Field trial of SILVIVO® – SM004 Lit, Jämtland, Scots pine

Trial 4 June – 20 September 2026 (108 days)

Introduction

At this site, seedlings planted with SILVIVO® were compared with untreated control seedlings. The aim was to examine differences in survival and growth during the first establishment period.

The trial site was unprepared forest land that previously carried productive Scots pine and Norway spruce stands, which were harvested in winter after extensive storm damage in January 2024. The site index was T23, with good drainage, moderate soil quality, and good access to daylight and precipitation. Three plots within the area were planted with 20 treated and 20 untreated seedlings per plot. Treated and untreated seedlings were planted in pairs about 1 m apart, on inverted mound (30 x 30 cm) prepared with a hand shovel in soil conditions as similar as possible.

Pictures from the site

Area identification 2026-04-22



Planting 2026-06-04





Follow-up 2026-09-20





Pictures of a representative selection of untreated (left) and treated (right) seedlings at the follow-up on 2026-09-20.

Results in brief

Key results

Measure	Control	SILVIVO®	Observed difference
Survival	100%	100%	0%
Mean seedling height	216 mm	245 mm	13%
Mean stem diameter	3.2 mm	3.6 mm	12%

Short conclusion

After 3.5 months, the SILVIVO® group had unchanged survival and somewhat stronger development than the control group.

Important to know

The results describe the outcome at this site and during the period in question. They should be interpreted together with soil conditions, weather, damage and the scale of the trial. A single field trial is not sufficient to draw general conclusions about all planting situations.

The trial in brief

Location	Lit, Jämtland
Planting date	2026-06-04
Follow-up date	2026-09-20
Tree species and seedling type	Scots pine, one-year-old containerised seedling
Scope	Scots pine, with every other row treated
Soil conditions	Unprepared ground, site index T23, previously Scots pine and Norway spruce stands, harvested in winter after extensive storm damage in 2024. Good drainage.
Site preparation	Inverted sod made with a spade (30 x 30 cm)
Dosage	1.6 grams per seedling
Application	Hand-dosed into planting tube
Trial focus	Survival and growth

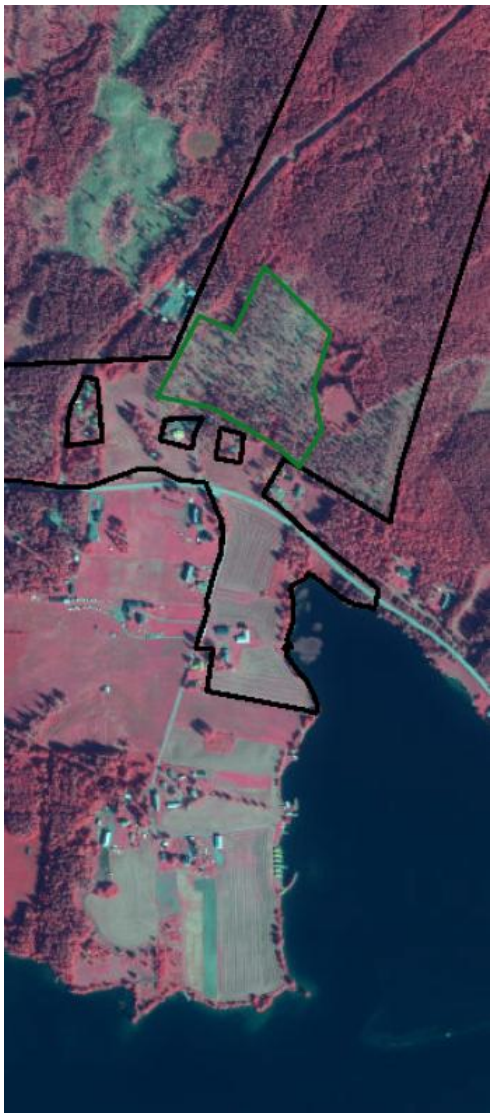
The question the trial aims to answer

Do SILVIVO®-treated seedlings show better survival and early development than the control seedlings under the conditions at the trial site?

