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Dispersal of plant propagules by vehicles.

Secondary dispersal of plant propagules by vehicles is generally perceived to be important in the spread of invasive species, though with only limited quantitative evaluation. The rate at which soil, plant propagules and other matter adheres to vehicles will depend on a number of factors including type of ground surface (asphalt, gravel, or unpaved), the surface condition (wet versus dry) and the distance driven. If driven on unpaved surfaces the soil type, type of vegetation encountered and its stage of development will also be important. We were interested in the role of these different factors as related to four different vehicle types: all-terrain recreational vehicle, light weight 4WD, heavy weight multi-wheel drive, and tracked vehicles. In a series of studies over a period of three years (2007-2009) the four different vehicle types were evaluated for seed transport resulting from their normal military or recreational activities. Vehicles were washed before, during and after activities, and were driven distances ranging from 16 – 422 km (10-262 miles). The diversity and number of plant propagules per vehicle type was analyzed for relationships to ground surface, ground conditions and distance driven.