

$$\frac{dN_t}{dt} = r_0 N_t \left(1 - \frac{N_t}{K}\right) - H$$

where:

N_t = the population size at time t

r_0 = maximum growth rate [1/time step]

K = carrying capacity

H = the harvesting rate

$$\frac{dN_t}{dt} = 0$$

$$H = r_0 N_t \left(1 - \frac{N_t}{K}\right)$$

where:

$$H'_{(N_t = \frac{K}{2})} = 0$$

$$H_{max} = \frac{r_0 K}{4}$$