mccaw-meas-error

Arseniy Khvorov

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Notation

R^o — observed recipient proportion.
D^o — observed donor proportion.
R — true recipient proportion.
D — true donor proportion.
θ — relative fitness parameter.
κ — parameter associated with the variance of R. $Var(R) = \frac{1}{\kappa(\kappa+1)}$

Model

$$D_i^o \sim N(D_i, 0.05^2)$$
$$R_i^o \sim N(R_i, 0.05^2)$$
$$R_i \sim \text{Beta}(\mu_i \kappa, (1 - \mu_i)\kappa)$$
$$\mu_i = \frac{D_i}{D_i + (1 - D_i)e^\theta}$$