

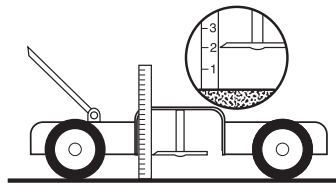


# Turfgrass

## Mowing

### Ranking of Tolerance to Short Mowing

Bentgrass	Best
Bermudagrass	
Zoysiagrass	
Buffalograss	
Ryegrass	
Bluegrass	
Fine fescue	
Tall fescue	Least



Check the cutting height on a sidewalk or drive.

Successful turfgrass culture requires appropriate mowing practices. Mowing affects turf density, vigor, water consumption, weed infestation, and resistance to weather stress. There are several aspects of mowing to be considered:

- Mowing Height
- Mowing Frequency
- Clippings
- Sharp Blade
- Mower Operation
- Mowing Pattern
- Mower Maintenance
- Mower Safety
- Mower Selection

In order to have an attractive and healthy turf, it is important to mow at the correct height and frequency.

### Mowing Height

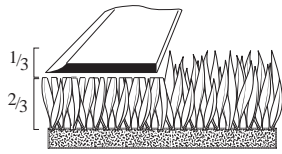
Optimal mowing height depends upon the type of grass, its use and the time of year. Only one-third of the grass leaf should be cut at a time. Cutting off more than one-third of the leaf will result in physiological stress and possible heat or cold injury.

### Mowing Frequency

Mowing frequency depends upon mowing height. The shorter the grass is mowed, the more often it must be done. A mowing schedule should be determined by the growth rate of the turf, which varies with the season and weather. In the spring, cool-season turf growth rate is fast, in the summer it is slow, and in the fall it is intermediate. In contrast, warm-season turf grows fastest during the summer. It is important not to mow with the same frequency all season. The amount of clippings left on the turf also is determined by mowing frequency. The longer between mowings, the more likely clippings will have to be picked up.

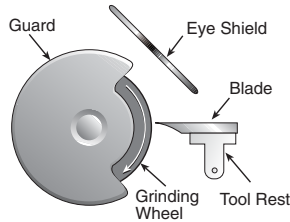
### Recommended Mowing Heights

	Residential Lawns	General		Golf Courses		
		Grounds	Fields	Sports Greens	Putting Tees	Fairways
Bermudagrass	1–2 inch	1½–2 inch	¾–1½ inch		½–⅝ inch	¾–1 inch
Buffalograss	1 ½–3	2–3	1½–2		1	1–1½
Zoysiagrass	1–3	1½–3			½–⅝	¾–1
Creeping bentgrass				⅛–⅕	¼–½	½–¾
Kentucky bluegrass	2–3	2–3	1½–2		¾–1	¾–1
Perennial ryegrass	2–3	2–3	1½–2		⅝–1	⅝–1
Blue/rye mix	2–3	2–3	1½–2		⅝–1	⅝–1
Tall fescue	2½–3½	2½–3½	2–3			



Don't cut off more than one-third of the grass.

*How to sharpen a blade*



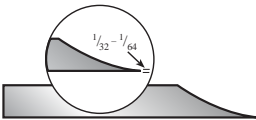
Step 1. Remove nicks from blade.



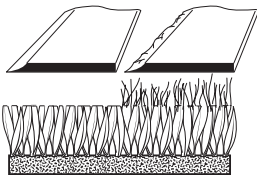
Step 2. Match blade cutting edge angle to wheel. Grind cutting angle.



Step 3. Balance blade. Grind heavy end.



Properly sharpened blade



Sharp blades cut cleaner, quicker, and require less energy.

**When to Mow**

Your Mowing height	Mow when grass gets this tall	Amount of grass removed (one-third)
1 inch	1 1/2 inch	1/2 inch
1 1/2	2 1/4	3/4
2	3	1
2 1/2	3 3/4	1 1/4
3	4 1/2	1 1/2
3 1/2	5 1/4	1 3/4
4	6	2

**Clippings**

Clipping removal is largely dependent upon mowing frequency. If the area is mowed often enough, the short clippings will filter into the turf, and removal is unnecessary. However, if the grass is cut when tall, clippings should be removed. Long clippings stay on top of the turf excluding sunlight and favoring disease development. By keeping the grass cut frequently, clippings will not have to be bagged, and mowing can be done in a third less time.

Clippings do not contribute to thatch because they contain 85 to 90 percent water. Clippings are composed of tissue that shrinks and decomposes readily. When clippings filter down onto the soil, they return about 25 percent of the nitrogen applied as turf's fertilizer.

When mowing without a catcher, it is a good practice to mow in a clockwise direction, throwing the grass away from the building, walks, and drive. After several passes throw the clippings away from the uncut grass by mowing counterclockwise. Remember to remove clippings from hard surfaces such as sidewalks and drives. A blower works well for this job.

