

PROBLEM

Vehicles may carry seeds in cracks or in mud and provide a threat to quarantine barriers. For example, cars brought in from overseas are steam cleaned before being delivered to their owners. You could survey the seeds/plant material carried by a range of vehicles.

INFORMATION

1. Almost any vehicle can be used – bikes, cars, buses, trains, aeroplanes, trucks, earthmoving equipment.
2. You could compare what is caught in say tyre tread of different vehicles or you could deliberately wash a vehicle thoroughly before a long journey, or a journey through a scrubby area and then wash it again afterwards.
3. You will need to get under the vehicle to do a thorough job. If possible stand the vehicle on a sheet of plastic so you can collect all the run off. Drain run off through a fine sieve. Dry half the sample and examine it under the microscope for seeds, and plant the other half.
4. Mud from tanks at the local car wash would be of interest.
5. To “plant” mud, mix it with the top 1 cm of a pot of sterilized soil.

DESIGN OF EXPERIMENT

1. At what time of year will you do your survey?
2. How will you identify what grows? How will you know if everything has germinated? How long will you wait for things to germinate?
3. Do you think your sampling method misses any particular type of seeds?

REFERENCES as for Project 4-19

Wace, N. (1977). Assessment of dispersal of plant species – the car-borne flora of Canberra. In Proceedings of the Ecological Society of Australia Vol. 10 (editor D. Anderson).