ROAD DUST SUPPRESSANTS & YOUR BOTTOM LINE

An evaluation of today's most commonly used dust suppressants

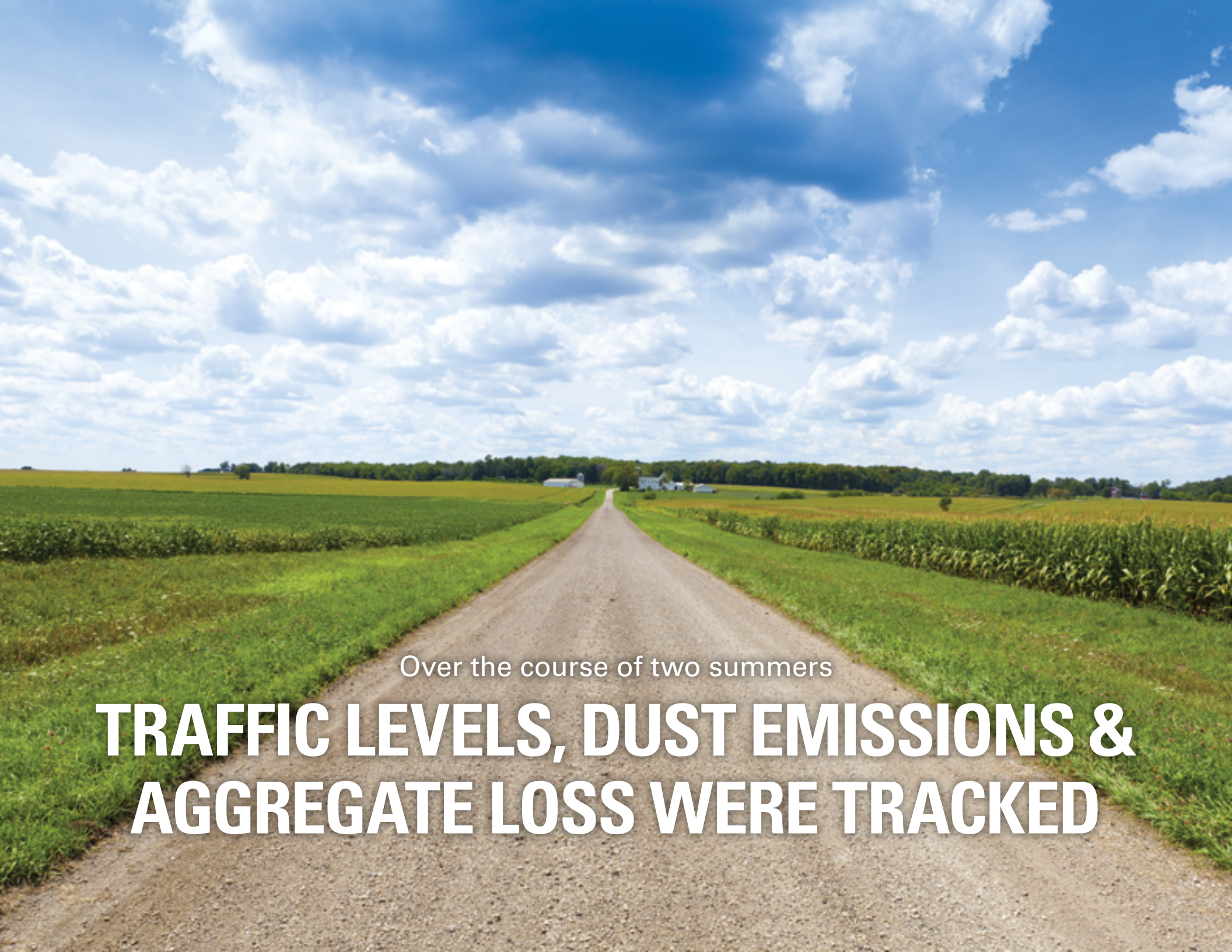
A summary of Colorado State University Research
T.G. Sanders, J. Q. Addo, A. Ariniello and W.E. Heiden.
"Relative Effectiveness of Road Dust Suppressants." 1993 - 1994

DUST SUPPRESSION PRODUCTS HAVE BEEN USED FOR DECADES

to help public works departments reduce fugitive dust and stabilize unpaved roads.


