

## Mowing A Lawn

By Thomas M. Smith, Greg Patchan, Kenyon T. Payne, and John E. Kaufmann  
Department of Crop and Soil Sciences

Proper mowing is important for maintaining a healthy, well groomed lawn. Mowing should provide a uniform, aesthetically pleasing surface, while improving the density of the turfgrass stand by increasing the development of tillers and leaves. Although high density discourages weed invasion, the actual mowing process also inhibits development of many weeds.

### Height of Cut

Turfgrasses are well adapted to frequent mowing, if not cut too short. The grass blades manufacture carbohydrates for the entire plant. When leaf surface area is reduced, a lower level of carbohydrates will be produced. As cutting height is lowered, the root system of the plant is reduced. With a reduced root system, the plant takes up smaller amounts of water and nutrients. A compromise must be reached where the area still looks well-groomed and dense, and is also healthy and actively growing.

The turfgrass species and cultivars growing in the area are the most important factors to consider when selecting the height of cut. For example, creeping bentgrass has many of its leaves oriented horizontally. At low heights of cut (under 1/2 inch) creeping bentgrass produces adequate leaf tissue to support the rest of the plant. This allows for shorter mowing such as practiced on a golf green. Kentucky bluegrass, fine-leaved fescues, and improved perennial ryegrasses have a more upright growth habit. These lawngrasses should be cut between 1 1/2 and 2 1/2 inches for maximum health of the grass plants.



Infrequent mowing shocks the grass and leaves excessive clippings that must be removed.

At higher cuts, lawngrasses also will be more stress tolerant. There is little need to vary the cutting height during the summer or prior to winter. Shady areas should be mowed at 2 1/2 or 3 inches to obtain the maximum leaf surface.

### Mowing Frequency

A general "rule of thumb" in determining mowing frequency is never to remove more than 1/3 of the total leaf surface at any one mowing. This may require mowing twice a week in the spring, every two weeks in the summer and once a week in the fall. If more than 1/3 of the total leaf surface is removed, the grass may be stressed. Scalping may occur if most of the green leaf area is removed. When scalped, the lawn

will appear brownish or yellowish because all that remains are the stemmy parts of the plant. If an area is scalped too frequently, the grass may die. Scalping often occurs on uneven lawn areas and rolling terrain.

### Clipping Removal

Excessive accumulation of clippings from infrequent mowing may shade and smother the grass if not removed promptly. When the lawn is mowed frequently, with less than 1/3 of the total leaf surface removed, grass clippings can be left on the lawn. Grass clippings are made up of leaf blades that contain mostly water. Clippings break down very rapidly and do not contribute significantly to the thatch layer. By re-

turning grass clippings, nutrients in the leaves are recycled, and therefore reduce fertilizer needs of the lawn.

It may be desirable to remove clippings in some circumstances. On golf putting greens or around swimming pools, clippings may interfere with putting or may get into the pool. Evaluate the particular use of the turfgrass area to determine whether clippings will interfere with the planned use. In most cases, clippings can be returned without problems.

## Mowing Equipment

The key to a quality cut is to use sharp, well adjusted mowers. Dull, poorly adjusted equipment tears rather than cuts the grass, leaving a ready site for disease invasion and giving the lawn a frayed, brownish look. The mowing direction should be varied each time to distribute the wear pattern. The grass should not be wet when mowing. Dry grass will cut more cleanly, and the clippings will tend to disperse rather than clump up and clog the mower. The rotary mower and reel mower are the two most common designs of mowing equipment. Each has its advantages and disadvantages, although the rotary mower is much more commonly used.

Rotary mowers are less expensive and easier to maintain than reel mowers. Rotary mowers readily cut coarse grass or tall weeds, and the simpler design requires less adjustment for proper operation. Any mower is dangerous and care should be taken to keep feet and hands away from the blades. Rotary mowers can discharge rocks, glass and other debris. Be certain the lawn is cleared of all debris prior to

mowing. Dull rotary blades will still cut the grass, but should be kept sharp for best results. Blades are easily sharpened and should be ground several times a season. It is important that the blade be balanced following sharpening. Sharp blades permit cutting at the lower speeds which improves the safety and energy efficiency of the mower. A mulching mower is a type of rotary mower that finely chops the clippings. The finer clippings filter down through the grass to the soil-thatch surface where they rapidly decompose. Mulching mowers also pulverize a light covering of leaves, adding some extra nutrients to the soil.

Reel mowers are most effective for high quality turfgrass areas. When properly adjusted, a very high quality cut is possible. Reel mowers are more complex to maintain and operate than rotary mowers. Frequent mowing is necessary because reel mowers will not effectively cut tall grass. A light, uniform contact between the bed-knife and reel must be maintained. This is a critical adjustment that should be checked before every mowing. Reel mowers require professional sharpening at least once per year, and more frequently if the blades are damaged.

The plastic string trimmer is another type of mowing equipment. Electric or gasoline units are available. Trim-work is easy with string trimmers. Whirling plastic twine cuts the grass around trees, fences and other hard to reach areas. Most models designed for the homeowner operate at low enough speed to prevent any type of serious injury. Goggles are recommended, especially when using heavy duty, industrial models. The nylon string

can injure the lower trunks of small trees with thin bark and shrubbery, so care should be exercised.

The edger is another common lawn maintenance tool. Gas, electric or manual types are used to form a clean edge between walks, drives, curbs and the lawn areas. A vertical, rotating blade provides the cutting action.

## Mower Safety

Mowing should be done regularly and carefully to protect the health of the grass and the safety of the operator. The following safety tips should be observed:

- pick up all debris before mowing
- keep children or pets away from mowers
- wear sturdy shoes; tennis or jogging shoes provide little protection
- wear long pants to prevent debris from hitting the legs
- always push the mower
- be familiar with the control and operation of the mower
- never put hands or feet near the discharge when the engine or motor is running
- be sure feet are away from the mower blade when starting the engine
- refuel the mower only when the engine is shut off and is cool
- clean and maintain the mower with the spark plug wire detached
- wear goggles when operating string trimmers or power edgers
- operate at low speed whenever possible to conserve gas and improve safety
- don't leave a running mower unattended.

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