



Successful turfgrass culture requires appropriate mowing practices. Mowing affects turf density, vigor, water consumption, weed infestation, and resistance to stress from weather. Key aspects of mowing for turfgrass professionals to consider:

- Mowing height
- Mowing frequency
- Clippings
- Blade sharpness
- Mower operation
- Mowing pattern
- Mower maintenance
- Mower safety
- Mower selection

Mowing Height

For an attractive and healthy turf, it is important to mow at the correct height and frequency. Optimal mowing height depends on the type of grass, use and the time of year. Only one-third of the grass leaf should be cut at a time. Removing more than this results in physiological stress and possible heat or cold injury.

Mowing Frequency

Mowing height determines mowing frequency. Shorter grass needs to be mowed more often. Do not mow at the same frequency throughout the season. The mowing schedule is based on the growth rate of the turf, which varies with the season and weather. Cool-season turf grows fast in the spring, slow in the summer, and moderately in the fall. Warm-season turf grows fastest during the summer. Mowing frequency determines the amount of clippings left on the turf. The longer between mowings, the more likely you will need to pick up clippings.

Clippings

If an area is mowed often enough, short clippings filter into the turf and do not need to be removed. 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 cutting the grass frequently, you can avoid bagging and finish mowing in a third less time. Clippings do not contribute to thatch because they contain 85 to 90 percent water and are composed of tissue that shrinks and decomposes readily. When clippings filter down to the soil, they return about 25 percent of the nitrogen applied as 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 purpose.

Ranking of Tolerance to Short Mowing

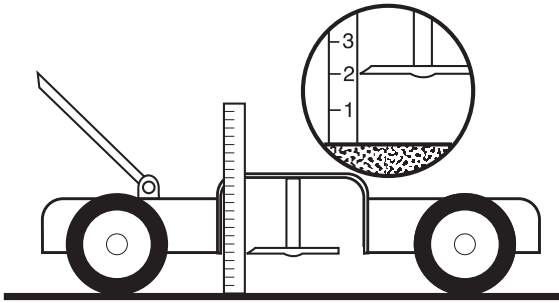
Bermudagrass	Best
Zoysiagrass	
Perennial ryegrass	
Buffalograss	
Kentucky bluegrass	
Tall fescue	Least

Recommended Mowing Heights

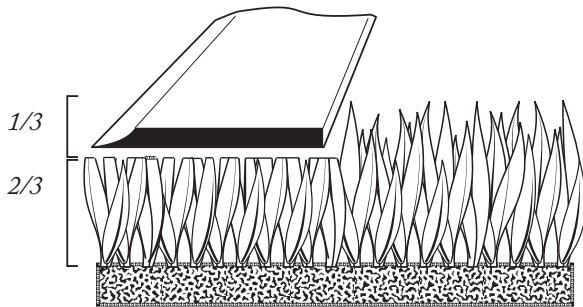
	Residential Lawns	General Grounds	Sports Fields	Golf Courses		
				Putting Greens	Tees	Fairways
Bermudagrass	1–2 inch	1½–2 inch	¾–1½ inch		½–⅝ inch	¾–1 inch
Buffalograss	1 ½–3	2–3	1½–2		1	1–1½
Zoysiagrass	1–3	1½–3			½–⅝	¾–1
Creeping bentgrass				⅛–⅕	¼–½	½–¾
Kentucky bluegrass	2–3	2–3	1½–2		¾–1	¾–1
Perennial 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			

When to Mow to Remove One Third

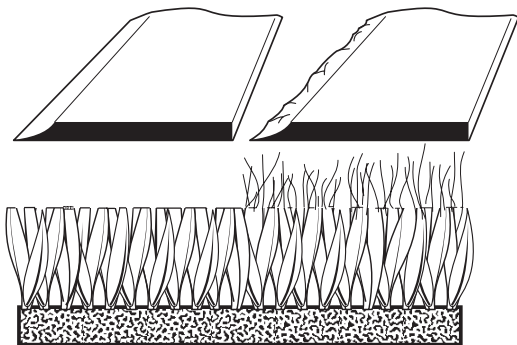
Your mowing height	Mow when grass gets this tall	Amount of grass removed (one-third)
1"	1½"	½"
1½"	2¼"	¾"
2"	3"	1"
2½"	3¾"	1¼"
3"	4½"	1½"
3½"	5¼"	1¾"
4"	6"	2"



Check the cutting height on a sidewalk or drive.



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



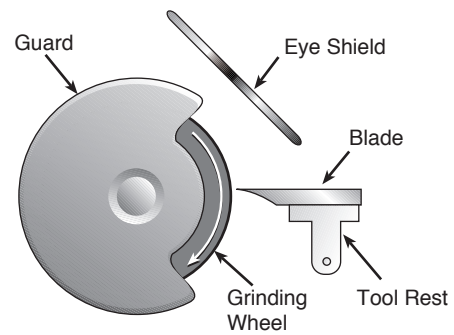
Sharp blades cut cleaner, quicker, and require less energy.

Sharp Blade

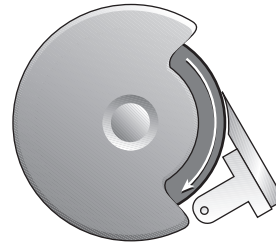
A sharp blade is important. A dull blade tears and chews at the turfgrass, resulting in a whitish cast to the lawn shortly after mowing. With a sharp blade, the mower is more efficient and uses less power. A reel mower requires special equipment and requires training to sharpen. A rotary mower blade can be sharpened easily.

