

Figure A1. Akaike's Information Criteria (AICs) of a logistic regression (proportion of leafing $(=1 / 100 \times$ the percentage of leafing) of Quercus crispura as a response variable and base temperature (BT) as a dependent variable) in the University of Tokyo Hokkaido Forest, Furano, Hokkaido, Japan by changing base temperature (BT) from $-2^{\circ} \mathrm{C}$ to $8^{\circ} \mathrm{C}$ with $0.2^{\circ} \mathrm{C}$ stepwise. Data of three individual trees for six years (2000, 2003, 2005-2008) were used for the model fitting.


Figure A2. Akaike's Information Criteria (AICs) of a logistic regression (proportion of leafing ( $=1 / 100 \times$ the percentage of leafing) of Quercus crispura as a response variable and base temperature (BT) as a dependent variable) in the University of Tokyo Chichibu Forest, Chichibu, Saitama, Japan by changing base temperature from $-2^{\circ} \mathrm{C}$ to $8^{\circ} \mathrm{C}$ with $0.2^{\circ} \mathrm{C}$ stepwise. Data of three individual trees for ten years (2002-2011) were used for the model fitting.

Table A1. Steps of model selection using Akaike's Information Criterion (AIC) for a multiple regression model with the day of year (DOY) of each event (stage II or stage III) as an independent variable and the averages of the homogenized temperatures (daily minimum ( $T_{\min }$ ), daily mean $\left(T_{\text {mean }}\right)$, daily maximum ( $T_{\max }$ ), and diurnal temperature range (DTR)) as dependent variables. At the first step, the monthly averages of the temperatures ( $T_{\min }, T_{\text {mean }}, T_{\max }$, and DTR) (The month of each variable is shown by a numeral following each variable) were included. At the second step, the monthly average of the variable selected in the first step was replaced by the average of that variable on the day of year (DOY). Then, model selection was conducted by including the monthly averages of the temperatures ( $T_{\text {min }}, T_{\text {mean }}, T_{\text {max }}$, and DTR) again to the selected model. Thereafter, same procedure as the second step was repeated until the model did not improve. (The month(s) is (are) indicated by an initial letter(s) of the month(s). A numeral follows the initial letter for " J " or " M " to distinguish January and June or March and May, respectively. An initial letter "A" indicates April because August was not included in the analysis. A numeral following a hyphen (-) distinguish two different periods in the same month.)

Stage II (bud break)

| Step | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| AIC | 126.68 | 112.37 | 83.51 | 71.42 | 67.68 |
| Variables | Tmax4 | TmaxMAM | TmaxMAM | TmaxMAM | TmaxMAM |
|  | Tmin3 | TminM3 | TminM3 | TminM3 | TminAM |
|  | Tmean5 | DTR5 | TminMA | TminMA | TminM3 |
|  |  | Tmin4 | TminJ1 | TminJ1 | DTRM5 |
|  |  | Tmin1 | DTRM5 | DTRM5 | Tmax4 |
|  |  |  | DTR4 | DTR4 | TminJ1 |
|  |  |  | Tmean4 | TmeanJF | TmeanJF |
|  |  |  |  | Tmax5 | Tmean1 |
|  |  |  |  | Tmax1 | Tmax5 |
|  |  |  |  | DTR2 | TminMA |
|  |  |  |  | Tmean6 |  |
|  |  |  |  |  | DTR3 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

Stage III (leaf opening)

| Step | 1 | 2 | 3 | 4 | 5 | 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AIC | 143.48 | 119.82 | 111 | 101.78 | 81.55 | 76.5 |
| Variables | Tmean5 | TmeanAM | TmeanAM | TmeanAM | TmeanAM | TmeanAM |
|  | DTR3 | DTRM3 | DTRM3 | DTRM3 | DTRM3 | DTRM3 |
|  | Tmax6 | Tmean5 | TmaxFM | TmaxFM | TmaxFM | TmaxFM |
|  | Tmax4 | Tmax2 | TmeanMJ | TmeanMJ | TmaxF | TmaxF |
|  |  |  |  | DTRJ6 | TmeanMJ | TmeanMJ |
|  |  |  |  | TminFM | TminFM | TminFM |
|  |  |  |  | TminA | DTRJ6 | DTRJ6 |
|  |  |  |  | Tmax2 | TminA | TminA-1 |
|  |  |  |  |  | Tmin4 | TminA-2 |

