

Repellents for controlling herbivore browse

David R. Morgan, Landcare Research, Lincoln
Anthony D. Woolhouse, Industrial Research, Lower Hutt.

Abstract

Repellents are being developed as an alternative to the use of poisons, traps, or firearms for controlling damage to forest and farm plantings by the introduced Australian brushtail possum and European rabbit. In a series of pen trials we tested synthetic, strong-smelling, sulphurous compounds known to exist in the secretions of predators, including the fox and the ferret. Compounds were applied to the foliage of radiata pine seedlings and presented to possums and rabbits in outdoor pens. In each trial, seedlings sprayed with "Treepel" (a commercial egg-based repellent) were also presented so that the effectiveness of the new compounds could be compared with a standard, moderately effective repellent. The amount of foliage left unbrowsed was assessed daily for 6-14 days. Most compounds were at least as repellent as Treepel. Several were significantly more repellent to possums than Treepel and one was also significantly more repellent to rabbits. This compound, known as "**PineplusTM**" is now being manufactured by Roe Koh & Associates Limited (PO Box 6254, Christchurch or Phone/Fax at 03 343 0345) and presently it is being supplied in a formulation suitable for the treatment of seedlings before they are distributed for planting. Application costs are 7.5-9.5 cents per seedling, depending on the number treated. The formulation has been tested for safety towards seedlings and can be expected to remain effective for at least 3 months (after which most seedlings have grown out of reach of rabbits and hares).