

several small irrigation plots. Averaging about 0.45 hectare in size, each plot was supplied with a fixed quantity of water by means of dripping rainmaker systems; while the plots of the control only relied on natural rainfall. In contrast, the plots with 1st-class water supply generally received artificially dripped water about 50 percent higher than the rainfall they received, and about 100 percent higher in regard to those with 2nd-class water supply of the same contrast. The results of the experiments, gained through three repetitions of the similar practice, indicated that irrigation could promote greatly the volume increment of this species without giving noticeable influences on such measurements of wood fiber as its length, width, cavum diameter, and double-wall thickness. However, it would lead a declining trend to most indexes of wood concerning its physical and mechanical properties, such as basic density, hardness, compressive strength, bending strength, shearing strength, and impact ductility.

**Key words** poplar; irrigation; wood property

## “国外杨树引种及区域化试验研究”达到国际 同类研究的先进水平

中国林科院林研所等单位承担的“国外杨树引种及区域化研究”，经近十年的工作，从意大利、法国、南斯拉夫、荷兰等17个国家引进的331个杨树无性系中选出了6个优良无性系，即美洲黑杨无性系55杨、ZKEN 8 杨，欧美杨无性系比利尼杨、N3016杨、NE 222杨和74杨，具有生长快、成活率高、干形通直、抗病虫害能力强的优良特性。经区域化试验，初步确定了6个优良无性系的适生范围。两个美洲黑杨无性系在北亚热带湿润地区、淮河流域以南至长江流域以北之间的广大平原地区均可种植。欧美杨无性系比利尼杨适生豫西、晋南的南温带半干旱地区，NE222 杨和74杨适宜在河北中南部、山东中北部、安徽北部和河南北部南温带湿润地区推广，N3016杨适宜河北北部南温带亚湿润地区种植。

最近，该项研究在北京通过鉴定。专家们认为：该成果紧密结合生产，选种程序严格，引种资源收集丰富，投资少，见效快，经济效益明显。在引种的同时，建立了我国材料最丰富的黑杨派杨树基因库。成果达到了国际同类研究的先进水平。

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