

Lawn Care

REG. U. S. PAT. OFF.

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THE SCIENCE OF MOWING

MOWING lawns is a subject that has pleasant memories for only a small handful of people. To most of us there is something about a mower that resembles a ball and chain and brings to mind many a Saturday afternoon when freedom was suppressed.

But mowing should not be a drudgery. Anyone tied to the task may be in that position because he is practicing the wrong methods. Authorities recognize that mowing is a science, that here is one of the few phases of lawn maintenance where definite rules can be applied. Anyone can learn the rules.

Effect of Mowing

The principal purpose of mowing a lawn is to improve its appearance. Unless properly done, however, this improvement will only be temporary, for one thing is certain—how a lawn is mowed has much to do with its health.

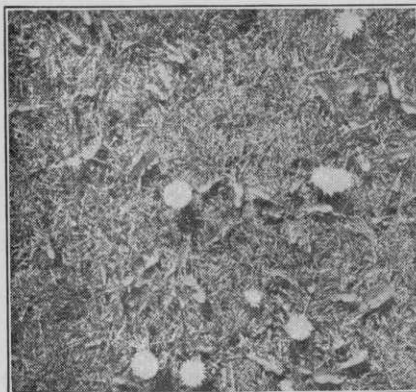
Like other living plants, grass is a factory that takes up food and transforms it into energy for growth. The green blades play a vital part in this transformation. How can grass thrive if its normal functioning is crippled by close cropping?

Continued removal of its foliage will eventually starve any plant. Close mowing has the same strangling effect on grass. Yet if mowing is neglected the grass becomes tall and spindly in an effort to reach the light. It forms a thin, weak covering instead of a thick sod.

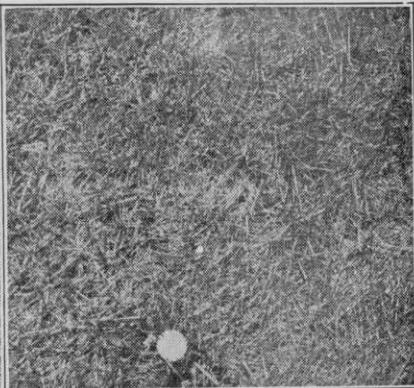
Somewhere between these two extremes lies the happy medium where mowing causes the least possible injury consistent with the desired appearance.

The Happy Medium

This medium is attained by cutting $1\frac{1}{2}$ or 2 inches high. At this length the turf will not suffer even from frequent



Mowed $\frac{1}{2}$ inch high



Mowed 2 inches high

These two lawns received identical treatment except for height of cut. Note the weak and weedy turf on the one which was cut closely.

cutting, and the grass tips can be kept uniformly trimmed so that the lawn has a neat, well groomed appearance.

This may not sound like high cutting. But if you examine your own mower you are apt to find it cutting only a half inch high, as most mowers do.

Benefits of Higher Cutting

Lawns maintained at the longer length provide a uniform color. Their beauty lies in the rippling sheen of the grass blades. Contrast this with the closely clipped lawn where most of the green blades have been removed. The yellowish stems are then exposed and the lawn takes on a parched and hungry appearance.

Taller grass also improves a lawn by minimizing the presence of weeds. It shades the surface soil and so prohibits the germination of many weed seeds. It also prevents weeds from overgrowing the desirable grass and smothering everything beneath them. Obviously, high grass forces weed leaves into an upright position where the mower blades can sever their seed heads and much of their foliage.

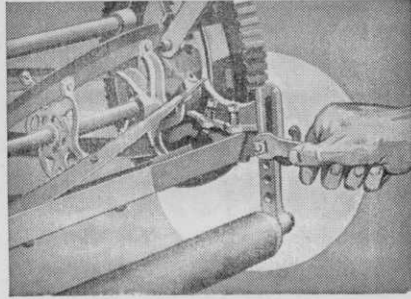
Aside from appearances, proper cutting has a lasting influence on the general health of the grass. There is a definite relationship between the grass growth above ground and that below ground. A longer topgrowth results in a more extensive root system. Such a root system is much to be desired because it is capable of reaching more moisture and absorbing more food. Taller growth also provides shade and so reduces evaporation of the soil moisture. In periods of drouth these factors may mean the difference between saving and losing the lawn.