Steps for sharpening a rotary mower blade

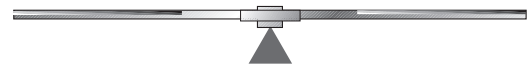
- Check the blade for damage.
- A new blade is needed if damage is irreparable.
- Clean the blade.
- Remove nicks from the cutting edge.
- Match existing edge angle to the grinding wheel or set desired angle.
- Grind until the edge is 1/32 inch.
- Do not overheat the blade as this ruins its temper and durability.



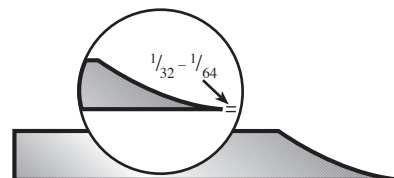
Step 1. Remove nicks from blade.



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



Step 3. Balance blade. Grind heavy end.



Properly sharpened blade

Balancing

- Sharpening can unbalance the blade. Place the blade on a balancer after the first grinding.
- Regrind the cutting edge of the heavy end 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 cuts 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. Refer to owner's manual for specific maintenance schedules.

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.
- Hearing protection.

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

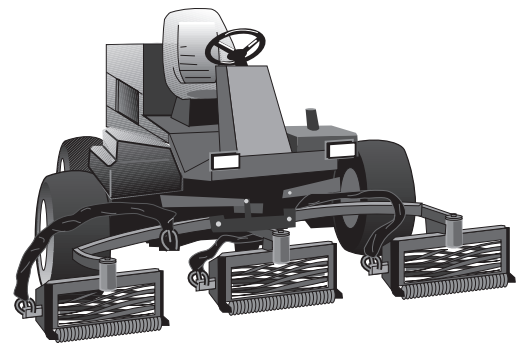
- Keep feet away from blades at all times.
- Always push the mower rather than pull.

- Watch your footing on steep slopes and wet grass.
- Refuel the engine only when the mower is shut off and cool.
- Do not refuel the engine in turf areas.
- Stop the engine and disconnect the spark plug wire before working on the mower engine or blade.

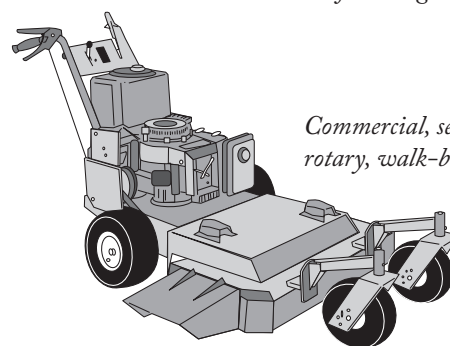
Mower Selection

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 for cutting turfgrass: the reel mower and the rotary mower. 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). A reel mower is more commonly used on golf courses and closely mown sports fields. A reel mower will not cut high grass or weeds and requires special maintenance, sharpening, and care. A rotary mower will cut high grass and weeds and is fairly easy to sharpen and maintain. Rotary mowers can be dangerous, noisy, take more power, and can scalp uneven close-cut turf.



Golf course greens mower



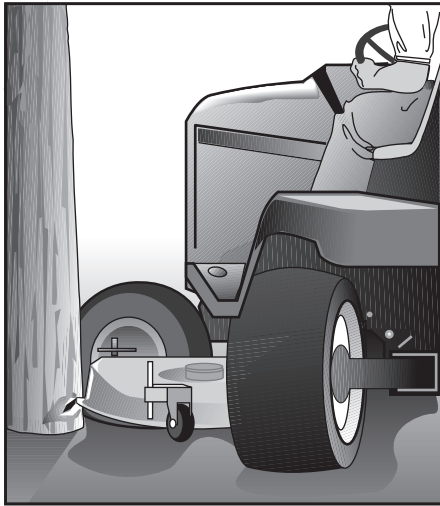
Commercial, self-propelled, rotary, walk-behind mower



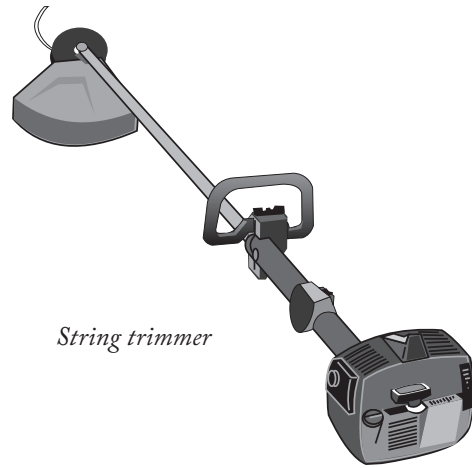
Commercial, riding, 3-unit, rotary mower

Bumping trees

Bumping young and thin-barked trees with a lawnmower may cause serious injury, reducing growth and vigor of the tree. What seems like only a minor bruise can enlarge to a deep wound destroying the cambium (growth) tissue just beneath the bark. Bumping the tree each time the lawn is mowed may eventually kill the tree. Maintain a cultivated or mulched area 1 to 1 1/2 feet in all directions from the trunk, so there is no need to mow close to the trunk. String trimmers can also injure young and thin barked trees if used carelessly. Use mulch or chemical edging next to tree trunks.



Don't bump the tree.



String trimmer

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