

2025 平茬杨树苗锈头病的防治试验

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摘要 [目的] 为了有效防治2025 平茬杨树苗锈头病。[方法] 对2025 杨树平茬苗采用3 种不同的施药措施: 雨后及湿热天气后的预防性施药, 锈头病发病后施药, 锈头病严重时施药。比较3 种施药方式下杨树苗的粗度和高度生长情况。[结果] 结果表明: 预防性施药措施明显优于其他2 种措施。[结论] 该研究为2025 杨树苗生产了提供科学依据和经验性的借鉴。

关键词 2025; 平茬苗; 锈头病; 施药

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Trial Study on Rust Head Control of 2025 Stumped Poplar Seeding

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Abstract [Objective] The purpose of the study was to control the rust head disease of 2025 stumped poplar seeding effectively. [Method] 3 different measures of pesticide application were used on the stumped seedlings of 2025 poplar, including preventive pesticide application after rain and damp-heat weather, pesticide application after rust head disease occurred, pesticide application when rust head disease was serious. The growth status of poplar seeding on thickness and height under 3 nodes of pesticide application were compared. [Result] The measure of preventive pesticide application was obviously superior to the other 2 measures. [Conclusion] The research supplied scientific basis and experience reference for the production of 2025 poplar seedlings.

Key words 2025; Stumped seedlings; Rust head disease; Pesticide application

2025 号杨树生长迅速, 材质好, 易于加工, 是温带地区重点推广的杨树新品种, 但是其平茬苗远比中林-46、108 等品种易感锈头病害。预防杨树苗锈头病是2025 杨树育苗的关键性技术, 决定着苗木质量。为此, 笔者对2025 杨树苗的锈头病开展研究, 总结施药规律, 为2025 杨树苗木生产提供科学依据。

1 材料与方 法

1.1 试验地概况 在3 个试验点进行试验。驻马店市林业科学研究所的多年杨树苗圃地, 年平均气温14.8, 年平均降雨量924 mm, 无霜期221 d, 土壤有机质含量低, 土质板结, pH值7.2。上蔡县卢岗乡九彩李村的菜地, 年平均气温14.9, 年平均降雨量871 mm, 无霜期225 d, 土壤有机质含量高, 土质疏松, pH值6.4。上蔡县大路李乡刘庄的庄稼地, 年平均气温14.7, 年平均降雨量851 mm, 无霜期222 d, 土壤有机质含量中等, 土质中等, pH值6.7。

1.2 试验材料 试验所用的2025 杨树插条来自驻马店市林业科学研究所同一块地产出的当年生壮苗。扦插后长出当年生苗, 次年平茬后长出的2 年生苗供施药试验用。药物采用正规厂家生产的1605、水胺硫磷和水的混合液, 体积比例为1:1:1500。

1.3 试验方法 每个试验点各有不相邻的3 块试验地, 分别采用不同的施药措施: 雨后、湿热天气后的预防性施药; 锈头病发病后立即施药; 锈头病严重时施药。同一地点各试验地除用药措施不同外, 其他条件都相同。

2 结果与分析

从表1、2、3 可以看出, 不同的施药措施对杨树苗的生长有不同的影响, 产生不同的效果。2025 平茬苗在雨后、湿热天气极易受真菌、细菌和害虫等的侵染, 此时虽然病害症状未表现出来时, 但并不说明没有遭受侵染。此时施药能够杀灭已经感染的真菌、细菌和害虫。另外, 在药物的有效

作用期内, 树苗可以免于菌虫的侵袭, 在雨水、阳光充足的情况下快速生长。由于树梢未受损伤, 生长素分泌旺盛, 保持着强大的顶端优势作用, 抑制侧枝生长, 打杈次数少, 树体营养消耗少, 树干粗实, 苗木高大。反之, 在病害症状表现出来之后再施药, 则树苗已经受到损伤, 特别是树梢受到真菌等的侵染, 高生长停滞, 顶端不能分泌生长素或分泌很少, 不能抑制侧枝生长。在雨水、阳光充足的情况下, 侧枝迅速大量发出, 消耗大量营养, 打杈任务量大。由于树苗生长错过了良好的水光充足的时机, 再加上营养消耗, 树苗细而矮。

表1 驻马店市林业科学研究所的杨树苗生长情况

Table 1 Growth conditions of poplar seeding in Zhunadian Institute of Forestry

施药措施 Pesticide application measures	施药次数 Pesticide application times 次	除侧枝次数 Times of removed collateral 次	平均胸径 Average diameter cm	平均树高 Average tree height m
	8	2	5.0	4.5
	7	4	4.0	3.8
	6	6	3.0	2.8

表2 上蔡县卢岗乡九彩李村的杨树苗生长情况

Table 2 Growth conditions of poplar seeding in Jucali village, Lugang countryside of Shangcai county

施药措施 Pesticide application measures	施药次数 Pesticide application times 次	除侧枝次数 Times of removed collateral 次	平均胸径 Average diameter cm	平均树高 Average tree height m
	6	2	7.0	5.5
	4	4	5.5	4.7
	4	6	5.0	3.0

3 结论

2025 虽然是迄今为止最速生的杨树新品种之一, 但其平茬苗在雨后、湿热的天气中极易遭受真菌、细菌和害虫混合感染而患锈头病, 失去顶端优势而影响正常生长。所以, 在雨后、湿热天气后预防性施药效果比病害症状出现时或严重

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表3 上蔡县大路李乡刘庄的杨树苗生长情况

Table 3 Growth conditions of poplar seedling in Liu village, Dalu countryside of Shangcai county

施药措施 Pesticide application measures	施药次数 Pesticide application times 次	除侧枝次数 Times of removed collateral 次	平均胸径 Average diameter cm	平均树高 Average tree height m
	6	2	5.5	4.9
	4	4	4.7	4.0
	4	6	4.0	3.0

后施药效果好得多。

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