Site conditions

Soil and planting

- Soil type and soil moisture: Good moisture content at planting and throughout the growing period.
- Seedling quality: Good at planting. A number of leftover seedlings were kept in their box and survived for 6 weeks after the trial and control seedlings had been planted.
- Site productivity or site index: T23.
- Elevation and climate zone: Approximately 263–286 metres above sea level, zone 4–5.
- Site preparation method and timing: Inverted sod made with a spade, 30 cm.
- Planting spot: In the inverted sod.
- Tree species and seedling type: Scots pine, one-year-old containerised seedling from SCA.
- Seedling protection: None.
- Known risks: Browsing damage.



In total, 120 seedlings were planted across three plots within the green-marked area on the map above. Every other row was treated with SILVIVO® and marked with blue sticks. The representative sample was taken from one of the plots.

Weather during the trial period

Weather at Östersund/Norderön, Jämtland, for the period 4 June – 20 September 2026, based on temperature data from the SMHI station Östersund-Frösön Airport and precipitation data from Norderön:

The mean daily temperature averaged 12.3°C over the 108 days. The warmest day was 16 July, with a daily mean of 19.6°C and a daily maximum of 27.7°C – the highest reading of the period (only one day reached 25°C as daily maximum, and none reached 30°C). No frost occurred during the period; the lowest daily minimum was 3.7°C on 11 September. The coldest daily mean, 7.7°C, occurred on 9 September as autumn set in.

Total precipitation was 345 mm over the period. As many as 52 of the recorded days had at least 1 mm of rain, while 38 days were virtually dry (below 0.1 mm) — the longest

continuous dry spell lasted only 6 days. The heaviest single day of precipitation was 21.4 mm, on 6 August.

How the trial was carried out

Control and SILVIVO® groups were created

→ SILVIVO® was placed under the roots at planting

→ The seedlings were marked and documented

→ The same measurements were followed up in both groups

Common trial method

The trial was carried out according to the SILVIVO® model, a standardised working method for planning, documenting and following up field trials. The common structure makes it possible to compare control and SILVIVO® seedlings and to relate the results to the site conditions. Read more about the SILVIVO® model at www.silvivo.se

Results in detail

Survival

All treated and untreated seedlings in the representative sample survived.

Seedling height and stem diameter

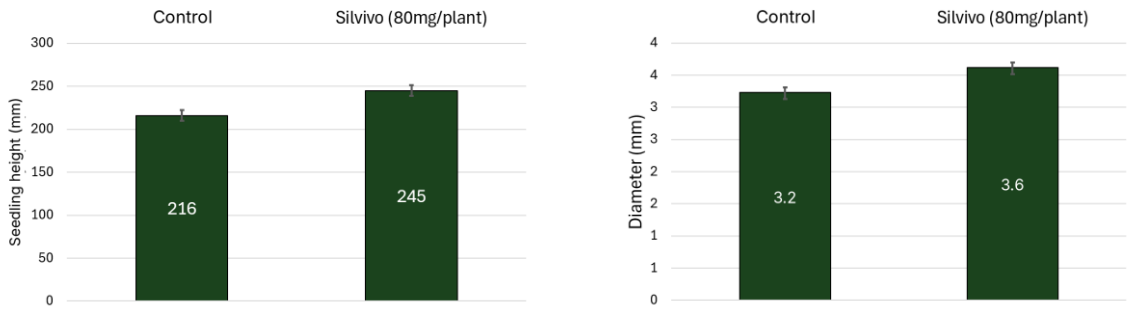


Chart of seedling height and diameter. Bars show means and error bars show the standard error of the mean (s/√n).

Damage and external impact

- Pine weevil damage: 0
- Browsing damage: 40 seedlings from one planting plot, 2 seedlings from another planting plot. The third plot was completely unaffected.
- Drought: 0
- Waterlogging: 0
- Frost: 0
- Vegetation competition: 0
- Mechanical damage: 0

Note

One of the three planting plots was completely lost due to browsing damage, while the other two were almost entirely unaffected.

What happens next?

- Next follow-up: No follow-up, as the site will be scarified during autumn 2026.
- Measurements to be repeated: No
- Planned long-term follow-up: No
- Comparison with other trial sites: A new trial will be planned shortly for comparison on the same land after site preparation.

About the trial

- Responsible for trial design: The landowner.
- Responsible for measurements: The landowner, with support from SILVIVO® staff
- Report date: 2026-10-27