

# Mechanical Properties of Transgenic Aspen with Reduced Lignin Content and Increased S/G Ratio

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## - Material -



- Transgenic aspen (*Populus tremuloides*) with reduced lignin and increased syringyl/guaiacyl ratio was investigated
- Chemical content was measured by analytical chemistry and was predicted by Near-infrared spectroscopy
- Modulus of elasticity in three-point bending and ultimate compression strength parallel to the grain was measured





## - Conclusions -



- Specific gravity only had significant effect on the ultimate compression strength
- The decrease in total lignin content caused significant decrease in mechanical properties.
- The mechanical properties of genetic group with increased S/G was not significantly different from the wild-type.
- The modification of total lignin content and S/G ratio together have a complex effect on the mechanical properties