

Mowing on Slopes

Mowing turf on steep embankments has been a thorn in the side of many mowing crews. Steep angles make mowing slopes a tedious process, resulting in lost efficiency and production. Equipment operators tend to rush, which leads to the most important factor when it comes to mowing slopes: safety.

“The biggest safety issue for mowing on slopes is equipment rollover. “The equipment has a natural tendency to want to go down the hill, so mowing slopes safely means managing that force and understanding what you can do to reduce the risk of a machine slipping downhill or turning over.

According to the National Institute of Safety and Health, injuries in the workplace occur for the following reasons:

- Lack of (or poor) training;
- Carelessness; and
- Pressure.

The key to keeping it safe on the slopes is to address all three of the above concerns. Regarding the first one, “Experience is a big safety factor when mowing slopes. You should never have someone inexperienced out there mowing a tough slope — make sure your operators know and stay within their limits.”

LEARNING THE ROPS

On May 1, 2003, in North Carolina, a 42-year-old man named Carlos Gonzales Hernandez was killed when a commercial mower he was riding tipped on an embankment during his workday for a local landscape company. Hernandez was trapped underneath when the mower overturned; he was dead at the scene.

Though no specific statistics were available for research regarding such accidents, most mower manufacturers now produce roll-bar attachments for mowers of various sizes.

Though ROPS equipment can prevent serious injury during rollover, the equipment may potentially infuse the operator with overconfidence or false confidence. For this reason, operators should deny themselves the luxury of moving faster or more recklessly, especially on slopes. Following the logical progression to injury and illness prevention, it falls on the employer's shoulders to ensure that solid training takes place. This includes machine operation, especially in compromising situations on steep slopes.

There are logical choices to be made concerning which mower to use on hillsides. The best mowers are those that have a low center of gravity, usually a walk-behind, because as the size, weight and width of mower increases, the stability decreases and control is compromised.

There's much to say for stability. During the job, avoid the set of wheel ruts from previous mowing. It's a good idea to take as many wide turns as possible. The result is added stability and less likelihood of rollover. Due to the central cutting deck, zero-turn-radius mowers also have a low center of gravity and provide more stability than many larger riding mowers.

Some suggest that **walk-behind mowers be used in lieu of riding units on slopes, *period*** — particularly in areas that are extremely wet. Walk-behinds are also recommended when mowing grass that is overly dry, as slippage is just as likely on straw-like turf.

Regardless of what you use, “Use equipment that you are familiar with, and think logically about how you can position the machine on the slope to reduce as much downward pull as possible.”

SLOPE SPECIFICS: Before tackling any hillside, first ask yourself: Is this slope mowable? Is it practical regarding safety of person and property to operate a mower on the slope? If the terrain is too rocky, steep or otherwise unstable, consider using a hand-held cutter/trimmer to cut hard-to-reach places.

The best rule of thumb for mowing safety is that if it looks unsafe, it probably is.

On any slope, the No. 1 risk factor is “losing control of the machine when it rolls downhill, damaging property, machine and operator.”

From a slope perspective, take time to devise a mowing strategy. First, consider whether to mow horizontally (side to side, progressively) or vertically (top to bottom).

“Side-to-side mowing allows more stability for the mower and the person walking behind it. A longer mower pass and a more consistent-looking pattern made by the mower is also achieved. On the other hand, “Mowing vertically places the operator directly behind the machine when going ‘up’ the slope and in harms way if he loses a grip on the machine.”

Mowing horizontally, starting from the bottom and working upwards to the top of a slope, allows the operator to turn the mower upwards as he switches directions. Turning the mower downwards encourages the machine to pull towards the bottom of the hill and should be avoided.

Mowing strategy should also entail taking extra care when maneuvering at the crest and bottom (ditches) of hillsides.

“Sometimes you will see operators mowing at an angle as they navigate a hill. This is just another method used to reduce the direct pull downwards. Do everything possible to stay horizontal, even at the top or bottom of a slope, but if you must move vertically, do so at an angle.

Traction is another important element of safe slope mowing. Checking tire pressure for proper inflation ensures optimal traction — just like your car. Double check the soles of operator shoes, too, as the first thing to fail may be slick-bottomed shoes.

If you make sure your crew takes all of the precautions to mow slopes safely, then you are doing everything in your power to avoid a tragic mowing accident.

- MOWING OPERATIONS

- Read operator manual and safety decals
- Ensure all safety switches and operator presence controls are in proper working order
- Choose the right type and size mower for the situation
- Wear required PPE/Seat belt on riders equipped with ROPS
- Only ride vehicle when conditions allow
- Scout site/remove objects that may become projectiles
- Don't operate with safety guards missing or damaged
- Always operate with discharge chute in the closed position
- Don't allow anyone near you
- Do not operate on slopes greater than manufacturers recommendations. If it looks unsafe it probably is
- Don't get close to water, retaining walls, or drop offs
- Stay off wet slopes
- Stay clear of autos and other objects
- Don't get complacent because you've operated a mower thousands of times without an accident