COLORADO STATE UNIVERSITY
RESEARCHERS CONDUCTED A STUDY
in Larimer County, Colorado to evaluate the effectiveness of
the most commonly used sources.
Magnesium Chloride
$MgCl_2$
Calcium Chloride
$CaCl_2$
Lignosulfonate
Lignin

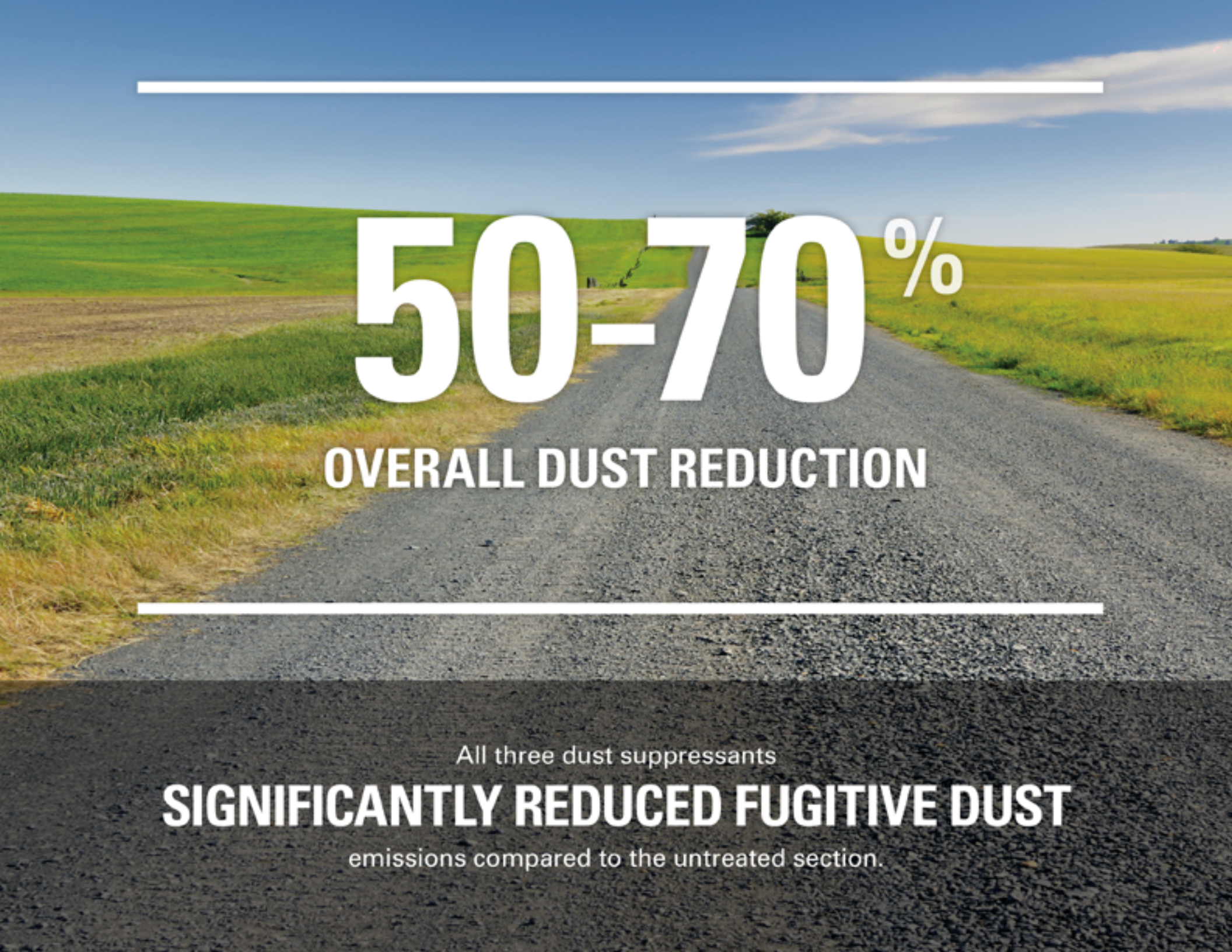

THE TEST ROAD WAS BROKEN INTO
FOUR SECTIONS
Three treated - and one untreated control.
Magnesium Chloride
MgCl2
Calcium Chloride
CaCl2
Lignosulfonate
Lignin
Untreated
Control