**Sharp Blade**

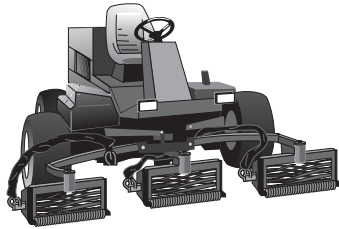
Having a sharp blade to mow the grass is important. A dull blade will tear and chew at the turfgrass, resulting in a whitish cast to the lawn shortly after mowing. With a sharp blade, the mower is more efficient and uses less power. A reel mower requires special equipment and a trained person before it can be sharpened. However, a rotary mower blade can be sharpened easily.

**Steps for Sharpening a Rotary Mower Blade**

- Check the blade for damage.
- A new blade is needed if damage is irreparable.

**Process for Sharpening**

- Clean the blade.
- Remove nicks from the cutting edge.
- Match existing edge angle to the grinding wheel or set desired angle.
- Grind until the edge is 1/32 inch; this is the size of a period.
- Do not overheat blade; it ruins its temper and durability.
- Sharpening can unbalance a blade.



*Golf course greens mower*

### **Balancing a Blade**

- Place the blade on a balancer after the first grinding.
- Regrind heavy end's cutting edge or grind off the outer end of the blade tip and recheck balance.
- Balancing takes about three checks and two correction grindings.

### **Mower Operation**

Operate the mower at a safe speed of 3 to 5 mph. This will cut the grass cleanly and thoroughly. Excessive speed causes the mower to bounce and cut unevenly. Slow down when making sharp turns to avoid damaging the turf. Make wide, gradual turns when possible.

### **Mowing Pattern**

Establishing a mowing pattern is important because grass blades tend to lean in the direction of mowing. Patterns should move at different angles each time the turfgrass is mowed. Mowing from a different angle each time reduces soil compaction and turf wear from the mower wheels. Also, use patterns with as few turns as possible. This will decrease mowing time, and reduce turf damage from mower wheels.

### **Mower Maintenance**

As with any machine, proper maintenance is a must. A properly maintained mower lasts longer and mows more efficiently. Always, at the end of each day's work, clean and check the mower. Never use a dull blade. Remove excess dirt and grass from mower housing so the debris does not dry and become hard to dislodge. Regularly clean the air filters, check all fasteners, guides, and parts according to manual. When filling up with gas avoid spilling it on the mower. At the time of refueling, also check the oil level, and wipe excess oil from the engine.

### **Mower Safety**

Power mowers can be dangerous and cause serious injury. Become familiar with the equipment, use common sense, and be safety minded. Be sure to read safety instructions provided with the machine.

#### **What to wear**

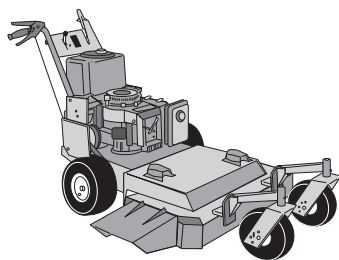
- Full-length jeans or slacks.
- Safety glasses.
- Ankle-height shoes with slip-resistant soles.

#### **Before you mow**

- Know the controls.
- Know how to quickly stop an engine in an emergency.
- Clear turf of sticks, stones, wire, and debris.
- Be sure all safety features are operational.

#### **While operating a mower**

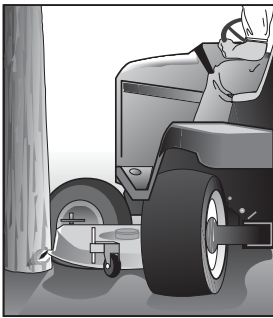
- Keep feet away from blades at all times.
- Always push the mower rather than pull.
- Watch footing on steep slopes and wet grass.
- Refuel the engine only when it is shut off and cool.
- Stop engine and disconnect spark plug wire before working on mower engine or blade.



*Commercial, self-propelled, rotary, walk-behind mower*



*Commercial, riding, 3-unit, rotary mower*



*Don't bump the tree.*



*String trimmer*

**Mower Selection**

Select a mower large enough to mow the turf in a reasonable amount of time, but small enough to be maneuverable. Be sure the mowing height is adjustable within the range recommended for the grass going to be cut. Select an engine with sufficient power and check on availability of parts and service.

Two basic types of mowers are used in cutting turfgrass: the reel mower and the rotary mower. Both types have certain advantages as well as some disadvantages. The reel mower produces a smooth cut, runs quietly, is more energy efficient, usually doesn't scalp on uneven ground, and doesn't throw hard objects. It is especially good for close-cut turf (1 inch or less). Disadvantages of a reel mower is, it won't cut high grass or weeds and has special sharpening and maintenance care. Rotary mowers cut high grass and weeds and are easy to sharpen and maintain. Disadvantages of rotary mowers are: they can be dangerous, noisy, take more power, and may scalp uneven close-cut turf.

**Bumping trees**

Bumping young and thin-barked trees with a lawnmower causes serious injury, reducing growth and vigor of the tree. What seems like only a minor bruise later enlarges into a deep wound destroying the cambium (growth) tissue just under the bark. Bumping the tree each time the lawn is mowed may result in eventual death of the tree. Maintain a cultivated or mulched area 1 to 1½ feet in all directions from the trunk, so there will be no need to mow close to the trunk.

String trimmers can also injure young and thin barked trees if not used carefully. Use mulch or chemical edging next to tree trunks.

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