

Baltic ForBio, WP 2, GA 2.4

Information about Demonstration Site and Demonstration of Early Thinning for Wood Fuel/Energy

Country	Lithuania
Region	Kapčiamiestis
Demonstration Site ID	54°00'57.1"N 23°43'22.8"E
Year/Date of the Thinning	December 2019
Торіс	Last thinning before main cuttings

Information about the Forest Stand

General Information

Forest Stand ID	official ID of the forest stand (if applicable)
Area [ha]	0.4 ha
Age [years]	80

Tree Specie

Species in stand: 100 % of pine. The stand is planted, not natural origin. Underbrush is rare, prevail juniper and alder buckthorn.

Terrain and Soil Conditions

The area is flat. Soil of stand is normal moisture, infertile, sandy. Forest type - vacinio-myrtilliosa.

Map with the Location of the Demonstration Site

Demonstration site is marked "7" in map.



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Stand Description Before Thinning

Dbh (arithmetic mean) [cm]	28
Tree height [m]	27
Number of trees per hectare [N/ha]	1400
Volume [m³/ha]	420

Objectives of Forest Management

In Lithuania clear cutting in pine stands is available from 101 years. It was last thinning before main cuttings. Commercial thinning aim - to promote the growth of the volume of the best trees and the whole stand, to cut shaded, delayed growth trees and trees-wolves. 20 years ago in this stand was carried out thinning.



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Pictures Before Thinning





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Stand Description After Thinning:

Dbh (arithmetic mean) [cm]	24
Tree heigh [m]	26
Number of trees per hectare [N/ha]	700
Volume [m³/ha]	270



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Pictures After Thinning







Damages to Trees and Soil



The right time was chosen for both harvesting and biofuel extraction from stand, so no road ruts appeared after the forest work. Some bark damages were observed near skidding roads.



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Thinning Method

Description of Working Process:

Harvesting process was carried out using forest machinery, not brush saw/chainsaw operators. Truck for this machinery is needed, but in the neighborhood were more harvested stands so costs of transportation have been reduced.

After commercial thinning was made some logs and high quality wood production. Forest owner decided to extract part of felling residues from stand as well. According rules and order of cutting some felling residues have to remain at stand. Biofuel was extracting using the same forwarder as for logs. Due reduced biofuel prices it is not profitable to produce wood chips from felling residues at the moment.

Machines (incl. pictures):

The choice of machines was determined by economic calculations, duration of work process and machinery options. For harvesting process company used John Deere 1470E harvester and Valmet 840.4 for biofuel extraction. Valmet 840.4 is quite versatile machine. Forwarder is maneuverable, a large bunker convenient for collecting biofuels.





2021-03-31

Attachments:

- Map with forest stand (general map / detailed map)
- Pictures of the forest stand *before* thinning
- Pictures of the forest stand *after* thinning
- Pictures of the machines