

para\_polli=[0.25,0.25,500,0.75,2000,5000,1/9,12,0.06,0.018,0.007,1,200,19,75,300]

En la función def dinamica(brood, workers, foragers, food, ganancia, parametros)

Algunos de ellos también aparecen en para\_polli

parametros[0]  $\alpha_{\min}$  = 0.25 transition rate in the absence of foragers but in presence to food

parametros[1]  $\alpha_{\max}$  = 0.25 parameter governing social inhibition of forager recruitment

parametros[2]  $b$  = 500 = stored food (g)

parametros[3]  $\sigma$  = 0.75 parameter governing social inhibition

parametros[4]  $L$  = 2000 queen's daily egg laying rate

parametros[5]  $\nu$  = 5000 parameter which controls the effect of the hive bees on brood survival

parametros[6]  $\phi$  = 1/9 pupation rate brood

parametros[7]  $\tau$  = 12 the duration of pupation

parametros[8]  $m$  = 0.06 mortality rate

parametros[9]  $\gamma_b$  = 0.018 consumption rate per brood (g/day)

parametros[10]  $\gamma_a$  = 0.007 rate of honey consumption for adult bees (g/day)

parametros[11]  $c$  = 1 = average amount of food collected per forager per day

para\_polli[12] = 200 = size of squad of foragers

para\_polli[13] = 19 = viajes por abeja recolectora al día

para\_polli[14] = 75 = number of flowers per trip

para\_polli[15] = 300 = flight range of species (esto está escalado son 3000 m)