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Safe Farm: Use SMV emblems for your safety

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Use SMV emblems for your safety

The transport of agricultural equipment on public roads can be a dangerous operation. According to Iowa Department of transportation data, about 20 percent of all traffic accidents involving farm equipment are rear-end collisions. Problems occur when vehicles traveling at higher speeds come upon a tractor or other slow-moving equipment and motorists do not have time to slow down.

A farm operator’s best protection on public roads is the use of slow-moving vehicle (SMV) emblems. This publication will discuss when SMV emblems are required, and the farm operator’s responsibility in maintaining those emblems to ensure your safety as well as the safety of other motorists.

Why identify slower vehicles?

Early identification of a slow-moving vehicle by the motorist gives the motorist an opportunity to avoid a collision. It’s helpful to know how little time motorists actually have when they come upon a slow-moving vehicle.

For example, a car traveling 50 miles per hour approaches a tractor traveling 20 miles per hour in the same direction on the road. Even if the car is still 400 feet behind the tractor (a sizeable following distance), the driver of the car has less than 10 seconds to react to avoid a collision with the tractor. In those 10 seconds, the motorist must recognize that a dangerous situation exists, determine the speed at which the tractor is moving, then decide what action to take. Time required to brake a vehicle traveling at 50 miles per hour also must be figured into the driver’s 10-second response time. Under ideal road conditions, it would require at least one second (and about 55 feet of braking distance) to slow the vehicle to 20 miles per hour and avoid a rear-end collision with the tractor.

Without early warning provided by the SMV emblem, the motorist might not have enough time to respond in this situation to avoid a collision.

SMV laws

Iowa law requires all vehicles traveling on public roads at speeds less than 30 miles per hour to display an SMV emblem on the rear of the vehicle. The emblem alerts drivers that they are approaching a vehicle traveling at a reduced rate of speed and that caution may be necessary. All types of slow-moving vehicles, including horse-drawn carriages, mowers, and construction equipment that use public roads, must display the SMV emblem.

The emblem must be displayed on the rear of any slow-moving vehicle used on public roads. If towing wagons or other equipment, the emblem on the tractor must be clearly visible, or another emblem must be displayed on the rear of the last implement.

The shape, color, and placement of the SMV emblem also are specified by law. The emblem is an equilateral triangle at least 13.8 inches high (plus or minus...
0.3 inches). It is a fluorescent red-orange material with a border of a red retro-reflective material. The fluorescent material is visible in daylight and the reflective border shines when illuminated by headlights of an approaching vehicle.

Standards for the SMV emblem are set by the American Society of Agricultural Engineers, the American National Standard Institute, and the Society of Automotive Engineers.

The placement of the SMV emblem is critical. The emblem is required to be displayed in the rear and as close to the center of the vehicle or implement as possible. It must be mounted with the point up, at a right angle or perpendicular to the direction of travel so that it can be seen by motorists approaching from the rear. The lower edge of the emblem must be at least 2 feet and not more than 10 feet above the ground.

Other responsibilities
Farm operators must not only mount SMV emblems on all slow-moving equipment used on public roads, they also must maintain those emblems. Inspect emblems occasionally for fading. Exposure to sunlight causes the reflective material to fade, thus reducing its effectiveness.

For more information
Another fact sheet in the Safe Farm series, Reduce farm accident risks on roads, Pm-1563e, offers further information on how to avoid traffic collisions while transporting farm equipment. It is available at your local extension office.

Other extension resources on this topic include:
- Safety on Iowa Roads: Sharing the Road with Farm Vehicles, Pm-1629, and
- Safe Operation of Agricultural Equipment, Pm 646m (fee for publication).

If you need to purchase SMV emblems or other safety equipment, check with your local implement dealer.

Prepared by Charles V. Schwab, extension farm safety specialist; Laura Miller, Safe Farm editor; and design by Valerie King.