The Latvia University of Agriculture
Forest Faculty

OCCURRENCE OF WOOD DAMAGE IN YOUNG FOREST STAND ECOSYSTEMS OF NORWAY SPRUCE (*PICEA ABIES* (L.) KARST.)

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IEGULDĪJUMS TAVĀ NĀKOTNĒ

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Research Topicality (1)

Many damages of the tree are caused by climate changes.

Especially roots and crowns of the trees are the most exposed to temperature changes or excessive humidity when the tree developes.

Research Topicality (2)

Classification of tree damages:

- branch and knot damage,
- stem crack,
- wood structure defect,
- fungal and insect damage.

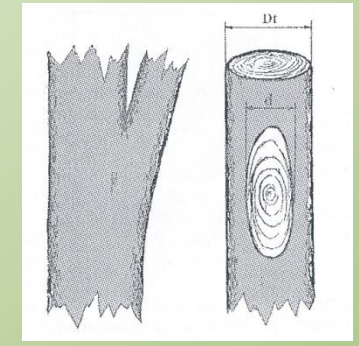
Aim of the Research

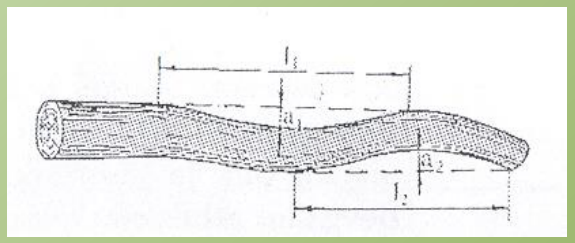
The research was established to determine the wood damages in 40-year-old Norway spruce (*Picea abies* (L.) Karst.) young stands.

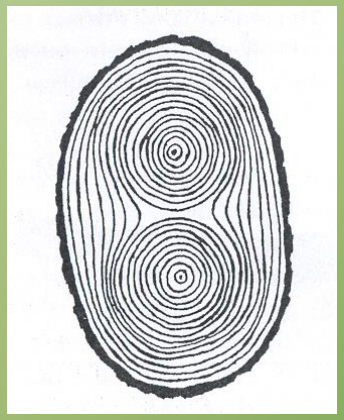
Material and Methods

The empirical trials were carried out during the time period from 2011 to 2012 in 34 stands in all Latvian regions, including 14 single species stands and 20 mixed ones. Tree damages were estimated visually in growing stands and clasiffied.

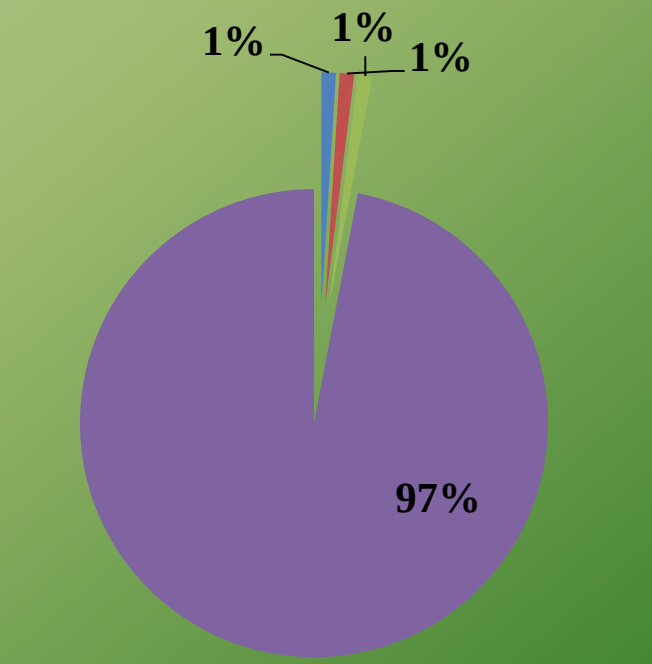
Results (1)





