High-Traction Pulley Coating Never Wears Out

"Our Vulcan Grip surface treatment for pulleys had a bigger impact on reducing maintenance costs in the agricultural world than we anticipated," says Jon Osborne, president of Extreme Industrial Coatings in Airway Heights, Wash. Vulcan Grip is advertised as a factory-applied treatment for pulleys that increases belt-drive performance and eliminates pulley wear.

Jon elaborates: "We originally viewed Vulcan Grip as a friction-enhancing treatment that not only increases traction to Vbelts, but also makes belts last longer. No one had previously pulled that off before we developed and patented Vulcan Grip – and that's not for a lack of trying over the hundred years since V-belts were introduced."

But Jon says his view has changed as Vulcan Grip-coated pulleys have penetrated into the agricultural world. He states, "What operators are seeing is their machines' performance not only goes to factory-new levels – or better – but it stays that way season after season. Why? Because the nano-ceramic metal composite is so hard, it doesn't wear, even in ultra-dusty conditions. Maintenance hassles due to pulley wear are eliminated. Less maintenance is proving to be as impactful on operations as is improved machine performance."

Jon adds, "To drive home the message to operators that they don't have to live with this cycle of wearing pulleys, decreasing performance, fragging belts, and pulley replacement, we're now offering a lifetime warranty on our treatment." He rhetorically asks, "Who else in ag does that?"

When asked how certain he is their lifetime warranty won't result in taking a hit with warranty replacements, he responded, "We've taken treated pulleys that spent a lot of time in extremely abrasive environments and examined them under a scanning electron microscope; we're confident we know what we're doing with this move."

Asked for examples of how maintenance headaches are eliminated with Vulcan



Photo shows a pulley treated with Vulcan Grip on a Claas 980 self-propelled forage harvester. Vulcan Grip's ultra-hard microtexture (inset) resembles an asphalt road surface under a microscope. The treatment reportedly increases V-belt grip and doesn't wear out.

Grip, Jon responds, "We have a customer in Nebraska who equipped his Claas 930 with Vulcan Grip to harvest 1,000 acres of corn. He was immediately able to increase his ground speed by ten percent, which obviously makes a huge difference in the bottom line. His neighbor, who was running the same type of machine, had gone through five main-drive belts after just 900 acres. After our customer had finished his fields – all on the same belt – he removed his Vulcan Grip-coated pulleys and loaned them to his neighbor, who then finished his season on the loaners."

Jon also explains that V-belt drive systems are found everywhere in agriculture (choppers, combines, spud diggers, planters, and seeders, to name a few) and if a single belt is slipping, the impact on overall operations can be significant.

Jon tells of another case history: "We have another customer, Jim Nollmeyer here in Washington, who grows wheat, canola, sunflower, barley, mustard, and flax. He seeds all his crops with a Case-IH Concord 2400 commodity cart. The cart has a belt-driven paddle fan that was smoking belts and collapsing drive train mounts. He used to have to re-tension the paddlefan's banded belt every three to four days and replaced the belt every season. Now he has three seasons—some 15,000 acres—on the same belt and he bothers to tension only once a year in the off-season."

Jon says, "The important takeaway is that Jim is using that one machine for all six of his crops. This key piece of equipment used to require constant maintenance to keep operations going. Jim thinks Vulcan Grip is fantastic."

When asked how, specifically, Vulcan Grip improves productivity, Jon responds, "It depends on the type of crop and machine. In all cases, pulleys no longer wear and belts last longer. Productivity increases of ten percent are common in harvesters. In potato harvesting, where fans must blow off sometimes tough-to-clean spuds before sending them to the truck, Vulcan Grip can be a game changer. A potato farm manager running Vulcan Grip-equipped potato harvesters recently told me, 'Jon, Vulcan Grip saved my bacon!'"

EIC has a video on Vulcan Grip at www. vulcan-grip.com.

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He "Trains" Predators And Deer With Baited Fences

Steve Kenyon uses bacon to keep predators away from young calves. He hangs strips of bacon on a "hot" wire around calving pens and young pig yards. He calls the bacon his "guard pig".

"Everybody else has guard dogs or guard llamas, but I have my guard pig," says Kenyon. "If you kill predators attacking your calves or lambs, it just opens up a space and another predator moves in. The electrified bacon trains them to stay away." With raw bacon hanging every 100 yards or so, hungry predators are eager to grab a strip. When they do, they get a powerful shock. Calf yards are near the farmyard with AC outlets for a more powerful fencer. Last year he used 3-strand barbed wire with 2 hot wires and a ground. If the predators tried to go through, they were guaranteed a good shock. Simply sniffing the bacon was just about as effective.

"Predators sniff the bacon or try to take a bite," says Kenyon. "Once they do, that's enough, and the smell keeps them away. By midsummer, most of the bacon is still hanging, but it is pretty well withered away."

Meanwhile, calves and cows have been turned out on pasture, and the coyotes and other predators have more options. They are no longer as hungry.

"If you can train a predator that calves or lambs are not what they want to eat, it is more effective as they keep untrained predators out of the area.