

**A**

**B**

Wind speed (m s-1)

**Figure S1.** Daily maximum instantaneous wind speed during the study period from May to October 2017 and the same data from the same period in previous years, 2016 and 2015 (A) and Frequency of the directions of the daily maximum instantaneous wind speed during the study period in 2017 (B). Data were measured at the meteorological observation site in the Hokkaido Agricultural Research Center, NARO (Sameshima et al. 2008).

Reference: Samejima R, Hirota T, Hamasaki T, Kato K, Iwata Y (2008) Meteorological observation system at the National Agricultural Research Center for Hokkaido region since 1966. Misc Pub Natl Agric Res Cent for Hokkaido Reg 67:1–7

**Table S1.** DeltaAIC values for the three probability density functions fitted to the survivorship curve, and shape parameters for the best fit probability function for each of six studied species. The delta AIC values indicate the difference in AIC scores between the model of interest and the best fit model, which is shown in bold.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Species | ΔAIC for three probability functions | | |  | Shape parameters for the best fit function | |
| Lognormal | Weibull | Exponential |  | meanlog | sdlog |
| *Agrostis gigantea* | **0.0** | 552.48 | 298.26 |  | -1.44 | 1.07 |
| *Anthoxanthum odoratum* | **0.0** | 1461.62 | 837.08 |  | -2.24 | 1.48 |
| *Dactylis glomerata* | **0.0** | 5760.82 | 6231.92 |  | -0.66 | 1.12 |
| *Phalaris arundinacea* | **0.0** | 395.67 | 198.22 |  | -0.81 | 1.09 |
| *Phleum pratense* | **0.0** | 8813.52 | 4457.34 |  | -1.72 | 1.10 |
| *Poa pratensis* | **0.0** | 131.93 | 118.98 |  | -0.73 | 1.80 |