

Keep Mowing a Cut Above



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What you should know about the highs and lows of cutting turfgrass



The type of blade used (high-lift, low-lift, etc.) can be tailored to particular mowing conditions. Grasshopper's GrassMax blade system (shown here), for example, lets operators customize their blade for best results.

One size does not fit all when it comes to commercial mowing. For best results and maximum efficiency, the type of mower used must be tailored to a particular site. Likewise, many factors, including turfgrass species, site utilization, mowing frequency, weather conditions and budget constraints largely determine mowing height. Fortunately, most late model mowers make changing heights quick, allowing the operator to customize the height of cut practically on the fly.

The Grasshopper Company, for example, offers different height-adjustment systems on its mowers, all designed to allow quick, convenient changes on-the-go with only one hand. "Using two hands to change cutting height requires more 'stop' time and more effort for the operator," says Trent Guyer, product information specialist. "Sometimes various cutting heights are required on the same property. For example, certain parts of a property may have tree roots or uneven ground which may necessitate a higher cutting range. Cutting-height-on-the-go is the efficient way to address this need."

He adds that making it easy to change mowing heights will make it more likely that crews make the change when needed, helping to improve the overall finished result of the mowing job. "Especially when multiple crews are operating the mowers, site managers want to know the operators are changing cutting height as often as necessary to optimize the appearance of the lawn. In the face of time constraints and busy schedules, Grasshopper believes the easier it is to adjust the cutting height, the more likely it is to get done," says Guyer.



John Deere's Z900 series is an example of mowers that offer an easy cut-of-height adjustment mechanism, an important consideration for operators caring for turf on a variety of different sites and conditions.

PHOTO COURTESY OF JOHN DEERE.

Check out ease of use

Chris Russell, product manager for commercial mowing with John Deere, advises lawn care pros working on sites where frequent changes of cutting height are required to make deck adjustability an important consideration when purchasing a new mower.

"Some machines have better cut-of-height adjustment mechanisms. Also, a machine with a floating deck can be easier to switch the cut of height compared to a machine with a fixed deck," he says, citing John Deere's Z900 series as an example of mowers that offer an easy cut-of-height adjustment mechanism. "Push the height-of-cut pedal with your foot and simply turn the cut of height dial [located in the operator station] with your hand. It offers tremendous ease of use."

The Portland (Oregon) Parks and Recreation department maintains 1,400 acres, which offer plenty of varied turfgrass to mow. Most of the grass is cut at 2.5 inches, and cut once per week, says Mike Carr, turf and irrigation supervisor. "Most of our grass is perennial rye, and that's a good height for it, given the limited fertilizer and broadleaf spraying we do. Mowing at that height helps us keep the weeds under control."

Tall grass dilemma

There are some designated "tall grass" areas within the parks that are seeded with a special hard fescue blend. These low-use areas are mowed only once a month or less, and a tractor-drawn flail mower is used to tackle the taller grass. "In the summer, when the grass has been knocked down a little bit, we sometimes mow those areas with our regular mowers," says Carr.

Similarly, within the Asheville, N.C., parks department, Kathleen Connor, park and public facility maintenance superintendent, must deal with tall grass, including rights-of-way and banks that are mowed only a few times each year. "We use big tractors with side-arm rotary mowers for those," she explains. "Really, all we can do is knock that tall grass down. It doesn't look clean or anything."

One big factor influencing mowing height is rain or the availability of irrigation. Most lawn care professionals realize that mowing at a low height, particularly during hot, dry periods, stresses turfgrass. "We raise our normal mowing height from 3 inches up to 4 inches during drought conditions," says Connor. Her crews use John Deere mowers, which she says allow the height of cut to be changed on-the-go.

Connor says that choosing a mowing height is "a balancing act" that must weigh budget realities against the weather conditions – and, finally, against

the demands of the public. "When I first came here, they were trying to mow everything every week, but we didn't have enough money to continue at those service levels," she explains. "There's a real fine line between the level of service you can provide and the dollars you're given to do it." Mowing less frequently saves money, but does present some challenges. For starters, there may be complaints about grass that's too tall. Secondly, says Connor, especially if the weather is wet, there can be problems with mowers clogging or throwing belts when trying to mow the taller turf.