In case of shaded lawns higher cutting is especially important because of the reduced volume of sunlight and competition from tree roots.

Adjusting the Mower

In only a few minutes' time your mower can be made to cut properly by

adjusting the wooden roller. Place the mower on a flat surface such as a walk or garage floor. Then loosen the side brackets at the end of the roller. As the roller bracket is extended downward the roller is lowered and the bed knife in front is tilted up. Measure $1\frac{1}{2}$ to 2 inches from the cutting edge of this bedknife to the floor and tighten the bracket bolts as shown in illustration.



Many mowers can not be set to cut high enough so it is necessary to obtain longer roller brackets from the manufacturer or have them made at a machine shop. Another solution is to wrap a $\frac{1}{2}$ -inch rope around the roller or replace it with one having a larger diameter.

The Mowing Schedule

The first spring cutting should be delayed until the grass has had an opportunity to do some growing. A large portion of the root system is regenerated every spring. Consequently by allowing more growth before cutting, the roots have more time to develop. This condition influences the grass for the rest of the entire season.

Cutting the grass every few days does no harm providing the height of cut is correct. Nevertheless, it is better to adopt a mowing schedule regulated by the amount of growth made, rather than by the calendar. Instead of mowing each Saturday, mow whenever the growth is one inch taller than when cut last. This will be more often during the moist, growing seasons, and less often during hot, dry weather.

At no time should grass be cut with a dull mower. It chews off the blades instead of shearing them cleanly and the resulting bruise gives a brownish cast to the lawn.

In the fall, plan to make the last mowing at such a time that further growth will take place before winter. A length of 2 or 3 inches is desirable and is all the winter protection a lawn needs.

Exceptions to Rule

A lawn of pure Creeping Bent is composed of an unusual type of grass, the nature of which is to make an extensive lateral growth. Because of this nature of growth it tolerates and even thrives under close clipping.

A second exception is the lawn infested with Crabgrass. After this pest starts producing seed heads, it is necessary to mow closely in order to remove as many of the low-lying seed heads as possible.

A third exception is the renovation of old lawns. If they are composed mostly of weeds and wild grasses, high cutting will not solve the problem. If they are going to be reseeded, close mowing is needed to reveal all the thin spots and permit a more unhampered growth of the new grass.

Mowing Terraces

In cutting the crown of a terrace, mow up and down the slope. Trying to cut crosswise will invariably leave the ridge scalped by the bedknife. Then it is only a question of time until the grass turns brown and is burned out.

Grass on terraces is often exposed to direct rays of the sun. Soil washes easily from around the grass crowns, exposing the surface roots. Here high cutting is doubly important. The taller grass will reduce soil washing and the evaporation of moisture.

Should Clippings Be Removed

One of the interesting wonders of a growing lawn is the enormous crop which it produces each year. The combined length of clippings removed from

a single blade of grass during the year may add up to the amazing total of 36 inches. Considering how closely together grass blades grow, the immensity of this crop is more apparent.

To produce such a harvest, there is a continual flow of food from the soil, through the grass roots to the blades which then are removed in mowing. No soil can long continue to yield so bountifully without replacing some of the fertility through the use of complete grass foods.

Contributing some small part of this replacement are the grass clippings left on the lawn. They work down to the ground and at least partially decay, thus liberating a portion of their food.

Greatest benefit of clippings, however, derives from the protection they afford. Acting as a mulch, they reduce evaporation from the surface soil, keeping it cooler and more moist.

But clippings can be detrimental, too. If wet, they will mat and cake, smothering the grass underneath them. If much over an inch long they do not readily work down through the grass. As they dry out, their brownish color dulls the lawn.

Everything considered, the disposition of the clippings is of secondary importance. The home owner can well follow his own preference as to whether he uses the catcher on his mower, rakes or sweeps the clippings, or simply lets them work down into the turf.

