

# THE GUT PASSAGE RATE OF SILVEREYES AND ITS EFFECT ON SEED VIABILITY

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The gut passage rate of Silvereyes *Zosterops lateralis*, was measured with fruits of *Coprosma quadrifida*. The rate of passage of seeds was measured when fed to birds whose guts were empty and compared to the rate when fed to birds that had eaten previously. Gut passage rates ranged from six to 28 minutes but was significantly slower when birds had consumed food.

The viability of the ingested seeds was measured using tetrazolium. There was no significant difference in the viability of seeds that had passed through an empty gut versus a gut with food. However, the viability of seeds that had passed through Silvereyes was significantly lower than the viability of fresh seeds.

This study has shown that food availability will influence the speed of passage through the gut and therefore the distance seeds are dispersed. It also suggests that laboratory trials that use starved birds can give erroneous speeds. Although there was little evidence that time spent in the gut affected viability, passage through the gut was clearly disadvantageous for seed viability. However, this may be counteracted by advantages in dispersal distance.