Go easy on the mower

Mowing tall grass or mowing at especially low heights undoubtedly places a strain on the mower. "Cutting at a low cut of height if the grass is tall – say mowing 4-inch-tall grass down to 1.5 inches – can make it tough for the mower," explains Russell. "An operator could shorten the life of the machine because the machine might work harder to get the job complete, especially if the blades are not sharp."

"Mowing shorter not only puts more stress on the grass itself, but it can also require more torque from the mower," agrees Guyer. "Grass stems tend to be thicker and tougher closer to the ground, and at the same time airflow is more constricted when the deck is dropped to a low cutting height, thus necessitating more power and a deck that's designed with maximum airflow capabilities." Guyer adds that, because airflow is so critical to performance, Grasshopper has devoted extensive research applied to designing "cutting chambers" that will help maximize performance throughout the mowing height range.

In some cases, the combination of mower type, grass species and mowing height necessitate the use of different blades to ensure proper performance. For example, advises Guyer, "We recommend High-Lift blades when a high volume of grass needs to be side discharged. Or, if a lawn is mowed frequently on a regular basis, a GrassMax Contour blade with lower lift is recommended to produce a very high-quality finished appearance." That company also offers a "High-Low" blade specially design to create alternating airflow conducive to mulching; a "Medium Lift" blade intended for use with vacuum collection systems; and an "Extreme High-Lift" blade recommended for vacuum collection and works best for high horsepower mowers working in overgrown conditions.

In extreme cases, it might even be best to change the mower set-up rather than simply changing the blades. "If tall grass is cut to a short height, lawn care professionals should consider using rear-discharge designs to minimize power demands on the mower and maximize discharge dispersal," explains Grasshopper's Guyer. For example, his company offers both rear-discharge mower decks in both mid-mount and front-mount configurations that provide wide distribution channels to help distribute clippings evenly behind the mower. This leads to improved appearance (no windrowing, as can occur with side-discharge decks) and allows for faster mowing speeds when cutting especially tall grass.

Parks and recreation departments, school campuses and others who must maintain specialty types of turfgrass areas, such as roadsides and sports

fields, may not be able to simply change the height of cut – they may need entirely different mowers to get the job done.



One common dilemma is how best to mow high-quality sports turf. For example, the Ashville, N.C., parks department maintains a minor league baseball field with a combination of bluegrass, bermudagrass and fescue turfgrass. Rather than use the rotary mowers it uses elsewhere throughout the parks, “we use a reel mower for that, that offers the cut they like, and it stripes a little bit better,” says Connor. That field is mowed down to about 1 inch.

The city of Portland’s parks also include some ball fields, but Turf and Irrigation Supervisor Mike Carr chooses to mow those with a rotary mower – even the sports turf. “But, it’s a little different type of mower,” he explains of the Toro Sidewinder that’s used for those lower heights. “It looks like a reel mower, but it’s really a rotary.” Those fields are mowed at about 1.5 inches. Carr says that reel mowers used to be used throughout the parks system. “When I first started here, we used to mow with gang reel mowers at 1.25 inches. With the rotary mowers that we’re using now, 2.5 inches works much better.”

Lower maintenance requirements are prompting many – even some sports turf managers – to change their reel mowers over to rotary units, explains Guyer: “More and more sports field managers are trading in their reel mowers for rotary mowers to reduce costs and to actually improve quality of cut.” Zero-turn rotary mowers, for example, can offer both speed and a high-quality cut even at the shorter heights required on some athletic fields, he adds.



Grasshopper offers several different variations of height-of-cut adjustment, each designed to be accomplished quickly and easily by the operator using one hand.

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It also is easier to maintain the blades of these rotary mowers, and attachments such as sweepers and vacuums allow clippings to be collected, a feature not available on most reel mowers. “Furthermore,” says Guyer, “rotary mowers allow greater flexibility between mowing intervals while reel mowers require a rigorous mowing schedule so that grass doesn’t get too tall for the reel mower to handle.”

In an era where budgets are shrinking, but consumer demands for a high-quality cut and appearance remain high, it’s often important that mowers be able to handle a variety of different mowing duties, and to change quickly with the demands of the job.

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