

$$\begin{aligned}
n_{t+1}(z'_h) = & \underbrace{p_r \rho_S(z'_h) N_{\text{seeds/pod}} \int \int \int \int N_{\text{pods}}(\cdot) p_s(\cdot) p_f(\cdot) \rho_\omega(z_\omega) \rho_c(z_c) \rho_l(z_l) n_t(z_h) dz_h dz_\omega dz_c dz_l}_{\text{Sexual pathway}} + \\
& \underbrace{\rho_B(z'_h) \int \int N_{\text{sprouts/stem}}(z_c) \rho_c(z_c) n_t(z_h) dz_h dz_c}_{\text{Clonal pathway}}
\end{aligned}$$

Terms	Description	Functional Form
$p_f(z_h, z_\omega, z_c)$	Probability of flowering	$\text{logit}^{-1}(\alpha + \beta_{z_h} + \beta_{z_\omega} + \beta_{z_c})$
$p_s(z_h, z_\omega, z_c, z_l)$	Probability of ramet survival	$\text{logit}^{-1}(\alpha + \beta_{z_h} + \beta_{z_\omega} + \beta_{z_c} + \beta_{z_l})$
$N_{\text{pods}}(z_h, z_\omega, z_c, z_l)$	Number of seed pods	$\exp(\alpha + \beta_{z_h} + \beta_{z_\omega} + \beta_{z_c} + \beta_{z_l})$
$N_{\text{seeds/pod}}$	Number of seeds per pod	$\alpha$
$p_r$	Probability of seedling recruitment	$\alpha$
$\rho_S(z'_h)$	Distribution of seedling height	$N(\mu, \sigma^2)$
$N_{\text{sprouts/stem}}(z_c)$	Number of clonal sprouts per stem (per capita clonal reproduction)	$\exp(\alpha + \beta_{z_c})$
$\rho_B(z'_h)$	Distribution of clonal sprout height	$N(\mu, \sigma^2)$
$\rho_\omega(z_\omega)$	Herbivory distribution	$(1 - p_\omega)I(z_\omega) + p_\omega \ln N(\mu, \sigma^2)$
$\rho_c(z_c)$	Cardenolide distribution	$N(\mu, \sigma^2)$
$\rho_l(z_l)$	LMA distribution	$N(\mu, \sigma^2)$