

Information about thinning demonstrating biofuel and Roundwood production

General information about stand

State	Latvija
Region	Latgales
Stand ID	6872 002 0086
Thinning year/season	2020
Topic	Pre-commercial thinning, improving the growing conditions of the remaining trees, and obtaining energy wood.
Area (ha)	4.65
Age	16
Forest type	Vr

Stand composition

Forest compartment composition: $3Ba_{16}$ $3B_{30}$ $2A_{16}$ $2Bl_{30}$

Terrain and soil conditions

They are located near the border of the Republic of Latvia, and the area is flat terrain, no sharp changes in altitude (hills, valleys, etc.) have not been detected.

The conditions of the soil for forest management are right. Soil is a mineral type with good soil bearing capacity.

Location of the demo site



Photo: Google Maps

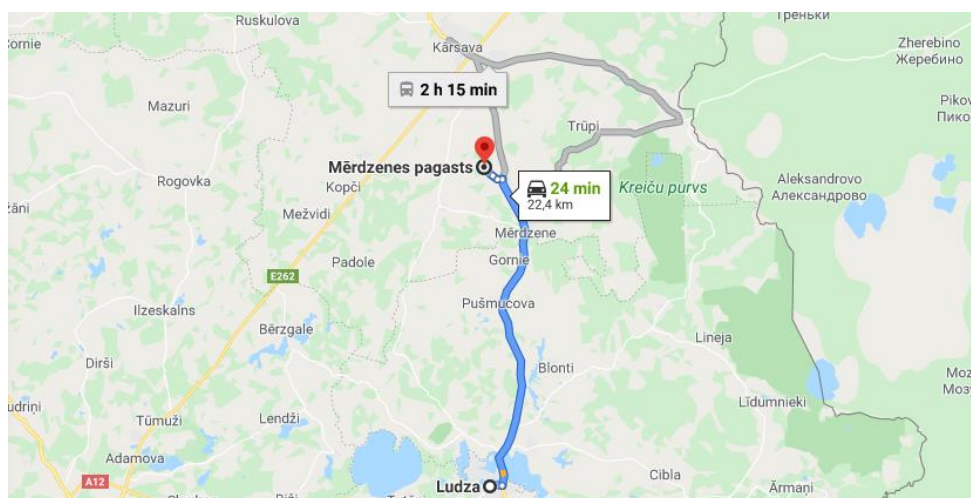


Photo: Google Maps

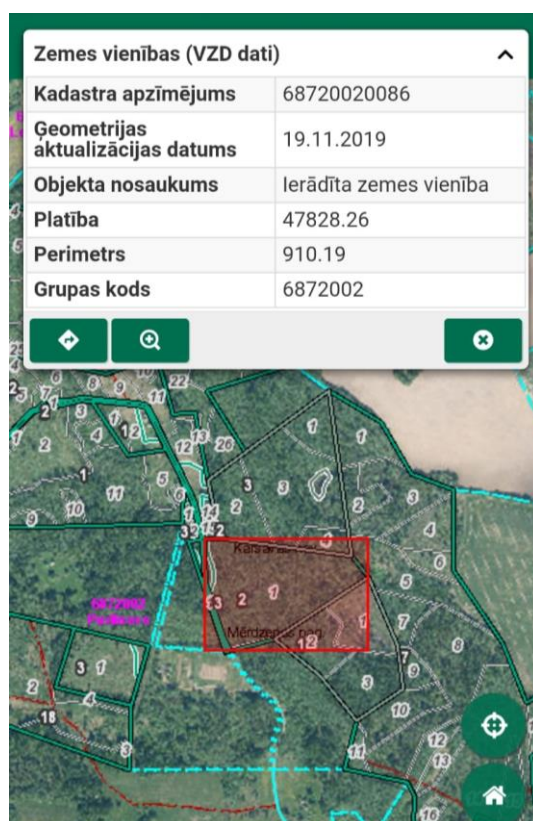


Photo: LVM Geo

Stand characteristic before thinning

Average DBH (cm)	11
Average height (m)	11
Number of trees (trees per ha ⁻¹)	-
Standing volume (m ³ /ha ⁻¹)	181



Photo: M. Mūrmanis

Stand management targets

1. *The main goal of forest management is to maintain or only increase the vitality, sanitary conditions of the stand and to promote the growth of the total stock, which includes the acquisition of quality assortment and biomass in the future.*
2. *Previous has been done pre-commercial thinning. However, in general, the last forestry activities had been done in 2019. – commercial thinning.*
3. *The aim is to thinning the stand at the appropriate age before the density has become so high that the increment starts and very thin and medium trees are formatted, which are generally very "stretched," and therefore, more damages can happen. For example, snowdrops, wind gases which remain "bent" and thus damage the quality of the assortments of the first part of the log.*

Stand characteristic after thinning

Average DBH (cm)	15
Average height (m)	15
Number of trees (trees per ha ⁻¹)	-
Standing volume (m ³ /ha ⁻¹)	130



Photo: M. Mūrmanis



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Mechanical damages due to thinning

Bark damages have been found on the remaining trees in the site after thinning. These damages to the bark can contribute to the penetration of diseases into the tree, which can lead to damage to the tree in the future.

Baltic ForBio

Previous, the stand has been very dense, and after thinning, free space between the trees increases, so this is a good reason for wind can run, and trees are more accessible to fell.



Photo: M. Mūrmanis



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Applied work method in thinning

Pre-commercial thinning is done with a hand-held chainsaw, brush cutter, such a technique is the most optimal option, as it causes less damage to the remaining trees and is the most economically advantageous

For forwarding the Roundwood and logging residues used, “BELARUS” specially designed for forest logging.



Photo: www.solidzini.lv



Photo: statsrent.lv



Photo: tractorsinfo.com

Belarus is a universal machine, can be used both in agriculture and forestry (forwarding). Pros: cheap repairs, relatively no so heavy, can be combined for different jobs, with various additional equipment units (trailers, hydraulic manipulators, tow bars, etc.).

Technical parameters:

Carrying capacity: 12 000 kg;
Road speed: 25km/h;
Speed through the forest: 8 km/h;
Length: 10 810 mm;
Width: 2 700 mm;
Height: 3 300 mm.

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