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
Name of the data / code	Männyn (Pinus sylvestris) alttiuden geneettinen vaihtelu mahdollisena keinona torjua havuparikas sientä Genetic variation in Scots pine resistance as a potential solution against Diplodia sapinea	Author
Author & ORCID	Terhonen, Eeva (0000-0002-9288-440X), Sutela, Suvi (0000-0003-0426-0718) .	Author
Authors' affiliation(s)	Natural Resources Institute Finland https://ror.org/02hb7bm88	Author
Owner of the material	Natural Resources Institute Finland https://ror.org/02hb7bm88	Author
Publisher	Natural Resources Institute Finland https://ror.org/02hb7bm88	Author
Funder	Natural Resources Institute Finland https://ror.org/02hb7bm88 Alfred Kordelin Foundation https://ror.org/0107h6s84	Author
Description	The dataset contains necrosis measurements (length, cm) and related metadata from Scots pine (Pinus sylvestris) seedlings used to study genetic variation in resistance against the fungal pathogen Diplodia sapinea. The material includes individual seedling-level data with variables such as TreeID, Population, MotherID, Treatment, Length, Growth, SideShoots, and NecrosisLength. The research object is Scots pine, and the unit of observation is a single seedling.	Author
Methods	Seeds from five naturally regenerated Scots pine (Pinus sylvestris) populations in Finland and Sweden were sown in 2021 to capture natural genetic variation. Seedlings were grown in greenhouse and outdoor conditions before inoculation in June 2023 with Diplodia sapinea (strain OP103742) cultured at +20 °C or +35 °C; mock controls received agar only. For each mother tree, three seedlings per treatment were used. Necrosis length, height, and number of side shoots were measured after two weeks and two months, and a subset was used for fungal re-isolation. Statistical analyses were conducted using linear models to assess the effects of treatment, seedling traits, and maternal origin on necrosis length. Depending on data distribution, ANOVA or Kruskal–Wallis tests with post hoc comparisons were applied. https://doi.org/10.14214/sf.25028	Author
Variables	**Full name of variable** / **Abbreviation / Identifier in dataset** / **SI unit** / **Description** Tree identifier / **TreeID** / – / Unique random identifier assigned to each seedling. Population / **Population** / – / Geographic origin of the seed lot (e.g., Kolari, Kälviä, Punkaharju, Loviisa, Norra Gullabo). Mother tree identifier / **MotherID** / – / Identifier of the maternal tree from which seeds were collected; seedlings are half-siblings (open pollination). Seedling length / **Length** / cm / Total height of the seedling at the time of measurement.	Author

	Seedling growth during 2023	**Growth**	cm	Increase in seedling height during the 2023 growing season.	
	Inoculation treatment	**Treatment**	–	Indicates whether the fungal pathogen *Diplodia sapinea* was cultured at +20 °C, +35 °C, or if the seedling was mock-inoculated with an agar plug (control).	
	Number of side shoots	**SideShoots**	count	Total number of side shoots present on the seedling.	
	Necrosis length	**NecrosisLength**	cm	Length of necrotic lesion on the main shoot, measured after two weeks and two months following inoculation.	
Author keywords	havuparikas, mänty				Author
Vocabulary keywords (community standard)	Diplodia sapinea, Scots pine, susceptibility				Author
Discipline	Forest Sciences				Archive/ Repository/ Publisher
Type of material	Research data				Author
Language	ISO 639:2023				Author
Time range covered	2023-06-01 to 2023-08-31				Author
Geographic region	FIN246				Author
Version	NA				Author
File format(s)	xlsx				Author
Availability of the materials (open, embargo, registration, limited, registration required)	open access				Author
Justification for access restrictions	NA				Author
Licence	CC BY 4.0				Author
Connections with other research materials	NA				Author
Access to the connected research materials	https://doi.org/10.23729/fd-f7666f35-f2d9-3b9e-a0f9-68c06775879a				Author
Codes only: hardware/software requirements for running the code					Author
Connections to other products of research	https://doi.org/10.14214/sf.25028				Author
Personal data	NA				Author
Confidential or secret data	NA				Author
Publication date	2025/06/17				Archive/ Repository/ Publisher
Preservation policy	permanent				Author

Permanent identifier (PID)	DOI: 10.23729/fd-f7666f35-f2d9-3b9e-a0f9-68c06775879a	Archive/ Repository/ Publisher