

### 3.17 Primary production

For primary producers the production is estimated as a function of the producers' biomass,  $B_i$ , from a simple saturating relationship

$$f(B_i) = \frac{r_i \cdot B_i}{1 + B_i \cdot h_i} \quad \text{Eq. 67}$$

where,  $r_i$  is the maximum production/biomass ratio that can be realized (for low  $B_i$ 's), and  $r_i/h_i$  is the maximum net primary production when the biomass is not limiting to production (high  $B_i$ 's). For parameterization it is only necessary to provide an estimate of  $r_i / (P/B_i)$ , i.e., a factor expressing how much primary production can be increased compared to the base model state. If a [Forcing function](#) is applied to primary production (see [Apply FF \(primary producer\)](#)), it multiplies the  $r$  parameter in Eq. 67.