

坡向对毛竹主要物理力学性质的影响 (PDF)

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Title: Impact of Different Slope on Main Physical and Mechanical Properties of Bamboo

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摘要: 研究不同坡向毛竹主要物理力学性质的变化, 为竹材资源合理开发、加工和利用提供理论依据。按照GB / T 15780—1995对毛竹材的气干密度、基本密度、抗弯弹性模量、顺纹抗压强度、抗弯强度进行了测定, 结果表明: 气干密度、基本密度随毛竹轴向高度增加呈增加趋势, 其中, 东北、西南坡向的基本密度分别为0. 699g·c m⁻³和0. 720g·c m⁻³, 气干密度分别为0. 798g·c m⁻³和0. 835g·c m⁻³, 西南坡向毛竹的基本密度、气干密度分别增加了2. 973%和4. 618%, 在0. 05水平上经T—检验差异显著。东北坡向与西南坡向毛竹的抗弯弹性模量、顺纹抗压强度、抗弯强度分别为12368. 28、11244. 71MPa , 55. 858、56. 206MPa 和183. 203、179. 918MPa , 其中, 东北坡毛竹的平均弹性模量较西南坡高9. 08%。

Abstract: Accordi ng to t he Chi na nati onal strandard GB / T 15780—1995, t he ai r—dry density , basi c density , MOE , co mpressi ve strengt h parallel to grai n and MO R of ba mboo were meas ured . The res ults s ho wed t hat bot h t he ai r—dry density and basi c density i ncreased along wit h t he i ncrease of axi al hei ght . The basi c density and ai r—dry density of ba mboo on nort heast—faci ng and s out h west—faci ng slopes were 0. 699g·c m⁻³and 0. 798g·c m⁻³, 0. 720g·c m⁻³and 0. 835g·c m⁻³res pecti vely . The basi c density and ai r—dry density of s out h west—faci ng slope i ncreased by 2. 973%and 4. 618%co mpared to t he values on nort heast—faci ng slope res pecti vely . They were si gnifi cantly different at 0. 05level i n T—test . The MOE , t he co mpressi ve strengt h parallel to grai n and t he MO R of ba mboo on nort heast—faci ng and s out h west—faci ng slope were 12368. 28MPa & 11244. 71MPa , 55. 858MPa & 56.

❖ 导航/NAVIGATE	
本期目录/Table of Contents	
下一篇/Next Article	
上一篇/Previous Article	
❖ 工具/TOOLS	
引用本文的文章/References	
下载 PDF/Download PDF(3544KB)	
立即打印本文/Print Now	
推荐给朋友/Recommend	
❖ 统计/STATISTICS	
摘要浏览/Viewed	455
全文下载/Downloads	195
评论/Comments	



206MPa and 183. 203MPa & 179. 918MPa respectively. Among them, the MOE on north-east-facing slope bamboo increase by 9.084%, and the differences of MOE between north-east-facing and south-west-facing slopes were remarkable at 0.05 level in T-test.

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