



**Delaware
T²/LTAP**

2015 Delaware T²/LTAP Center

Build a Better Mousetrap

Winners

First Place

University of Delaware Grounds Services was chosen as the best Delaware submittal for the 2015 Build a Better Mousetrap Competition for their “3-Point Hitch Brine Sprayer.” Maintaining 25 miles of pedestrian pathway on the Newark campus, they needed to reduce the amount of chlorides being applied to the hardscapes. With nearly 23,000 students and another 4,300 faculty and staff, the campus is a busy, busy place and the campus pedestrians tend to find it irrelevant that a snow or ice storm has occurred—they have some walking to do.

So Grounds Services developed a low cost solution to apply salt brine to large plazas, patios, and sidewalks. Leveraging their existing tractors with power take offs (PTOs), they fashioned together an existing 3-point hitch 150-gallon water tank with a PTO-driven pump, adding a spray bar, nozzles, and controller (powered by a 12 volt connection on the tractor) for approximately \$2,200.

This innovation is just the latest in the evolving snow and ice control program at UD. Roger Bowman, Manager of Grounds Services, observed that the anti-icing setup will, “allow us to apply brine at a controlled rate to a wide range of pedestrian areas 3-4 days in advance of a storm and reduce our salt usage.” Roger also noted that the setup could be used for other uses year round, such as fertilizer applications, with simple adjustments, such as swapping out the nozzles.



Rusty Lee and Sandi Wolfe congratulate Roger Bowman (center), for the winning entry in Delaware’s 2015 Build a Better Mousetrap competition.

Second Place

The City of Newark addressed another winter maintenance challenge with their “Two Hands Are Better Than Four” submittal. Jason Winterling explained, “the installation of a new plow blade required two men to hold the blade in place and bolt the blade to the plow. While this did not take a significant amount of time, any opportunity to make a two man job a one man job with a little thought and little to no cost is certainly worth it.” Utilizing an old jack and scrap materials, a plow blade temporary support was constructed. Jason estimated that the total cost was less than \$100, including labor. He explained that, “sometimes finding the extra set of hands is what takes the longest. This is especially the case when long plowing shifts leave public works crews short staffed in the garage. When a plow blade needs to be replaced in the middle of a shift, and all of the available support is on the streets, one man can [now] get the job done.”



Third Place

UD Ground Services grabbed the third spot as well with their “Front Mounted Leaf Collector.” Roger Bowman explained that their, “large leaf collection system and vehicle were too large for many of the small, tight areas on campus and a current staff member had previously utilized a small leaf vacuum [mounted on a] snow plow lift. By mounting [the power unit] to the front of the truck, we improved visibility, safety, and productivity.”

They utilized a Fisher snow plow frame and lift system, together with electrical connections to create the quick connect setup. They then connected the vacuum to the plywood truck body insert by running the pipe over the cab of the truck. With the savings from not purchasing a trailer to mount the power unit, the cost was likely zero or even an outright savings.



The national Build a Better Mousetrap Competition is all about celebrating innovation by local agencies and sharing ideas, technologies, evolutions, approaches, and modifications that make the jobs of local agencies easier, more effective, and safer at low cost. It is the epitome of “doing more/better with less” and the nationally published booklet proves each year that local personnel are always looking at old problems with new perspectives and applying creativity and innovation to advance the cost-effectiveness, productivity, and safety of their organization.

The Delaware T²/LTAP Center congratulates UD Grounds Services and the City of Newark for their great submittals and thank them for sharing their ideas!