

$$\begin{aligned}
\left(\frac{G}{1-\nu}\right)(h_c - h_t) &= \frac{\sigma_0}{3\sqrt{\alpha_t}} (2a_1 - 3a_2) \left\{ \int_0^{R_t} \text{Ln}(K) dr \right. \\
&- R_t \text{Ln}(K_t) \left. \right\} - \frac{2\sigma_0}{3} \left\{ 7a_1 N_t - J_t (9a_2 h_c^2 + 3a_3) / H_t \right\} \\
&+ \frac{1}{3} \sigma_0 h_c \left[(3a_2 - 4a_1) / (\beta_t^2 - 4\alpha_t \gamma_t) \right] \left\{ (D_t N_t + E J_t / H_t) \right. \\
&- R_t (D_t R_t^2 - E) / (\sqrt{\alpha_t} R_t^2 - \sqrt{\gamma_t}) \left. \right\} - \frac{1}{3} b R_t^3 (4a_1 + a_2) \\
&- b R_t \left[R_t^2 \left(\frac{2}{3} a_1 - a_2 \right) + 6a_2 h_c^2 + 2a_3 + P_t / b \right] - F_t \gamma_{R_t}
\end{aligned} \tag{57}$$

$$\begin{aligned}
D_t &= \beta_t \beta_t^I - 2\alpha_t \gamma_t^I \\
E_t &= \beta_t \gamma_t^I - 2\gamma_t \beta_t^I \\
H_t &= 2(\alpha_t \gamma_t^I)^{0.25}
\end{aligned} \tag{58}$$