



An Assessment of the Safety Performance of Farm Vehicles Subject to Exemptions Under MAP-21

BACKGROUND

The Moving Ahead for Progress in the 21st Century Act (MAP-21) requires that the Secretary of Transportation conduct a “Safety Study” of covered farm vehicles. The Act defines a “covered farm vehicle” as a vehicle that:

- Is operated by a farm or ranch owner or operator, or an employee or family member of a farm or ranch owner or operator.
- Transports agricultural commodities, livestock, machinery, or supplies to or from a farm or ranch.
- Is not used in for-hire operations.
- Does not transport hazardous materials (HM) that require a placard.
- Is equipped with a special “farm” license plate or other designation issued by the State in which the vehicle is registered.
- Has a gross vehicle weight rating (GVWR) or gross vehicle weight, whichever is greater, of 26,001 pounds or less; or has a GVWR greater than 26,001 pounds and travels either within the State where it is registered or within 150 air miles of the farm or ranch that the vehicle is servicing.

MAP-21 requires that the Safety Study address specific subject areas, which are listed with study findings in Table 1 on the following page. In response to the requirement, the Federal Motor Carrier Safety Administration’s (FMCSA’s) Office of Analysis, Research, and Technology, with support from FMCSA’s Office of Field Operations, performed an analysis of the required subject areas.

METHODOLOGY

Because a farm is not defined in MAP-21, this study uses a definition historically used by the Federal Motor Carrier Safety Administration (FMCSA): in order for a business to qualify as a farm, it must engage in animal husbandry or cultivate a crop; however businesses engaged in such activities whose operations extend to

the preparation and packaging of their products are not considered farms.

FMCSA developed a methodology to identify motor carriers with a high probability of having covered farm vehicles (as defined by MAP-21) by utilizing motor carrier cargo and vehicle weight information contained in the Motor Carrier Management Information System (MCMIS) and license tag number configurations associated with farm license plates in various States. Because not all States have easily identifiable license tag configurations for their farm license plates, and not all States require 100 percent of their intrastate carriers to register with FMCSA, a census of all carriers operating covered farm vehicles could not be developed in this study. Instead, this study estimated the number of covered farm vehicles and carriers, their out-of-service (OOS) rates, and their crash rates, by focusing on a sample of eight key States having the following characteristics:

- They require 100 percent of their intrastate carriers to obtain a U.S. Department of Transportation (USDOT) number.
- They have special license tag configurations for farm vehicles that can be readily identified in the MCMIS data on roadside inspections.

The sample data from the 8 key States were supplemented with data from all 19 States whose farm license plate configurations can be recognized in MCMIS, but do not necessarily meet the two conditions outlined above.

FINDINGS

This study estimates that roughly 100,000 vehicles and 75,000 drivers are affected by the MAP-21 exemptions for covered farm vehicles and their drivers.

Based on MCMIS data from the eight key States, approximately 78 percent of carriers with covered farm vehicles operate at least one covered farm vehicle across State lines.

Table 1. Summary of study findings related to MAP-21 subject area requirements.

Subject Area	Study Findings
Number of covered farm vehicles and drivers operating them.	Analysis revealed there are an estimated 99,820 covered farm vehicles and 74,865 drivers of covered farm vehicles in the United States.
Number of covered farm vehicle crashes.	The number of covered farm vehicle crashes could not be estimated from existing data, although the study did conclude that crash rates for carriers with covered farm vehicles are slightly higher than crash rates for all private carriers.
Number of occupants and non-occupants killed and injured in crashes involving covered farm vehicles.	Although this subject area metric could not be directly measured by the study, the data suggest that crashes involving covered farm vehicles are no more likely to result in an injury or fatality than crashes involving the commercial motor vehicles (CMVs) of other types of private carriers.
Analysis of covered farm vehicle crash investigations.	Data not available.
Overall operating mileage of covered farm vehicles.	Average annual vehicle miles traveled (VMT) for covered farm carriers in the eight key States is approximately 38,000 miles per year. The estimated national total VMT for covered farm vehicles is approximately 950 million miles per year.
Number of covered farm vehicles operating in neighboring States.	Approximately 78 percent of covered farm carriers in the eight key States operate at least one covered farm vehicle across State lines.
Listing of State regulations identical to the Federal regulations subject to exemption under MAP-21 for covered farm vehicles.	Most States have issued exemptions similar to those required by the Act, or are in the process of modifying existing regulations. Some States, however, still have regulations that are at variance with the MAP-21 covered farm vehicle exemptions. Once all States adopt their covered vehicle laws, FMCSA will work with any States whose laws appear to be at variance with MAP-21, with the goal of ensuring compliance.

Driver and vehicle OOS rates from inspections of covered farm vehicles domiciled in the eight key States were higher than similar rates for all private carriers prior to enactment of MAP-21 (6.8 percent versus 5.4 percent for drivers; 29.0 percent versus 24.2 percent for vehicles). Similar results were found for all farm-plated vehicles, whether such vehicles are covered under MAP-21 or not.

Violation rates for both inadequate record of duty status (RODS) and no medical certificate were higher in the period immediately prior to enactment of MAP-21 for drivers of covered farm vehicles when compared to drivers for all private carriers (10.3 versus 7.5 violations per 100 inspections for inadequate RODS; 14.5 versus 9.5 violations per 100 inspections for no medical certificate). Similar results were found when considering all carriers with farm-plated vehicles. These differences are statistically significant.

2011 and 2012 crash rates were generally slightly higher for carriers identified by the study as having covered farm vehicles than for all private carriers. And when comparing crash rates of all carriers with farm-plated vehicles to crash rates for all private carriers in these 2 years, all carriers with farm-plated vehicles have “per power unit” crash rates that are approximately 45–55 percent higher than the crash rates for all private carriers. These differences are also statistically significant.

CONCLUSIONS

For the period immediately prior to the enactment of MAP-21, driver and vehicle OOS rates, as well as violation rates pertaining to no RODS and having no medical certificate were found to be higher for inspections of covered farm vehicles, compared to inspections of all vehicles from all private carriers. Similar results were found for inspections from all farm-plated vehicles.

In 2011 and 2012, crash rates for carriers with covered farm vehicles were generally slightly higher than crash rates for all private carriers, and “per power unit” crash rates for all carriers with farm-plated vehicles were more than 45 percent higher. The crash data do not suggest, however, that crashes involving covered farm vehicles are more likely to result in an injury or fatality than crashes involving the CMVs of other types of private carriers.

States have until March 14, 2016, to make their motor vehicle regulations conform with the new Federal regulations pertaining to covered farm vehicles, as outlined in MAP-21 (i.e., 3 years from the publication of FMCSA’s March 14, 2013, final rule).

For more information, please visit:

http://ntl.bts.gov/lib/59000/59200/59251/RRA-14-003-MAP21_Farm_Study_Full_Report_Final-508C_.pdf