

## 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>	Fertilization plot level data	Author
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<i>Authors' affiliation(s)</i>	Professor Heli Peltola, UEF, ROR: <a href="https://ror.org/00cyydd11">https://ror.org/00cyydd11</a>	Author
<i>Owner of the material</i>	UEF, <a href="https://ror.org/00cyydd11">https://ror.org/00cyydd11</a>	Author
<i>Publisher</i>	Zenodo	Author
<i>Funder</i>	UEF, <a href="https://ror.org/00cyydd11">https://ror.org/00cyydd11</a>	Author
<i>Description</i>	The aim was to study the spatial evenness of nitrogen (N) fertilization (measured fertilization dose on circular plots with radius of 7,98 m) in fertilized treatments and effects of fertilization treatments (target of 0, 150 and 200 kg N /ha) on short-term volume growth responses in two ground-fertilized (2018) Scots pine and in two airborne-fertilized (2019) Norway spruce study sites on medium fertile (Myrtillus-type, MT) upland forest sites in Eastern Finland. It was also studied the relationships between measured fertilization dose, N concentrations in needles and soil organic (humus) layer, and volume growth of trees (calculated based on diameter at breast height and height of sample trees) based on block level averages (based on data measured for three circular plots in each block). Units of measured data are given related to plot level data excel sheet.	Author
<i>Methods</i>	In each study area, we established three one hectare replicate blocks (with three circular study plots of 200 m <sup>2</sup> in each) for fertilizer treatments with target of 0, 150 and 200 kg N /ha. Spatial evenness of the fertilization was measured with textile funnels. Height, breast height diameter and vitality (living/dead) of trees were measured annually in each circular plot. Nutrient concentrations in needles (analysed in Yara laboratory in United Kingdom) and soil organic (humus) layer (analysed at UEF laboratory) were measured once. The data analyses is described more in details in article.	Author
<i>Variables</i>	Fertilizer dose, Stand volume growth, N concentrations in needles and soil organic (humus) layer	Author
<i>Author keywords</i>	Boreal forest; Forest fertilization; Spatial evenness of fertilization; Nitrogen fertilizer dose; Stand growth; Upland forests; Picea abies; Pinus sylvestris	Author
<i>Vocabulary keywords (community standard)</i>	Scots pine (Pinus sylvestris L.) and Norway spruce (Picea abies Karst.)	Author
<i>Discipline</i>	Forest science	Archive/Repository/Publisher
<i>Type of material</i>	Research data	Author
<i>Language</i>	eng	Author
<i>Time range covered</i>	2018-06-01 - 2022-0901	Author
<i>Geographic region</i>	FIN	Author
<i>Version</i>	No	Author

<i>File format(s)</i>	.txt	Author
<i>Availability of the materials (open, embargo, registration, limited, registration required)</i>	Access is free	Author
<i>Justification for access restrictions</i>		Author
<i>Licence</i>	CC license	Author
<i>Connections with other research materials</i>	No	Author
<i>Access to the connected research materials</i>		Author
<i>Codes only: hardware/software requirements for running the code</i>		Author
<i>Connections to other products of research</i>	No	Author
<i>Personal data</i>	No	Author
<i>Confidential or secret data</i>	No	Author
<i>Publication date</i>	April 25, 2024	Archive/Repository/Publisher
<i>Preservation policy</i>	Permanent	Author
<i>Permanent identifier (PID)</i>	<a href="https://doi.org/10.5281/zenodo.11066704">https://doi.org/10.5281/zenodo.11066704</a>	Archive/Repository/Publisher