

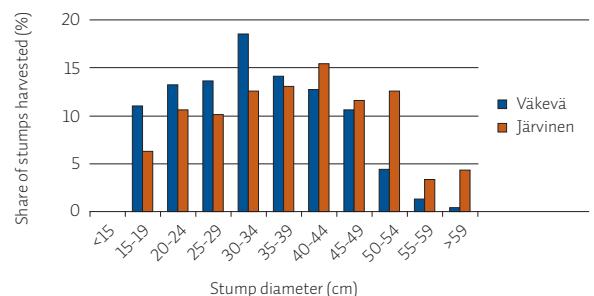
Testing Two Novel Stump-lifting Heads in a Final Felling Norway spruce Stand

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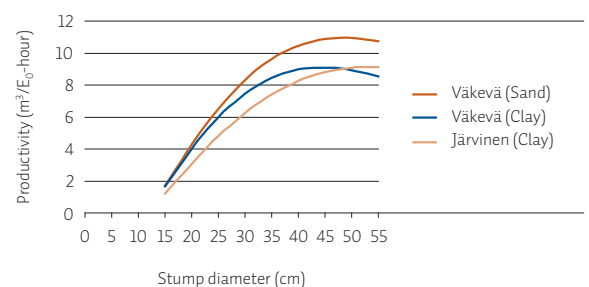
- Metsäteho Oy and TTS Research tested two new stump-lifting devices (the Väkevä Stump Processor lifting head and the Järvinen stump-lifting device) for lifting stumps in a final felling Norway spruce (*Picea abies*) stand.
- In the time study with the Väkevä Stump Processor lifting head, the productivity of stump lifting was 7.5 m³/E₀-hour when lifting spruce stumps with a diameter of 30 cm from clayey soil, and 8.3 m³/E₀-hour when lifting spruce stumps from sandy soil.
- When lifting stumps with a diameter of 40 cm, the stump-lifting productivity was 9.0 m³/E₀-h (clay) and 10.5 m³/E₀-h (sand).
- The results of this relatively restricted test indicated that the Väkevä Stump Processor is a reliable and effective stump-lifting head that enables the harvesting of high-quality stump raw material for energy generation.
- The stump lifting productivity of the other lifting head (Järvinen) was lower than that of the Väkevä Stump Processor.
- Some development suggestions for the Järvinen lifting head were presented and discussed.



The Väkevä Stump Processor lifting head tested in the time study.
Photos: Kalle Kärhä / Metsäteho Oy.



Stump diameter distributions for the Väkevä and Järvinen stump-lifting heads in the time study.



Effective (E₀) hour productivity of spruce stump lifting with the Väkevä Stump Processor in clayey and sandy soils and the Järvinen stump-lifting head. No site preparation was performed for stand regeneration.



The work cycle of the Järvinen stump-lifting device.