



**S3 Figure. Comparison of the effect of a fixed and uncertain initial population size on  $R_0$  for Newcastle disease in a homogeneous (model 1) and age-structured (model 2) population of white-winged parakeets.** Black dots show the mean  $R_0$  while the bars indicate the associated confidence intervals (based on 5th and 95th percentiles). The initial population size was either fixed ( $N(0)=200$ ) or uncertain ( $N(0)=LN$  where  $LN=\text{Lognormal}(189, 1.4)$ ), while additional harvest was either absent ( $h1=0$ ) or 10% ( $h1=10$ ). For each scenario, results were based on 10,000 simulations.