Mowing Rules

Although proper mowing can not be considered a cure-all for scraggly turf, much can be accomplished by following these simple rules: (1) delay the first spring mowing until the grass has made some new growth; (2) cut the grass at a minimum height of 1½ to 2 inches, using a sharp mower; (3) remove the clippings during wet weather and whenever they are heavy enough to mat; (4) stop mowing early enough in the fall to assure a growth of 2 or 3 inches for winter.

Grass Substitutes

NUMEROUS articles about a Utopian substitute for grass appeared last year in horticultural publications. These were interpreted none too authentically by the newspapers. Numerous inquiries have been received from home owners with regard to these plants. Lawn Care for September 1938 contained a short article about Camomile, one of the plants mentioned in the fantastic stories.

Since fall we have studied this subject thoroughly, consulting English and French references as well as contacting growers of rare perennials who have worked with these plants for many years in their nurseries.

The facts brought to light entirely refute the claims of popular feature writers that these special plants will make good lawns with less care than grasses. The opposite is true. They require watering, mowing and special care to greater extent than grass and for this labor do not make attractive lawns. They may be used as ground covers under certain circumstances but only where a qualified landscape architect or nurseryman recommends them.

Centuries Old

At least one of the plants receiving so much publicity as being new was commonly used centuries ago. The flowering perennial Camomile was used by the nobles of France and England for turf purposes as far back as the Sixteenth Century before they discovered the superiority of our present turf grasses. Grass has actually replaced these ancient ornamental plants rather than being supplanted by them.

Miss Elizabeth Wilson, turf authority at the University of California, writes: "There is no substitute for grass, in my opinion. There is no point at all in using ground covers that actually become undesirable from one standpoint or another in the course of two years."

Dr. John Monteith, Jr., a leading authority associated with the United States Department of Agriculture, recently wrote about Turfing Daisy: "Although under very limited conditions it [Turfing Daisy] may produce good turf, it can in no way be considered as a satisfactory substitute for grass." (Turf Culture, January 1939)

Possible Ground Covers

The four most talked of plants suggested as grass substitutes are: Camomile, Sandwort or Arenaria, Turfing Daisy, and Pearlwort.

CAMOMILE (*Anthemis nobilis*) is the name sometimes given to the plants of the Yarrow

(*Achillea*) family because it has a leaf closely resembling that of Yarrow. Its appearance in turf is distinctly that of a weed. Although soft and fragrant it is untidy and weak and will not tolerate shade. It dies back every winter.

Growers of Camomile advise that it must be mowed as regularly as grass because it naturally grows tall and produces many daisy-like blossoms. Left to grow naturally it becomes very untidy. It must be frequently rolled and mowed to produce a turf anything like grass. Camomile can be started from seed or nursery grown stock. The seed costs about \$16 per pound and germination is very uncertain.

SANDWORT (*Arenaria balearica*) has a good green color and attractive foliage. The fine leaves are rather fleshy and have a smooth surface. They grow about one inch long except for the seed stalks which shoot up several inches. Plantings of Sandwort must be kept mowed in order to remove these seed stalks. This plant prefers sandy or well-drained soils.

TURFING DAISY (*Matricaria tchihatchewi*) is a flowering perennial, covered with little white-rayed "daisies." It is most attractive as a border or edging plant.

It is a possible ground cover for hot, dry embankments but it is soft and will not stand the wear of walking and play.

As is the case with the other so-called grass substitutes, lawn enthusiasts will be sorely disappointed if they expect Turfing Daisy to grow in conditions where they have been unable to get a good stand of grass. It will not survive much shade and requires a long time to recover from excess moisture.

The only practical way to get a stand of Turfing Daisy is by transplanting young plants. These are very expensive. They are quoted by a large nursery at \$5.00 for enough to plant a space ten feet by ten feet. That means a cost of \$250.00 for an average sized lawn of 5000 square feet.

PEARLWORT (*Sagina procumbens*) is practical only in hot, humid climates. To maintain Pearlwort at its best it is necessary to water freely. Its soft spongy growth is a haven for moisture-loving pests such as grubs, moths, beetles and sow bugs.

The United States Department of Agriculture in Washington or your State Experimental Station will have up-to-date information on any new discoveries in grass or grass substitutes. They operate an unbiased proving ground for all lawn materials.



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