

2-4. Effects of Cypermethrin Residues in Cattle Dung on the Development and Survival of Dung Beetle *Copris tripartitus* (Coleoptera: Scarabaeidae)

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Fresh dung was collected from untreated cattle and cattle dosed with a spray-on formulation of cypermethrin (2.1 g/cow) on days 1, 3, 5 and 7 post-treatment. The dung was bioassayed using the dung beetle [*Copris tripartitus* Waterhouse]. Residues of cypermethrin were sufficient to inhibit oviposition by [*C. tripartitus*]in day 1 dung but there was no significant effect on egg laying in dung collected at days 3~7 post-treatment. Food consumption of newly-emerged adults of [*C. tripartitus*]was reduced in dung collected up to 5 days after treatment. But in dung collected at days 3~7 post-treatment, cypermethrin residues had no significant effect on juvenile development time, sex ratio or the size (thorax width) of newly emerged adults. From this experiment, we conclude that adverse effects of a spray-on formulation of cypermethrin are confined mainly to dung voided at 1 day post-treatment. The potential ecotoxic effects of these compounds will be discussed in terms of dung beetle activity and strategies for parasite control of cattle in Korea.