

Metadata form of Silva Fennica

This form is designed for writing the elements of metadata, which are used in the description of research materials such as data and codes. The form is based on the work done in the Work Group “Description of research materials” under the Finnish Open Science Coordination.

| Item | Description | Responsible |
|--------------------------------|--|-------------|
| <i>Name of the data / code</i> | Seedling forcing data. | Author |
| <i>Author & ORCID</i> | Partanen, Jouni: 0009-0007-1782-4283; Häkkinen, Risto: 0009-0007-1687-1045; Viherä-Aarnio Anneli: 0000-0002-1777-637X; Stenvall, Niina: 0000-0002-9447-8712; Hänninen, Heikki: 0000-0003-3555-2297 | Author |
| <i>Authors' affiliation(s)</i> | Partanen, Jouni ¹ ; Häkkinen, Risto ² ; Viherä-Aarnio, Anneli ² ; Stenvall, Niina ² ; Hänninen, Heikki ³ ¹ Natural Resources Institute Finland, Production Systems, Juntintie 154, FI-77600 Suonenjoki, Finland (https://ror.org/02hb7bm88) ² Natural Resources Institute Finland, Production Systems, PO Box 2, FI-000791 Helsinki, Finland (https://ror.org/02hb7bm88) ³ National Key Laboratory for Development and Utilization of Forest Food Resources, Zhejiang A&F University, 666 Wusu Street, Hangzhou 311300, PR China | Author |
| <i>Owner of the material</i> | Natural Resources Institute Finland (https://ror.org/02hb7bm88) | Author |
| <i>Publisher</i> | Natural Resources Institute Finland (https://ror.org/02hb7bm88) | Author |
| <i>Funder</i> | Luke, https://ror.org/02hb7bm88 | Author |
| <i>Description</i> | An experimental study addressing the effects of a SD treatment in the preceding summer and of the photoperiod in experimental forcing conditions in a greenhouse (8 h vs. 16 h) on the chilling requirement of second-year Norway spruce seedlings was conducted. The hypothesis was that both the SD treatment in late summer and the long photoperiod in forcing conditions reduce the chilling requirement of the seedlings and advance the bud burst. | Author |
| <i>Methods</i> | The seedlings were transferred from natural outdoor chilling conditions to forcing conditions in several batches between September and May. The bud burst of the SD-treated and the control seedlings was observed in the forcing conditions and in the natural conditions of the next spring. For each treatment group, the bud burst percentage, BB%, was calculated as the proportion of seedlings showing bud burst in the terminal bud of the main shoot out of the total number of seedlings observed (n=10). The days to bud burst, DBB, was calculated as the mean number of days from the beginning of forcing to the day of the observed terminal bud burst. The differences between the bud burst percentages, BB%, were analysed by means of logistic regression with a binary response (bud burst / no bud burst) of the terminal bud. The differences in the number of days to bud burst, DBB, were analysed with two-way analyses of variance and a log transformation of DBB. The experimental unit in both analyses was the seedling. The differences between the four seedling treatments were tested pairwise at each transfer time with Fisher's exact test (BB%) and the LSD test (DBB). Statistical analyses were carried out with IBM SPSS Statistics for Windows, Version 26.0., IBM Corp., Armonk, NY, USA. | Author |
| <i>Variables</i> | The explanatory variables in the analyses were the seedling treatment (with four levels: SD treatment with 8 h forcing day length = SD 8 h or 16 h forcing day length = SD 16 h and no SD treatment (control seedlings) with 8 h forcing day length = Control 8 h or 16 h forcing day length = Control 16 h), the transfer time, and their interaction. | Author |

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| <i>Author keywords</i> | Norway spruce; Short-day treatment; Forcing; Bud burst percentage; Days to bud burst | Author |
| <i>Vocabulary keywords (community standard)</i> | - | Author |
| <i>Discipline</i> | Forest science, forest ecology. | Archive/Repository/Publisher |
| <i>Type of material</i> | Research data (Excel) | Author |
| <i>Language</i> | English | Author |
| <i>Time range covered</i> | From 2005-09-20 to 2006-05-31. | Author |
| <i>Geographic region</i> | FIN. The coordinates of the study area are 61°48' N 29°19' E. | Author |
| <i>Version</i> | - | Author |
| <i>File format(s)</i> | Excel (.xlsx) | Author |
| <i>Availability of the materials (open, embargo, registration, limited, registration required)</i> | The data are available at 10.6084/m9.figshare.31998786 | Author |
| <i>Justification for access restrictions</i> | The research data will be available to everyone. | Author |
| <i>Licence</i> | CC BY 4.0 Creative Commons licences . | Author |
| <i>Connections with other research materials</i> | No connections to previously published material. | Author |
| <i>Access to the connected research materials</i> | Free for everybody | Author |
| <i>Codes only: hardware/software requirements for running the code</i> | - | Author |
| <i>Connections to other products of research</i> | No such connections. | Author |
| <i>Personal data</i> | No. | Author |
| <i>Confidential or secret data</i> | No. | Author |
| <i>Publication date</i> | 13.4.2026 (Figshare) | Archive/Repository/Publisher |
| <i>Preservation policy</i> | Permanent. | Author |
| <i>Permanent identifier (PID)</i> | 10.6084/m9.figshare.31998786 | Archive/Repository/Publisher |