

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>	SAS language	Author
<i>Author & ORCID</i>	Manner, Jussi https://orcid.org/0000-0002-4982-3855 Lundström, Hagos (no ORCID available)	Author
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<i>Owner of the material</i>	Manner, Jussi https://orcid.org/0000-0002-4982-3855 Lundström, Hagos Skogforsk, https://ror.org/00qgx3790	Author
<i>Publisher</i>	Skogforsk, https://ror.org/00qgx3790	Author
<i>Funder</i>	Skogforsk, https://ror.org/00qgx3790	Author
<i>Description</i>	This dataset and code support the analysis of the impact of boom-tip control on harvester-time consumption. Two experienced operators performed clearcutting operations in Sweden using a John Deere 1470G harvester, both with and without Intelligent Boom Control (IBC) activated. The dataset includes stem volume, tree species, boom-control system status, time consumption in seconds per cubic metre, and time consumption in seconds per stem.	Author
<i>Methods</i>	Data were collected through field trials conducted in a <i>Picea abies</i> -dominated stand in Sollefteå, Sweden. Two trials were conducted, with one operator participating in each. The harvester used was a John Deere 1470G equipped with a rotating-levelling cabin, a CH9 crane, and an H425 harvester head. The time study divided the harvester work into boom-out and felling-processing elements, and time consumption data were manually recorded using a handheld device. The effects of IBC on productivity were analysed using a general linear model in SAS.	Author
<i>Variables</i>	Time consumption in seconds per m ³ Stem volume (m ³) Boom-control system, IBC (levels: on and off) Tree species (levels: spruce, pine, birch)	Author
<i>Author keywords</i>	automation, crane work, cut-to-length logging, Intelligent Boom Control (IBC), Levels of Automation (LoA), operator assistance system, productivity	Author
<i>Vocabulary keywords (community standard)</i>	Not applicable	Author
<i>Discipline</i>	Field(s) of study to which the material is related. This is generally given by the repository as they use specific classifications.	Archive/Repository/Publisher
<i>Type of material</i>	Dataset and code for harvester time-study analysis	Author
<i>Language</i>	Eng	Author
<i>Time range covered</i>	01.07.2023-31.10.2023	Author
<i>Geographic region</i>	Country: Sweden County: Ångermanland Municipality: Sollefteå	Author
<i>Version</i>	Not applicable	Author
<i>File format(s)</i>	.txt, .csv	Author

<i>Availability of the materials (open, embargo, registration, limited, registration required)</i>	The dataset and SAS codes used for analysing the data can be found at: https://doi.org/10.5281/zenodo.15253532	Author
<i>Justification for access restrictions</i>	Not applicable	Author
<i>Licence</i>	A licence defines the conditions for reuse of the material. Silva Fennica requests the use of Creative Commons licences .	Author
<i>Connections with other research materials</i>	Not applicable	Author
<i>Access to the connected research materials</i>	Not applicable	Author
<i>Codes only: hardware/ software requirements for running the code</i>	We used a 64-bit operating system, an x64-based processor, and the SAS (9.4) program. SAS release: 9.04.01M8P01182023 SAS platform: X64_10PRO WIN Copyright © 2012-2023, SAS Institute Inc., Cary, NC, USA. All Rights Reserved.	Author
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<i>Publication date</i>	Date of publication in an archive or repository.	Archive/Repository/Publisher
<i>Preservation policy</i>	Not applicable	Author
<i>Permanent identifier (PID)</i>	Unambiguous, permanent identifier of the material. The identifier may be DOI, URN or accession number.	Archive/Repository/Publisher