**Table S2.** List of models fitted for thermal performance curves.

|  |  |  |  |
| --- | --- | --- | --- |
| **Model** | **Equation** | **Parameters** | **Reference** |
| Beta | *rate = (a.((T - b + ((c.(d-1))/(d + e - 2)))/c)^(d-1).(1 - ((T - b + ((c.(d-1))/(d + e - 2)))/c))^(e-1)) / (((d-1)/(d + e - 2))^(d-1).((e-1)/(d + e - 2))^(e-1))* | **a, b, c, d, e**: dimensionless parameters | [1] |
| Boatman | *rate = rmax.(sin(pi.((temp - tmin)/(tmax - tmin))^a))^b* | **rmax, tmin, tmax, a, b** | [2] |
| Delong | *rate = c.exp(-(eb-(ef.(1-((temp + 273.15)/tm))+ehc.((temp + 273.15)-tm-((temp + 273.15).log((temp + 273.15)/tm)))))/(k.(temp + 273.15)))* | **c, eb, ef, tm, ehc** | [3] |
| Flinn | *rate = 1 / (1 + a + b.T + c.T^2)* | **a**: controls the height of the curve**b**: controls the slope of the initial increase of the curve**c**: controls the position and steepness of the decline of the curve | [4] |
| Gaussian | *rate = rmax.exp(-0.5.(abs(T - topt)/a)^2)* | **rmax**: maximum rate at optimum temperature**topt**: optimum temperature (ºC)**a**: related to the full curve width | [5] |
| Jöhnk | *rate = rmax.(1 + a.((b^(temp - topt) - 1) - (log(b)/log(c)).(c^(temp - topt) - 1)))* | rmax, topt, a, b, c | [6] |
| Modified Gaussian | *rate = rmax.exp(-0.5.(abs(T - topt)/a)^b)* | **rmax**: maximum rate at optimum temperature**topt**: optimum temperature**a**: related to full curve width**b**: allows for asymmetry in the curve fit | [7] |
| Quadratic | *rate = a + b.T + c.T^2* | **a**: parameter that defines the rate at 0 ºC**b,c**: parameters with no biological meaning  | [8] |
| Spain | *rate = est = r0. exp(a.T) . (1 - b.exp(c.T))* | **a**: constant that determines the steepness of the rising portion of the curve**b**: constant that determines the position of topt**c**: constant that determines the steepness of the decreasing part of the curve**r0**: the apparent rate at 0 ºC | [9]  |
| Thomas | *rate = a . exp(b . temp) - (c + d.(exp(e.temp)))* | **a, b, c, d, e** | [10] |
| Weibull | *rate = ((a.(((c-1)/c)^((1-c)/c)).((((T-topt)/b)+(((c-1)/c)^(1/c)))^(c-1)).(exp(-((((T-topt)/b)+(((c-1)/c)^(1/c)))^c)+((c-1)/c)))))* | **a**: scale the height of the curve**topt**: optimum temperature**b**: defines the breadth of the curve**c**: defines the curve shape | [7] |

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