# Loblolly Pine Provenance Variation in Juvenile Wood Properties

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**Abstract** The wood basic density (*BD*), fiber length (*FL*) and latewood percentage (*LP*) of loblolly pine provenances were evaluated based on four 9-year-old provenance tests in Guangxi, Guangdong, Jiangxi and Zhejiang. The result showed that the provenance difference was significant for *BD* but not notable for *FL* and *LP* in every test location. The geographical variation patterns of wood properties of provenances were mainly two-way clinal ones influenced firstly by longitude and secondly by latitude. The *BD* of the western provenances were the highest, of the northern ones the next, and of south coast ones the lowest, the *FL* of the south coast provenances were the longest and of east coast ones the shortest, inland and northern provenances had the higher *LP*. The *BD* of loblolly pine were also different between test locations, decreasing from south to north. The provenance × test location effect for *BD* was small, most of the provenances displayed relatively higher stability. *BD* and *LP* were negatively correlated with the tree growth and yield traits, but *FL* was not correlated regularly with the tree growth traits, the three wood property traits also had complicated relationship with tree form traits.

**Key words** loblolly pine　geographical provenance　juvenile　wood wood properties

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## "五个相思树种纸浆材种源和家系选择研究"通过部级鉴定

"五个相思树种纸浆材种源和家系选择研究"为国家"八五"科技攻关专题"相思类树种纸浆材育种"的主要研究内容，由中国林科院热林所杨民权副研究员主持，于1996年12月6日在本所通过鉴定。该成果研究系统全面、数据翔实，与国外同类研究相比，规模大、内容丰富、成效显著。9位评委一致认为达到了国际同类研究的先进水平。主要内容有：(1)从原产地收集了马占相思(*Acacia mangium* Willd.)、大叶相思(*A. auriculaeformis* A. Cunn. ex Benth.)、厚荚相思(*A. crassicarpa* A. Cunn. ex Benth.)全分布区种源113个、家系469个以及灰木相思(*A. implexa* Benth.)、银荆(*A. dealbata* Link.)主分布区种源18个，共收集保存了基因资源600件，在13个地点建立了40 $hm^2$的试验林；选出适合纸浆材的优良种源47个，材积增益达20%以上；选出优良家系40个，材积增益达30%以上。(2)制定了相思树种纸浆材的选优标准，选出优树145株。(3)解决了相思树种无性繁殖中的截干促萌技术，优树组培微繁技术，田间移栽成活率达80%以上。(4)推广良种造林2万$hm^2$，获得了明显的经济、社会和生态效益。

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