EU HARDWOODS

Progress report from UL FGG – Ljubljana meeting

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TESTING PLAN

- Expand the data with visual, non-destructive and destructive data f
single lamellas
- Within the EU Hardwoods project tension tests will be done
- Later bending tests on single lamellas and
- Tension and bending tests on finger joints will also be done
- Glulam and CLT (MPA) specimens

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TESTING - Material

- Beech wood (*Fagus sylvatica*) from Slovenia
- 208 logs from sawmill GG Novo Mesto d.d.
- Length of logs: 3.85 – 4.66

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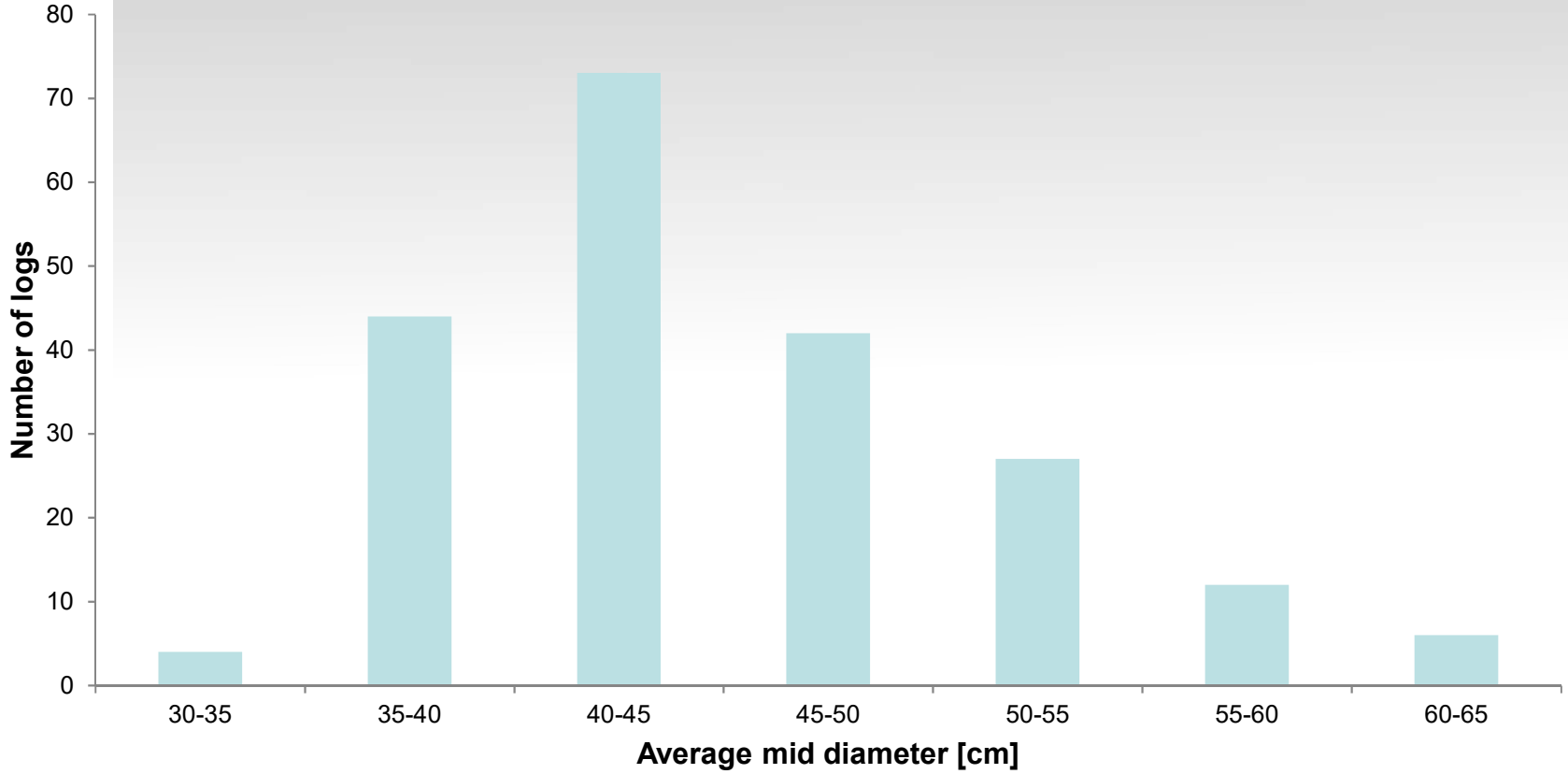
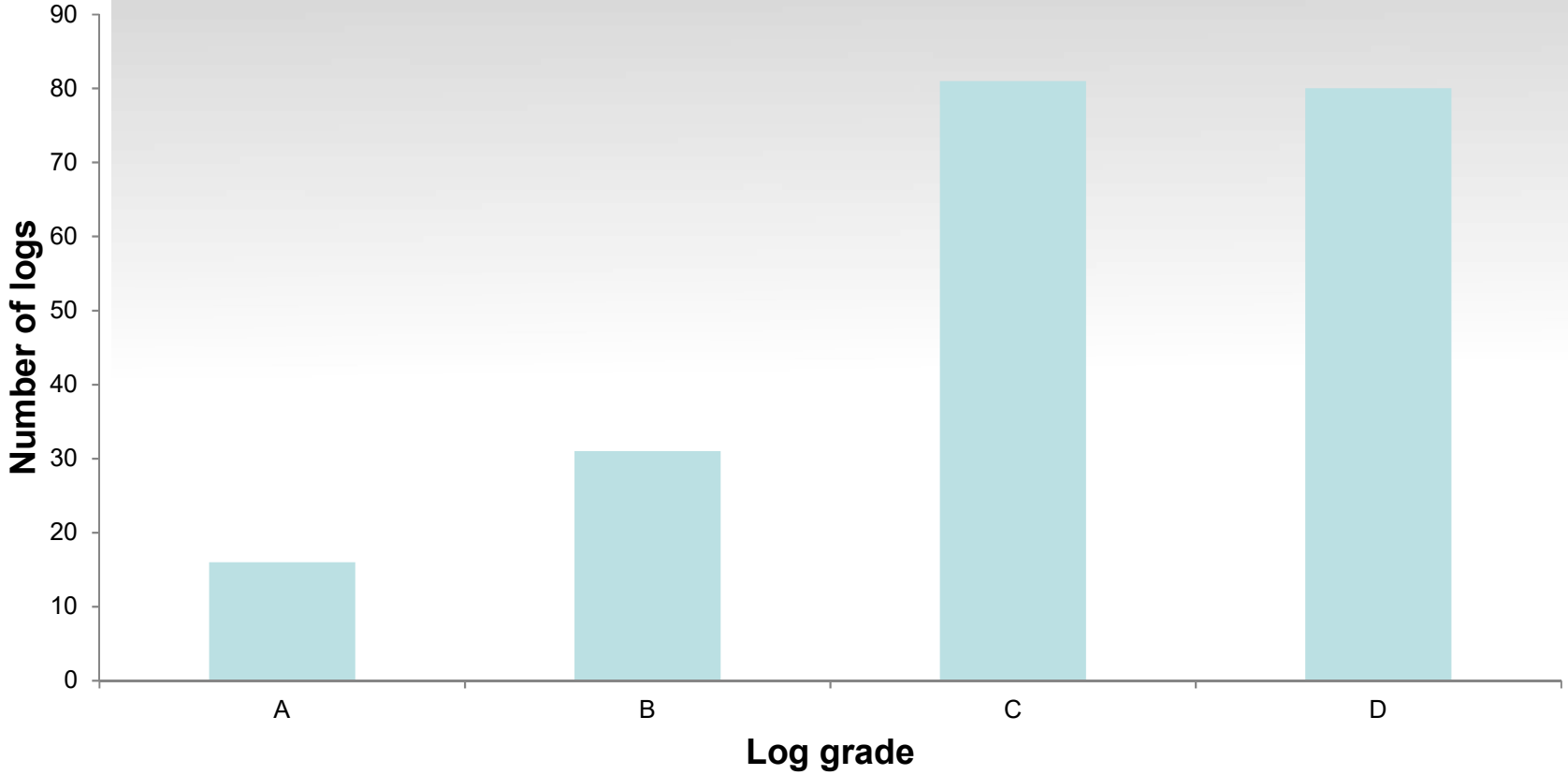
TESTING – Measurements on logs

