

Build a Better Mousetrap



2005 Better Mousetraps

Editor's note: Each year during the annual Iowa Maintenance Training Expo inventors from across Iowa demonstrate their innovations in the "Better Mousetrap" competition. In this issue of Technology News, we've published some of the 2005 winners.

Modified island marker

For island markers that are frequently knocked down, the Iowa DOT maintenance staff in DeSoto came up with a faster, more economical replacement.

They manufactured a steel base plate using a 1 1/2" pipe that's notched at the sides. A plastic sleeve is glued onto the plate, and three reflectors are attached to the top of the sleeve.

The base usually isn't damaged, so replacing these modified markers takes about half the time of the standard metal markers. The materials are inexpensive—less than \$15 for the pipe, base, and sleeve for one marker.

For more information, contact Tim Branam, Daryl Davis, or Pete Wonders at 515-834-2368.



Judges scoring exhibits from the 2005 Mousetrap competition.



Pete Wonders (above), explains how the island marker replacement saves the DeSoto maintenance staff time and money.

Truck mounted edge rut blade

For more than 10 years, the Iowa DOT maintenance staff in LeMars have been using a truck-mounted edge rut blade system that lets a single operator do the work of several people. It's designed to use material already on the shoulder.

The equipment includes three blades. The first blade moves material from right to left to fill the edge rut. The second blade moves excess material back across the shoulder. The third blade floats along on the left side of the machine to keep material off the roadway. A roller can be pulled by the same truck to pack the shoulder.

Mounted on the front of the truck, the edge rut blade is easy to operate. It leaves no material on the roadway.

Materials cost about \$559 to manufacture this blade system.

For more information, contact Kim Christensen or Dale Anderson at 712-546-6401.

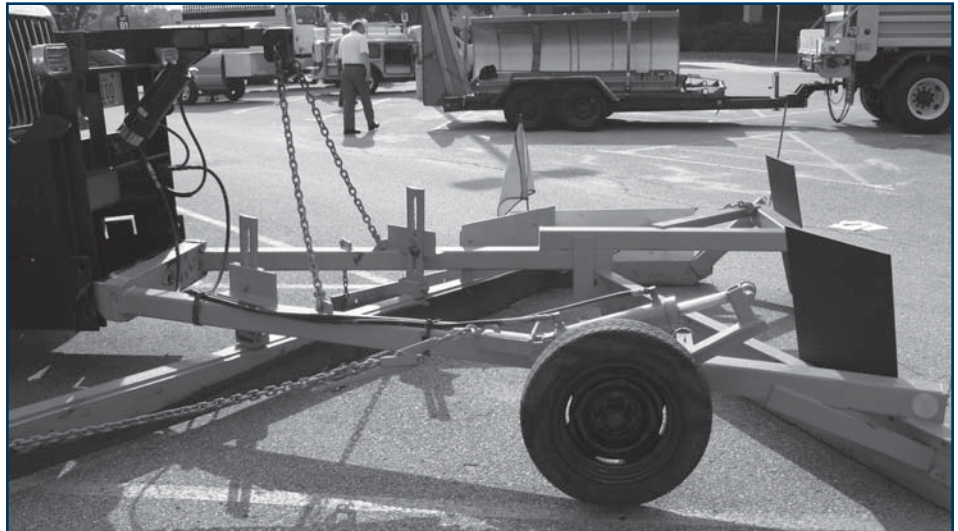
Improved hitch and wheels on one-man edge rutter

DOT mechanics in LeMars modified their original design of a skid edge rutter that's attached to the rear of the truck (this one is different from the one described above).

They added a hitch and adjustable pneumatic tires. The hitch helps keep the skid from tipping forward during edge rutting operations. The tires are adjusted to carry enough of the load so the shoes have minimal contact with the surface. This has helped speed up the work of adding new material.

Materials included two light trailer axle wheel hub assemblies, steel, and related materials for a cost of about \$225.

For more information, contact Kim Christensen or Dale Anderson at 712-546-6401. ■



The truck-mounted edge rut blade system submitted by the LeMars shop.



Dale Anderson (above) of the LeMars shop explains how the improved hitch helps speed up the work.