

Survival and growth of Scots pine (*Pinus sylvestris*) seedlings in north Sweden: effects of planting position and arginine-phosphate addition - Data from field inventory 2019 of survival and growth of Scots pine (*Pinus sylvestris*) seedlings in Northern Sweden

SND-ID: 2021-116-1. **Version:** 1. **DOI:** <https://doi.org/10.5878/4gf7-ay12>

Download data

2021-116-001-V1.zip (10.79 KB)

effects_position_APtreatment_data_leader_length.csv (129.99 KB)

effects_position_APtreatment_data_survival.csv (8.32 KB)

seedling_performance_explanations.txt (14.84 KB)

Associated documentation

haggstrom_et_al.pdf (2.58 MB)

Download all files

2021-116-1-1.zip (~2.74 MB)

Citation

Häggström, B. (2021) Survival and growth of Scots pine (*Pinus sylvestris*) seedlings in north Sweden: effects of planting position and arginine-phosphate addition - Data from field inventory 2019 of survival and growth of Scots pine (*Pinus sylvestris*) seedlings in Northern Sweden (Version 1) [Data set]. Swedish University of Agricultural Sciences. Available at: <https://doi.org/10.5878/4gf7-ay12>

Creator/Principal investigator(s)

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Principal's reference number

SLU.sfak.2019.3.2.2-367

Description

The purpose of the research study was to investigate the effects of and interaction between planting position, arginine-phosphate addition and location on survival and growth of Scots pine seedlings in north Sweden.

The study include 11 trial locations between latitudes 61.1 and 67.1 in the boreal forest of northern Sweden where forest had been harvested and mechanical soil preparation had been performed in

2017 either by mounding or disc-trenching. Scots pine seedlings were planted in May and June 2018. At each site seedlings were planted in three different planting positions, including seedlings treated with arginine-phosphate and untreated seedlings for each planting position. Survival- and growth inventory was performed in August and September 2019 following two growing seasons.

The data consists of survival and leader shoot length measurements of Scots pine (*Pinus sylvestris*) from inventory after two seasons in field at 11 sites across middle and north Sweden as well as site location coordinates, date of planting and inventory along with site environment variables.

The variables are described in detail in the documentation file. Data from SMHI has been used, see documentation file.

Two data files are included:

- a. effects_position_APtreatment_data_leader_length.csv
- b. effects_position_APtreatment_data_survival.csv

Field inventory was performed in the end of the second growing season during August-September 2019. All seedlings that had any green needles were registered as living, seedlings with no green needles and missing seedlings were registered as dead. Leader shoot length was measured from the base of the top branches to the top of the terminal bud. Every second alive and undamaged seedling was measured with random start at first or second seedling for each row. At sites where many seedlings were damaged or dead in any of the planting position-and treatment combinations, all remaining undamaged seedlings were measured from that combination.

Data contains personal data

No

Language

[English](#)

Time period(s) investigated

2019-08 - 2019-09

Variables

22

Data format / data structure

[Numeric](#)

[Text](#)

Geographic spread

Geographic location: [Sweden](#)

Geographic description: 11 trial locations between latitudes 61.1 and 67.1 in the boreal forest of northern Sweden

Responsible department/unit

Department of Forest Genetics and Plant Physiology, Umeå Plant Science Centre

Contributor(s)

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Funding 1

- Funding agency: Knut and Alice Wallenberg Foundation
- Funding agency's reference number: KAW 2016.0341, KAW 2016.0352, KAW 2018.0259
- Project name on the application: UPSC Forest Biology and Biotechnology, Forest Biology and Biotechnology
- Funding information: The Foundation supports long-term, free basic research beneficial to Sweden, mainly in medicine, technology, and the natural sciences. This is achieved through long-term grants to excellent researchers and to projects. The Foundation can also initiate grants to strategic projects and scholarship programs.

Funding 2

- Funding agency: Trees and Crops for the Future (TC4F)
- Funding information: Trees and Crops for the Future (TC4F) is a Strategic Research Area (SRA) at SLU with Umeå University and the Forestry Research Institute (SkogForsk) as collaborative partners. TC4F develops knowledge on sustainable plant production and plant-based product development with the main objective to support the development of the new circular bioeconomy in Sweden.

Funding 3

- Funding agency: Vinnova
- Funding agency's reference number: 2016-00504
- Project name on the application: UPSC Centre for Forest Biotechnology
- Funding information: Vinnova is Sweden's innovation agency. We help to build Sweden's innovation capacity, contributing to sustainable growth. Our vision is that Sweden is an innovative force in a sustainable world.

Research area

[Biological sciences](#) (Standard för svensk indelning av forskningsämnen 2011)

[Ecology](#) (Standard för svensk indelning av forskningsämnen 2011)

[Forest science](#) (Standard för svensk indelning av forskningsämnen 2011)

Keywords

[Planting position](#), [Arginine-phosphate](#), [Pinus sylvestris](#)

Publications

Häggström, B., Domevscik, M., Öhlund, J., & Nordin A. (2021). Survival and growth of Scots pine (*Pinus sylvestris*) seedlings in north Sweden: effects of planting position and arginine phosphate addition. *Scandinavian Journal of Forest Research*. 36 (6), 423-433.

<https://doi.org/10.1080/02827581.2021.1957999>

DOI: <https://doi.org/10.1080/02827581.2021.1957999>

If you have published anything based on these data, [please notify us](#) with a reference to your

publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

15.09, 67.09

15.09, 61.06

22.3, 61.06

22.3, 67.09

15.09, 67.09

Accessibility level

Access to data through SND

Data are freely accessible

Use of data

[Things to consider when using data shared through SND](#)

Versions

Version 1. 2021-08-02

Download metadata

[DataCite](#)

[DDI 2.5](#)

[DDI 3.3](#)

[DCAT-AP-SE 2.0](#)

[JSON-LD](#)

[PDF](#)

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[File overview \(CSV\)](#)

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