EFFECTS OF STAND DENSITY ON CROWN ARCHITECTURE AND DISTRIBUTION OF LIGHT ENERGY IN *POPULUS DELTOIDES* CV. 'LUX' I-69/55 PLANTATION

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Abstract The close spaced *Populus deltoides* cv. 'Lux' I-69/55 plantations have sharper-angled branches and low percentage of skeleton branches. The optimum stand density appears when the leaf area index reaches 7.81 and the leaf area density amounts to 0.8～0.9. The light distribution within the canopy is subject to the leaf area index and the extinction coefficient. The light intensity weakens faster in closed plantations. Taking 8% of the relative light intensity as a criticle light intensity, the close spaced plantation possessed the lowest productivity and the medium density plantation the highest at the sixth year. The widely spaced plantation's productivity approached that of the medium density plantation at the seventh year.

Key words *Populus deltoides* cv. 'Lux' I-69/55; stand density; crown architecture

我国选育出第一批早实核桃新品种

中国林科院林研所、山东省果树所等单位从70年代开始进行了早实核桃新品种选育研究。共调查实生树10万多株，人工杂交组合50多个，获杂交子代苗2 000多株，在11个省、市(区)建立无性系测定园和区试园1 500多亩。"七五"期间汇集了九个省、市筛选出的36个最优无性系，在豫、晋、陕、辽进行评比及区域化试验。评定出我国第一批16个早实核桃新品种，具有丰产、优质等优良经济性状，已推广栽培2万余亩，产量提高10倍左右，深受生产单位欢迎。研究成果最近在北京通过了部级鉴定。专家们认为该项研究布点合理，试验设计正确，数据可靠，研究成果居国内早实核桃良种选育工作的领先水平，所评定的16个早实核桃新品种，为实现我国核桃生产品种化、良种化奠定了基础。部分品种的果质和丰产性达到了国际核桃良种水平。

(中国林业科学研究院 郭志伟)