quickly and be more beautiful than ever.

After such severe combing the lawn must be topdressed to cover the exposed roots and runners and hasten recovery. A feeding is next in order unless already taken care of in the same season. A consistent watering program should follow.

While this renovation may be done any time during active growth, it is better to avoid the real hot weather when recovery will be slower. Late

spring is probably the least desirable time as Crabgrass and other summer weeds in the topdressing material might get a head start before the Bent has fully recovered.

BRUSHING The need for renovation and even topdressing may be practically eliminated by brushing with a stiff-bristle push broom or brush, once or twice a year. Such treatment will be especially effective if carried out at the beginning of growth each spring. Where a Bent lawn is so large as to call for a power mower, a revolving brush attachment can be obtained. The same brush can also be used for sweeping snow off sidewalks and drives in winter.

DISEASES and INSECTS

Any living plant is subject to attack by many insect pests and plant diseases. Those who have lovely flower gardens find it necessary to keep up a diligent fight with dust gun, sprayers, poison bait and other implements of war against plant enemies.

A Bent lawn is not as touchy as most ornamentals, but various disease and insect pests may attack any of the grasses at times. The result of a severe attack shows up conspicuously in a good Bent lawn because the blemish stands out so prominently in an otherwise perfect piece of turf.

In golf course parlance, the term "brown patch" is confined to a specific fungus disease which may attack any of the grasses under certain conditions. This disease is much more apt to develop on golf greens where growth is forced all through the playing season—an unhealthy stimulation not necessary for lawns. Before treating brown spots in a Bent lawn it is advisable to diagnose the damage and make the treatment called for.



Several different fungi attack grasses, causing varying degrees of damage, all of which eventually result in brown or dead looking spots scattered over the lawn. Their extent will be determined by many factors, one of the most important of which is temperature. These disease fungi are present in all soils but they are generally active only at temperatures above 85 degrees coupled with relatively high humidity.

Usually the fungi are most active during sultry nights. Their spores penetrate the grass blades and feed upon the cells, thereby causing their destruction. The first evidence of an attack can be seen in the early morning when the grass has a scalded darkened appearance. As the sun strikes the blades, they shrivel and soon become brown and dead looking.

Only the blades are attacked in the early stages of the disease, and the roots are not killed if the fungus is checked by a change in weather or by application of a fungicide.

A good golf course greenkeeper will avoid attacks or at least catch them in their early stages by regular applications of fungicides every week or two in hot, humid weather. A number of mercuric fungicides have been used successfully in the past, including *Calo Clor* (Mallinckrodt Chemical Co.) *Special Semesan* (Bayer Semesan Co.), *Barbak* (American Cyanamid Co.).

A non-mercury fungicide is available, called *Thiosan*, developed by the DuPont Company.

There are others generally sold by golf course supply houses. These are applied in dry form by mixing with sand or compost or sprayed on in a water solution. Whatever the method, it is important to follow directions closely in amounts used. An overdose or uneven application may result in severe burning.

For the convenience of owners of Bentgrass lawns, we have prepared convenient packages of fungicides mixed with a carrier of sufficient bulk to easily distribute over an area of 1000 square feet. Available from Marysville, Ohio, or Ridgefield, New Jersey.

If disease occurs it is well to apply a fungicide over the whole lawn as soon as possible to stop the spread of the injury. The treatment does not restore damaged grass but checks spread of the infection. Unless the attacks are very severe, roots in the soil will soon send up new blade growth and will creep in from surrounding plants to fill in the damaged spots. The process can be hastened by a vigorous brushing of infected spots, followed by a topdressing with screened soil.

PREVENTIVE TREATMENT Certain areas are much more susceptible to disease attack than others. Poor surface and underground drainage, poor air circulation because of thick shrub and tree growth are contributory to brown patch attacks. Where such conditions exist and previous experience indicates that attacks can be expected in hot, humid weather, it may be well to apply a preventive treatment of fungicide every two or three weeks during such weather in July and August. Effectiveness will be lessened if heavy rains immediately follow treatment.

SNOW MOLD After an open winter, some damage may show up in a lawn in the form of spots of dead, matted grass having a rather light bleached-out appearance. This is the result of an unusual fungus disease called Snow Mold, which develops only at temperatures at or near freezing and only in connection with excessive water, such as would be present at time of melting snow or where there is poor surface drainage.

Growth of this fungus is checked by a late fall preventive application of fungicide, as described for brown patch. (See **LAWN CARE** No. 77.)

INSECTS The appearance of small spots of dead or dying grass does not always indicate disease attack. At times insect pests such as Beetle Grubs or Chinch Bugs are responsible. It is well to investigate the possibility of such attacks.

As brought out in **LAWN CARE** No. 44, the grubs of Japanese, Asiatic and June beetles may cause damage in any kind of lawn because the grubs feed on grass roots. The source of such an infestation comes from eggs deposited in the soil by adult beetles in a previous season. These hatch into grubs that feed on grass roots until maturity. Their damage is most apt to show up in late summer or fall although they also feed in spring and early summer. Wherever a colony has been operating, the turf turns brown and can literally be rolled up like a rug because roots are completely severed.

See **LAWN CARE** for detailed instructions on poisoning soil against grub infestations.

Chinch Bugs are less generally distributed than Beetle Grubs but they

can cause a lot of damage in a nice lawn. They are very small insects, about $\frac{1}{8}$ inch long, black with white wings. They puncture the stems of grass and suck out the juices, causing the blades to wither and turn brown. The damage appears in irregular brown patches of dead grass with an edge of yellowing grass where the Chinch Bugs are actively working. Damage is most apt to appear in June or early July and again in August and early September. Chinch Bugs are controlled by means of suffocation by contact poison sprays or dusts as described in **LAWN CARE** No. 80.

Because of their tiny size, Chinch Bugs are difficult to find. They hide among the grass stems and on the ground. They are not active on dry, hot days.

Earthworms perform a valuable service in drainage and air circulation, but in certain seasons their operations may become objectionable because of casts formed on the lawn. If these casts are too numerous the activities of the earthworms can be controlled by one of the poisons described in **LAWN CARE**.

Ants may also become a nuisance and suggestions for getting rid of them are also given in **LAWN CARE**.

WINTER PROTECTION It is a mistake to cover any lawn, including Bentgrass, with a mulch of manure, straw or any other substance. Mulches may prove harmful by harboring insects and excluding air and the materials used are apt to contain weed seeds.

It is better to let Bent go into the winter rather closely clipped. Lawns that have previously proven susceptible to Snow Mold should be given a preventive treatment of fungicide as suggested on page 6.

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