Over the course of two summers

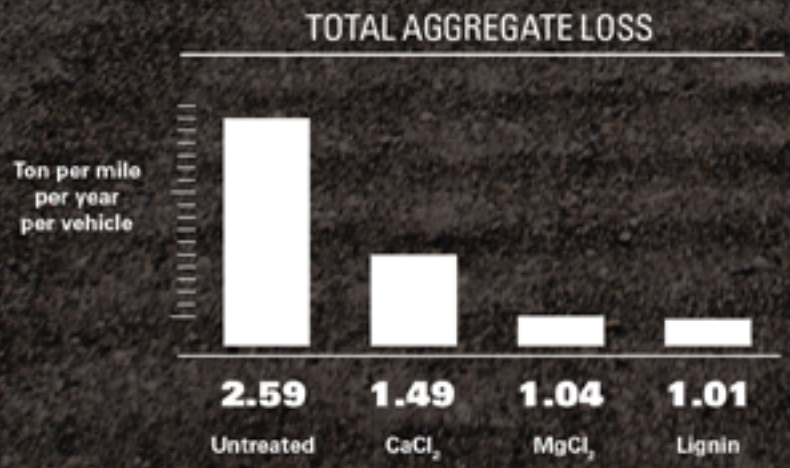
TRAFFIC LEVELS, DUST EMISSIONS & AGGREGATE LOSS WERE TRACKED


THE RESULTS


50-70%
OVERALL DUST REDUCTION
All three dust suppressants
SIGNIFICANTLY REDUCED FUGITIVE DUST
emissions compared to the untreated section.

42-61%

REDUCED AGGREGATE LOSS



The treated sections of road had a significant reduction in aggregate loss compared to the untreated section of road.

MAGNESIUM CHLORIDE AND LIGNIN PERFORMED BEST.

30-46%

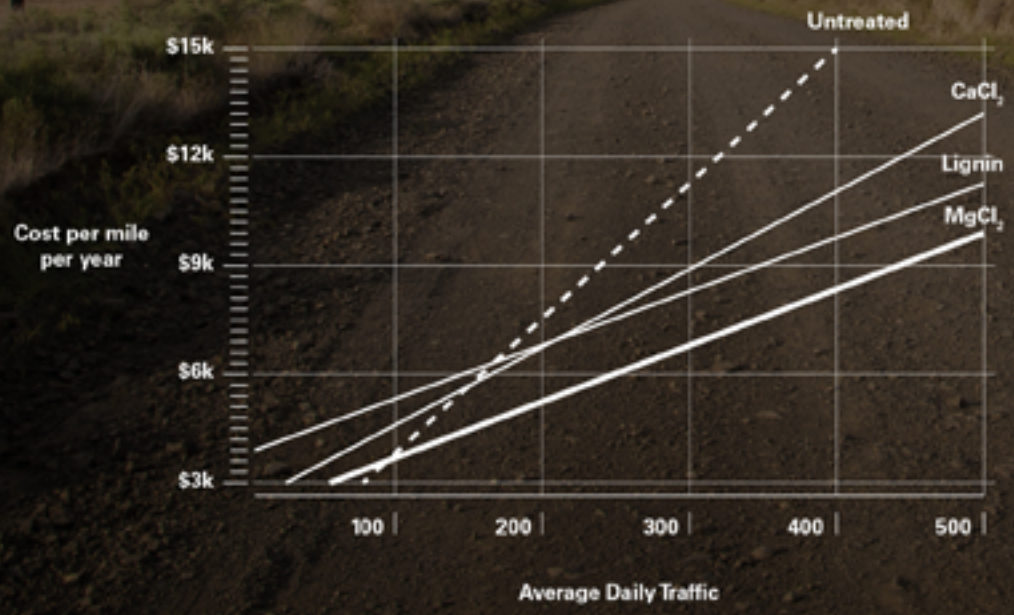
LOWER MAINTENANCE COSTS

The estimated annual maintenance costs on the treated sections were significantly less than the untreated road.

MAGNESIUM CHLORIDE AND LIGNIN PERFORMED BEST.

Researchers also established

TRAFFIC LEVELS AT WHICH DUST SUPPRESSION WOULD BE COST EFFECTIVE



Calcium chloride and lignin treatments became cost effective at 130 ADT, while **MAGNESIUM CHLORIDE TREATMENTS BECAME COST EFFECTIVE AT 100 ADT.**

(assumes aggregate cost of $11.57/ton in place)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