

For Immediate Release

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Unlikely Stowaways: Weed Seeds Travel to Faraway Places on Cars, Trucks and ATVs

- *Weed Science Society of America spotlights research by Montana State University on the role vehicles play in the spread of invasive weed species*

LAWRENCE, KANSAS – October 19, 2011 – When you take your four-wheel drive out for a spin this fall, you might be bringing home more than memories. Researchers at Montana State University have found that vehicles are routinely transporting invasive weed seeds.

Seeds can stow away on tires, bumpers, wheel wells or the underside of a vehicle and sometimes travel great distances before falling off in a new locale. As weed seeds sprout and grow, they can crowd out native plants, disrupt native ecosystems and wildlife habitats and reduce crop yields when they spread to nearby fields.

“Take a look at the many types of weeds growing along most any roadside and you’ll get a big clue about the role vehicles play,” says Lisa Rew, Ph.D., a member of the Weed Science Society of America and an assistant professor at Montana State University. “With an estimated 4 million miles of roads crisscrossing the U.S. and an estimated 256 million registered vehicles, even a few weed seeds per car can make a significant impact on the spread of weeds.”

Montana State researchers measured the number of seeds picked up by a variety of vehicles and the distance traveled before the seeds fell off. Among their key findings:

- **Seed volume is seasonal.** The study showed thousands more seeds per mile were transported by vehicles during the fall than in the spring.

- **Moisture matters.** Wet conditions make it easier for seeds to be picked up by a vehicle – and easier for them to drop off miles down the road. Tests conducted at military installations showed Humvees picked up 14 times more seeds when conditions were wet, while tanks picked up 26 times more.
- **Distance is no barrier.** The distances seeds can travel may be surprising. When researchers examined vehicles over several distance intervals, they found even at the 160-mile mark many seeds stayed attached. “If seeds are lodged in mud that dries on the vehicle, they can travel almost indefinitely, or at least until it rains again and the road surface is wet,” Rew says. Scientists consider that bad news. When vehicles transport seeds long distances, it increases the likelihood weeds will be spread into areas where they don’t yet occur.
- **Off-road travel increases the risk.** Outdoor sports enthusiasts trucking to remote trailheads or riding ATVs off the beaten path are at special risk for spreading weeds. Researchers found vehicles picked up almost 20 times more seeds off-trail than on-trail.

Recommended Prevention Techniques

To prevent the spread of weeds, researchers recommend that you wash your vehicle frequently, especially after driving off-road or off-trail or along roads bordered by high densities of weeds. Both the U.S. Department of Defense and the U.S. Forest Service routinely use that technique to reduce the risk of transporting invasive species.

Montana State researchers evaluated the ideal duration and number of washes needed to remove weed seeds. Vehicles washed once for six minutes or two to three times for three minutes each were judged to be the most seed-free. Five portable commercial wash units were tested, and each performed similarly, regardless of the water pressure or the amount of water used. Four of the units had undercarriage washers as well as pressure hoses, which made removal of dirt from the underside much easier.

As an added measure of protection, land managers in areas where high-risk invasive species are growing are advised to close the area to traffic when the ground is wet. Doing so will dramatically reduce the risk of transporting weed seeds to new sites and also reduce future weed management costs.

“Understanding how vehicles spread weeds and the steps we can take to intervene can help us reduce weed seed dispersal and reduce the likelihood of devastating new invasions that can be costly to eradicate,” Rew said.

For more information on the Montana State University studies, visit <http://weedeco.msu.montana.edu>.

About the Weed Science Society of America

The Weed Science Society of America, a nonprofit scientific society, was founded in 1956 to encourage and promote the development of knowledge concerning weeds and their impact on the environment. The Weed Science Society of America promotes research, education and extension outreach activities related to weeds, provides science-based information to the public and policy makers, fosters awareness of weeds and their impact on managed and natural ecosystems, and promotes cooperation among weed science organizations across the nation and around the world. For more information, visit www.wssa.net.