- Visual grading according to EN 1316-1:2012
- Longitudinal vibration frequency
- Transverse vibration frequency (only on a small sample)

Average middle diameter of logs



Log grade according to EN 1316-1:2012



SAWING - sample

- Random sawing pattern
- Two sawing dimensions:
  - 32 x 130 mm; 3 - 7 pieces from each log
  - 44 x 130 mm; 1 – 3 pieces from each log (only 130 logs)

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Measurement on “green” boards

- Longitudinal vibration frequency
- Moisture content on two boards per log (MC = 40 %)

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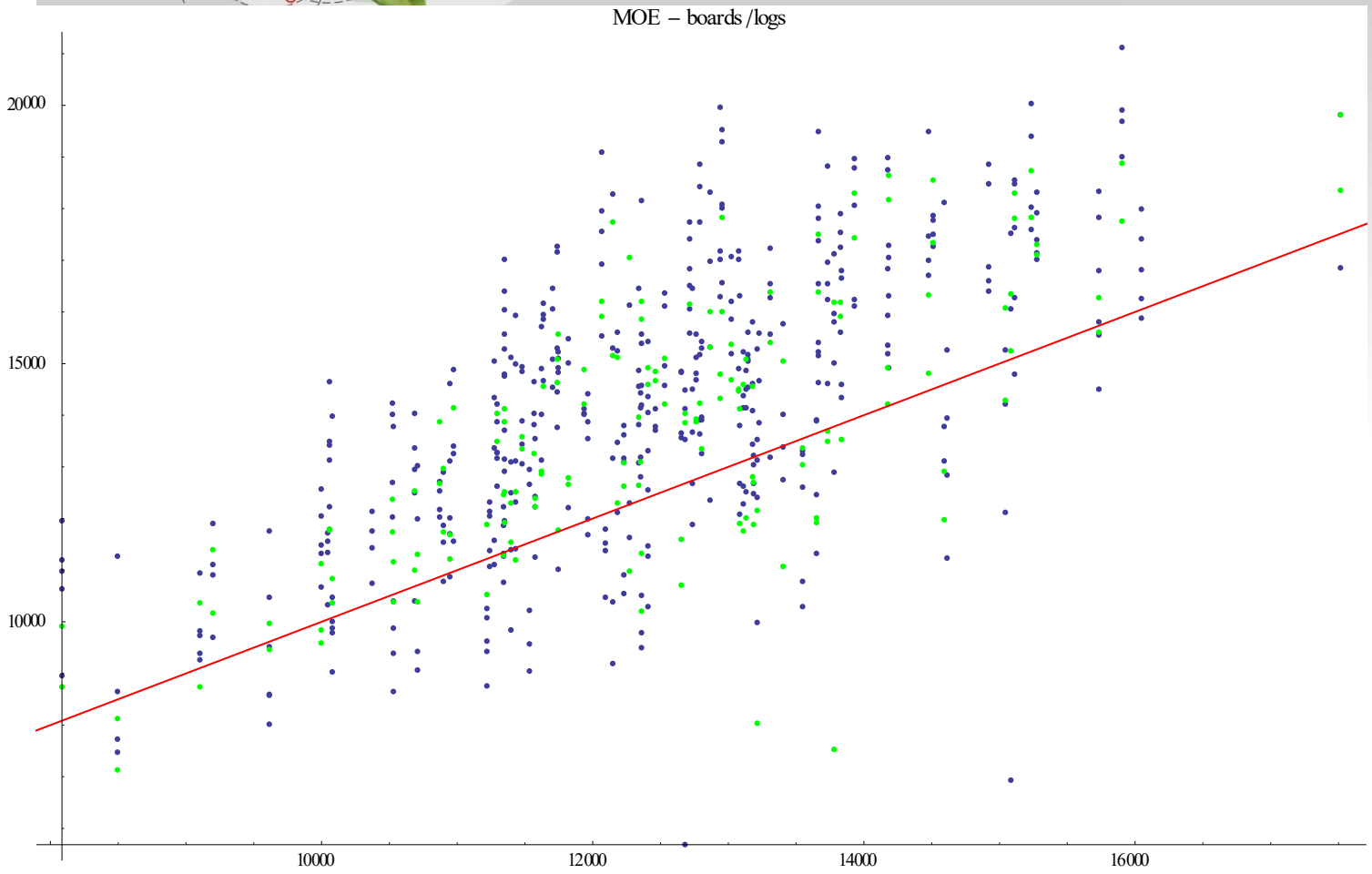
MOE – boards /logs
20000
15000
10000
10000
12000
14000
16000

FURTHER TESTING – NDT + Destructive tests

- Visual grading (DIN 4074-5, KAR?, BS 5756?)
- Longitudinal Eigen frequency (laser, accelerometer, microphone)
- Transvers Eigen frequency (laser, accelerometer, microphone)
- Speed of ultrasound and damping of ultrasound
- Edgewise and flatwise bending MOE and tension MOE on all boar
- Destructive testing:
  - 2016: Tension tests on 200 boards
  - 2017: Bending tests on 200 boards
  - 2017-18: All other tests

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Thank you.

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