

**State Planning and Research Program
Quarterly Report**

PROJECT TITLE: The Effects of Implements of Husbandry on Pavement Performance TPF (148)

OBJECTIVES: 1. Determine pavement responses to selected farm equipment.
2. Compare pavement damage/response to typical 5-axle semi.

PERIOD COVERED: July, 2009- September, 2009

PARTICIPATING AGENCIES: MnDOT, Minnesota Local Road Research Board, Iowa DOT, Illinois DOT, Professional Nutrient Applicators Association of Wisconsin.

PROJECT MANAGER: Dr. Shongtao Dai

SP&R PROJECT NO:

PROJECT IS:

LEAD AGENCY: Mn/DOT

TPF-148

Planning
 Research &
Development

PRINCIPAL INVESTIGATOR: Lev
Khazanovich.

ANNUAL BUDGET:

\$430,000 for 3 years

PROJECT EXPENDITURES TO DATE:

About \$158,300 was spent on the construction of the test sections and \$155,000 was spend on testing plan development, data collection, and data analysis.

WORK COMPLETED:

One week of traffic testing was conducted in August of 2009. The testing was conducted at load levels of 0%, 50%, and 80%, and 100% of the full capacity of each vehicle. Significant pavement failure was observed on the eastbound lane of Cell 83. The research team continued a data reduction process of the data collected in Fall 08 and Spring 09 tests and began a data reduction process of the data collected in Fall 09. The research team has also initiated a data analysis of the processed data.

Mn/DOT repaired the westbound failure area and installed additional instrumentation prior to the fall testing in August 2009. The repair area failed again during the testing.

SUMMARY OF ACTIVITIES EXPECTED TO BE PERFORMED NEXT QUARTER:

The research team will complete the data reduction process of the data collected in Fall 08 and Spring 09 tests.

STATUS AND COMPLETION DATE:

The completion date of the project: September, 2011.