

# CHALKBOARD

## TIPS FROM THE PROS

### GRINDING AND BACKLAPPING TO REEL BLADE SHARPNESS

Few turf managers doubt that the reel mower makes an impressive cut. The scissor action of reel blades against a bed knife cuts turf almost like a razor. When operating properly, a reel mower uses less energy than rotary or flail mowers to cut the same turf. It's getting reel mowers to operate properly that drives some turf managers away from them.

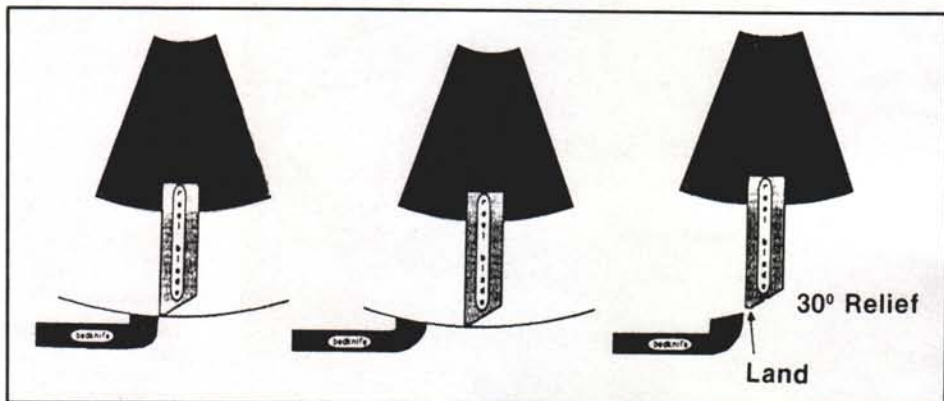
Don Cotton of Mowing Machine Grinders and Reels Inc., Andalusia, AL, has been trying to calm the nerves of frustrated reel mower owners for almost ten years. More than once he has seen reel gang mowers just sitting idle, abandoned because the operator couldn't figure out how to adjust the reels. "The clients said the mowers worked beautifully the first year or so, but eventually got to the point that keeping belts on these units was nearly impossible. If they worked when new, there was no reason why they couldn't be repaired to mow again." In the end, he discovered that the belts weren't at fault, the problem was how the blades and reels were ground.

When he attended the GCSAA Show in Atlanta he found that every grinder representative had a different theory about grinding reels and bed knives. He heard about spin grinding, relief grinding, cylindrical grinding and single-blade grinding. No wonder reel mower owners were confused, he thought.

During the show, Gerry Brouwer, president of Brouwer Turf Equipment Ltd., of Ontario, Canada, introduced Cotton to a British gentleman by the name of Ralph Winstanley. For more than 25 years, Mr. Winstanley had been making reels and grinding equipment as owner of Mowing Machine Maintenance in Wath-upon-Dearne, UK. His company makes more reels than any other company in the world.

As Winstanley explained to Cotton, the movement of the blades across the bed knife creates heat and friction. As blades wear down with use, the part of the blade contacting the bed knife is thicker thus increasing the amount of friction. One way to reduce this friction is by decreasing the blade thickness by "relief grinding," or making the tip of the blade thinner. The other way is to add a relief angle to the bed knife. Winstanley said relief grinding both blades and bed knife would greatly enhance the performance of a reel mower and produce a more consistent quality of cut.

After grinding, the mower operator can maintain an adequate cutting edge by fre-



Grinding a relief angle on both the blades and the bed knife of a reel mower greatly reduces the amount of power needed to turn the reels during mowing.

quently adjusting the reel to the bed knife. Eventually, the edges of the reel and the bed knife become rounded. It then becomes necessary to back lap until the blades are square again. Back lapping, says Cotton, is nothing more than a grinding job using a grit compound and the friction produced by spinning the reel in reverse and adjusting it toward the bed knife to rapidly wear the blades down to a sharp edge.

Back lapping is also the norm for producing a perfectly round reel after individual blades have been ground. The ideal situation, according to Winstanley, is to relief grind the individual blades and then spin

grind to assure a perfect reel.

When adjusting reel mowers, the blade should be as close to the bed knife without actually touching. Make this adjustment with the trailing edge of the blades, not the leading edge. The leading edge can cut ribs out of the bed knife if they touch.

So, if you have a reel mower sitting in the maintenance building because it is out of adjustment, take it to someone with the proper grinding equipment and give it another try. With a better understanding of reel adjustment, you should be able to bring that mower back into full production once again.

### MOLE CRICKETS AND FLORIDA COURSES



Layton Overstreet, superintendent of Marriott Orlando World Center, manages a two-pronged assault against the southern mole cricket.

When the leaves start falling up North in autumn, the starters at Florida's prestigious resort golf courses get busy. That's the way it has to be for these courses to be profitable. One of the biggest threats the past few years has not been the weather or airline fares, but rather an inch-and-a-half-long insect called the southern mole cricket.

This hard-to-control pest hides from the

daytime Florida heat in burrows as deep as ten inches below the surface. As temperatures drop in the evening, the mole cricket burrows up to the surface to feed on the turfgrass roots, especially those of bermudagrass and bahiagrass. The insect's enlarged front legs act like spades for digging and also serve as scissors for cutting

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