

## STUDY ON THE EFFECT OF STUMP DIAMETER AND HEIGHT ON SPROUT REGENERATION IN MANGIUM (*ACACIA MANGIUM* WILLD.)

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**Abstract** The effect of diameter and height of stumps on sprout regeneration in mangium was studied in a short rotation mangium plantation. The study is based on observations of four height classes (25 cm, 50 cm, 75 cm and 100 cm) and two diameter classes (4.1~8.0 cm and 8.1~12.0 cm) of the stumps. The results showed that sprouting percentage of the stumps and number of sprouts per stump increased with the stump height, whereas they decreased with stump diameter. The length and diameter of sprouts and the total basal-area of all upright sprouts per stump increased with the increases in stump height and diameter. For achieving good results of sprout regeneration, it appears that young mangium plantation should be coppiced at heights ranging between 50~75 cm.

**Key words** *Acacia mangium* Willd.; sprout regeneration

### 恢复胡杨、梭梭和怪柳荒漠林创新路

由新疆林科院、内蒙阿拉善盟林业处和中科院新疆分院生土所承担的国家攻关项目“荒漠地区胡杨、梭梭更新复壮技术”,包括“怪柳抗逆性及其造林技术”,1989年10月经新疆、内蒙古自治区科委组织鉴定,认为成果达到国际和国内研究的先进水平,为“三北防护林建设工程、恢复荒漠林提供了配套技术。(1)建立了南疆塔里木河流域胡杨林天然落种更新的预测模型;(2)把胡杨林划分为湿润、干燥、干旱和盐地类型,相应制定了经营原则;(3)引洪灌溉及独特的渠道进出口设计;(4)不同密度和林龄的胡杨林科学管理方法。内蒙采用“护、封、促、育、造”营林技术措施,再现乔、灌、草立体草场生态系统。现已封育胡杨林12.5万亩,更新复壮3.88万亩,每年提供林下牧草150万kg,可为1 1367只羊提供冬春饲料。在更新幼林中,可伐除老树24 615 m<sup>3</sup>,纯收入437.4万元,投产比为1:5.5。

探索了梭梭个体、群体发生规律和不同荒漠立地条件下天然更新能力。对梭梭成过熟林隔带皆伐,大面积疏残梭梭林围栏封禁,每年提高覆盖度1.2%~2.4%。已封育50多万亩,节省造林费8 750万元。封育5年梭梭,产草量增加4.7倍,名贵中药肉苁蓉产量增加5倍。

对怪柳研究提出了深栽植苗造林,解决了重盐碱地上不易成活的难题。在自治区的支持下,在沙地和盐碱荒地上,大面积洪灌,快速恢复和发展怪柳林27万亩。

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