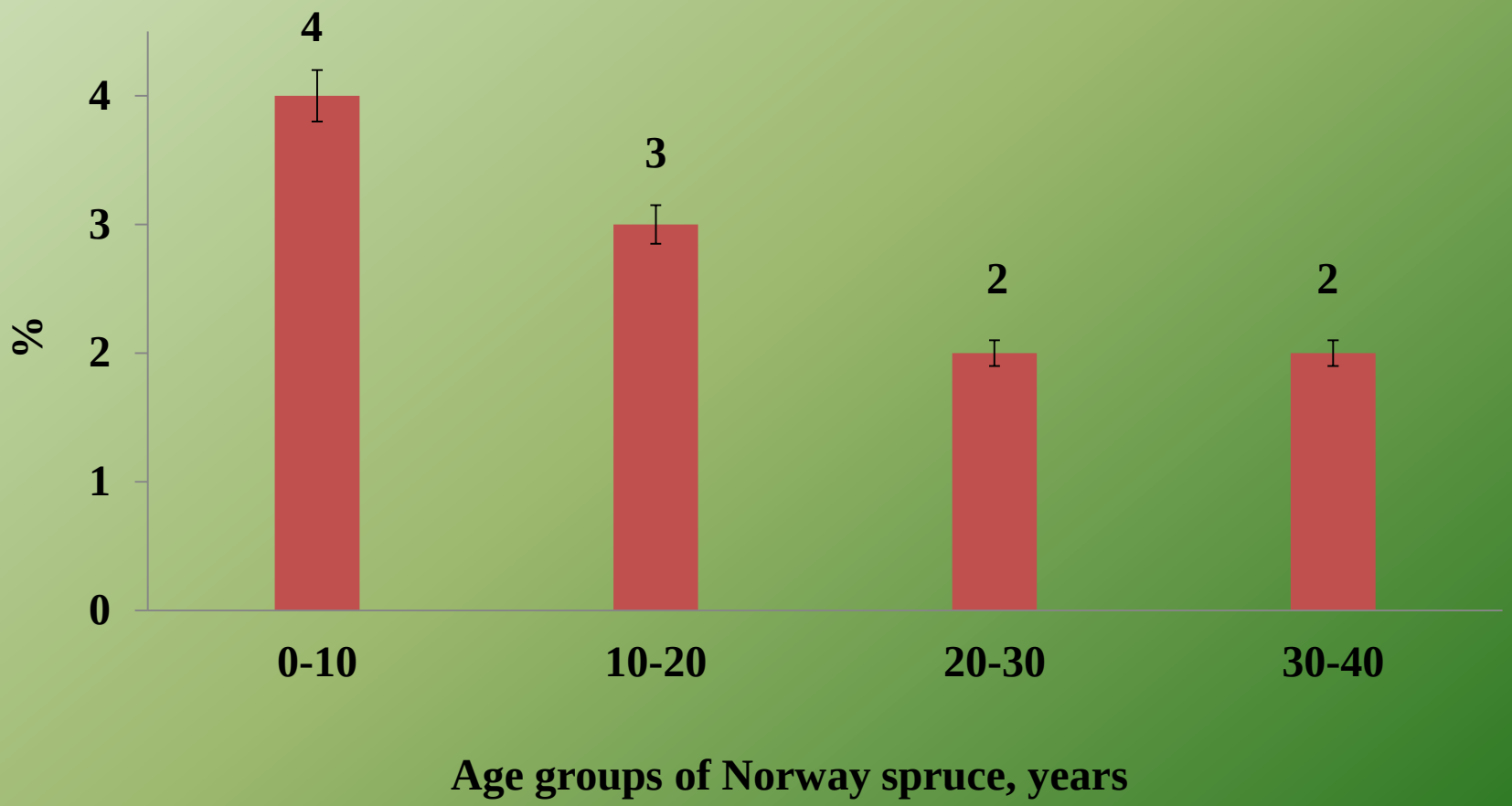


Percentage distribution of Norway spruce tree damages



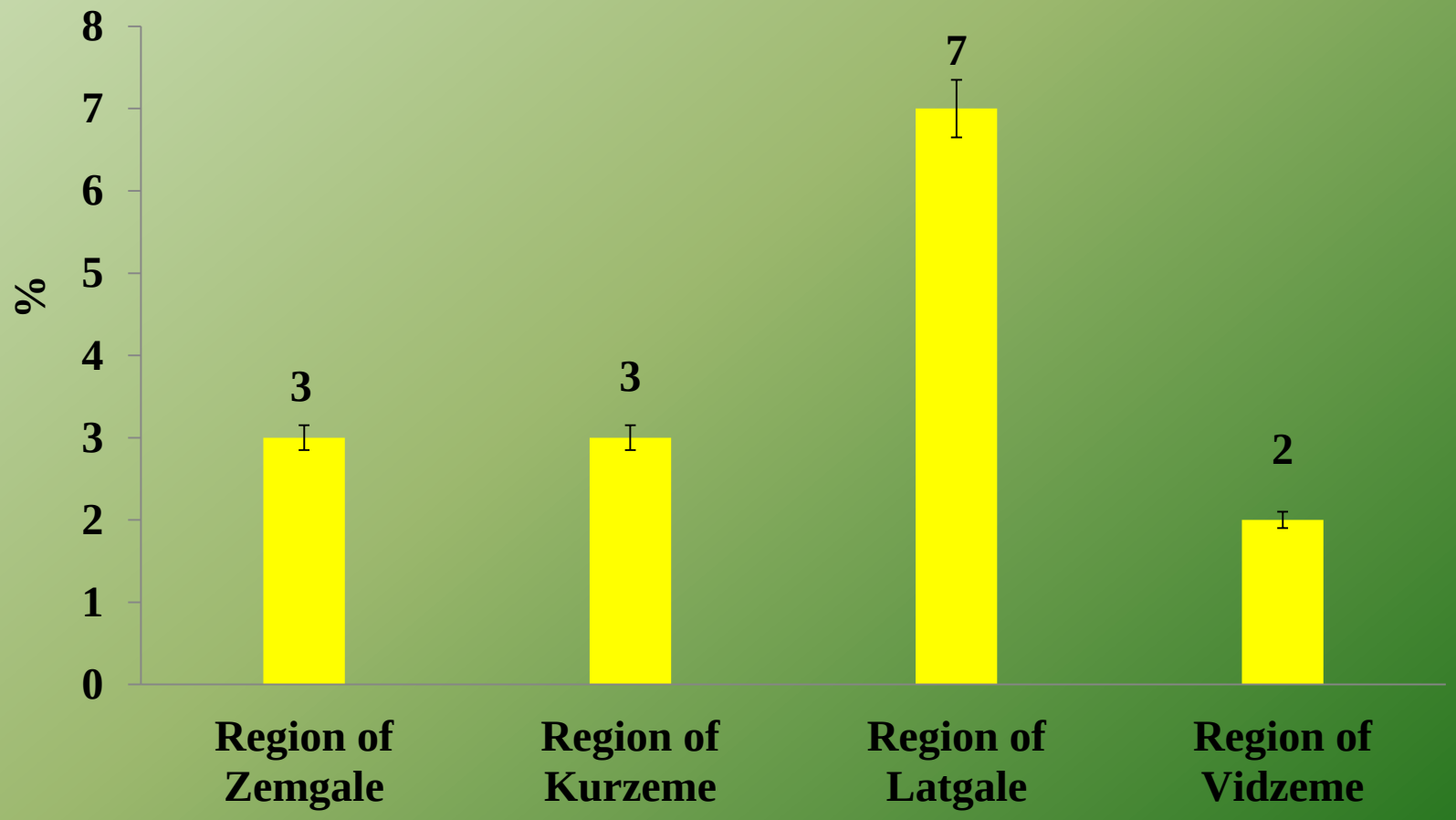
Results (2)

The occurence of tree damages in young stands of Norway spruce.



Results (3)

The occurence of tree damages in young stands of Norway spruce in different regions of Latvia.



Conclusions

1) **Spike knots, crookedness and double stems were mostly found, the occurence of each value did not exceed 1%.**
2) **Occurence of wood damage in young forest stands of Norway spruce is most founded in age group (0-10) – 4% but the lowest in (20-30) and (30-40) – 2%.**
3) **Wood damage occurrence compared by region, was found that most of them were in region of Latgale – 7% and lowest in region of Vidzeme - 2%.**

Acknowledgments

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Thank you for attention!