

TABLE 1: Description of parameters for prior distributions at the highest level (hyperparameters).

Parameter	Description	Distribution
VIABILITY TRIALS		
$\mu_0^g$	Population mean germination, age 1	normal(0, 1000)
$\mu_0^v$	Population mean viability, age 1	normal(0, 1000)
$\mu_0^{g2}$	Population mean germination, age 2	normal(0, 1000)
$\mu_0^{v2}$	Population mean viability, age 2	normal(0, 1000)
$\sigma_0^g$	Population S.D. of germination, age 1	half-normal(0, $3^{1/3}$ )
$\sigma_0^v$	Population S.D. of viability, age 1	half-normal(0, $3^{1/3}$ )
$\sigma_0^{g2}$	Population S.D. of germination, age 2	half-normal(0, $3^{1/3}$ )
$\sigma_0^{v2}$	Population S.D. of viability, age 2	half-normal(0, $3^{1/3}$ )
$\sigma^g$	Population and year S.D. of germination, age 1	half-normal(0, $3^{1/3}$ )
$\sigma^v$	Population and year S.D. of viability, age 1	half-normal(0, $3^{1/3}$ )
$\sigma^{g2}$	Population and year S.D. of germination, age 2	half-normal(0, $3^{1/3}$ )
$\sigma^{v2}$	Population and year S.D. of viability, age 2	half-normal(0, $3^{1/3}$ )
SEED BAG BURIAL EXPERIMENTS		
$\mu_0^1$	Population mean intact to January 1	normal(0, 1000)
$\mu_0^2$	Population mean germination in January 1	normal(0, 1000)
$\mu_0^3$	Population mean intact to October 1	normal(0, 1000)
$\mu_0^4$	Population mean intact to January 2	normal(0, 1000)
$\sigma_0^1$	Population S.D. of intact to January 1	half-normal(0, $3^{1/3}$ )
$\sigma_0^2$	Population S.D. of germination in January 1	half-normal(0, $3^{1/3}$ )
$\sigma_0^3$	Population S.D. of intact to October 1	half-normal(0, $3^{1/3}$ )
$\sigma_0^4$	Population S.D. of intact to January 2	half-normal(0, $3^{1/3}$ )
$\sigma^1$	Population and year S.D. of intact to January 1	half-normal(0, $3^{1/3}$ )
$\sigma^2$	Population and year S.D. of germination in January 1	half-normal(0, $3^{1/3}$ )
$\sigma^3$	Population and year S.D. of intact to October 1	half-normal(0, $3^{1/3}$ )
$\sigma^4$	Population and year S.D. of intact to January 2	half-normal(0, $3^{1/3}$ )
SEEDLING SURVIVAL TO FRUITING		
$\mu_0^{\text{survival}}$	Population mean seedling survival	normal(0, 1000)
$\sigma_0^{\text{survival}}$	Population S.D. of seedling survival	uniform(0, 1.5)
$\sigma^{\text{survival}}$	Population and year S.D. of seedling survival	uniform(0, 1.5)
FRUITS PER PLANT		
$\mu_0^{\text{fruits}}$	Population mean fruits per plant	normal(0, 1000)
$\sigma_0^{\text{fruits}}$	Population S.D. of fruits per plant	uniform(0, 1.5)
$\kappa^{\text{fruits}}$	Population and year dispersion of fruits per plant	gamma(0.001, 0.001)
SEEDS PER FRUIT		
$\mu_0^{\text{seeds}}$	Population mean fruits per plant	normal(0, 1000)
$\sigma_0^{\text{seeds}}$	Population S.D. of fruits per plant	uniform(0, 1.5)
$\kappa^{\text{seeds}}$	Population and year dispersion of fruits per plant	gamma(0.001, 0.001)

TABLE 2: Description of parameters (obtained by marginalizing over hyperparameters).

Parameter	Description
VIABILITY TRIALS	
$\nu_1^g$	Probability that an intact seed germinates in germination tests in October of year $t + 1$ , for seeds produced in year $t$
$\nu_1^v$	Probability that an intact seed that did not germinate in tests is viable in October of year $t + 1$ , for seeds produced in year $t$
$\nu_2^g$	Probability that an intact seed germinates in germination tests in October of year $t + 2$ , for seeds produced in year $t$
$\nu_2^v$	Probability that an intact seed that did not germinate in tests is viable in October of year $t + 2$ , for seeds produced in year $t$
SEED BAG BURIAL EXPERIMENTS	
$\theta_1$	Probability that a seed buried in October of year $t$ is intact in January of $t + 1$ , for seeds produced in year $t$
$\theta_2$	Probability of emergence of seeds in January in year $t + 1$ conditional on being intact in January in year $t + 1$ , for seeds produced in year $t$
$\theta_3$	Probability that a seed buried in October of year $t$ is intact in October of $t + 1$ conditional on being intact in January of $t + 1$ , for seeds produced in year $t$
$\theta_4$	Probability that a seed buried in October of year $t$ is intact in January of $t + 2$ conditional on being intact in October of $t + 1$ , for seeds produced in year $t$
SEEDLING SURVIVAL TO FRUITING	
$\sigma$	Probability that a seedling survives to become a fruiting plant
FRUITS PER PLANT	
$F$	Number of total fruit equivalents per plant
SEEDS PER FRUIT	
$\phi$	Number of seeds per undamaged fruit

TABLE 3: Description of derived quantities (obtained as functions of marginal posterior distributions).

Derived quantity	Description
$\nu_1$	Probability that a seed buried in October of year $t$ is viable in October of year $t + 1$ conditional on being intact, for seeds produced in year $t$
$\nu_2$	Probability that a seed buried in October of year $t$ is viable in October of year $t + 2$ conditional on being intact, for seeds produced in year $t$
$s_1$	Probability that a seed buried in October of year $t$ is intact and viable in January of $t + 1$ , for seeds produced in year $t$
$g_1$	Probability that a seed germinates in January in year $t + 1$ conditional on being intact and viable in January in year $t + 1$ , for seeds produced in year $t$
$s_2$	Probability that a seed buried in October of year $t$ is intact and viable in October of $t + 1$ conditional on being intact and viable in January of $t + 1$ , for seeds produced in year $t$
$s_3$	Probability that a seed buried in October of year $t$ is intact and viable in January of $t + 2$ conditional on being intact and viable in October of $t + 1$ , for seeds produced in year $t$

Note to self: I need to make sure that I am using the correct language in writing about these parameters. I am highly certain that my description of Table 1 is correct (parameters for prior distributions at the highest level). I am least certain that my description of Table 2 is correct (parameters, obtained by marginalizing over hyperparameters). Specifically, I'm not sure whether or not the second clause is right. I am reasonably certain that my description of Table 3 is correct (functions of marginal posterior distributions). The last one could also be functions of parameters.