中国农学通报 2011, 27(第13期6月) 116-120 DOI: ISSN: 1000-6850 CN: 11-1984/S

园艺—研究报告

大叶千斤拔种子萌发特性研究

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摘要:

探讨大叶千斤拔种子发芽最佳基本条件和种子的寿命，为栽培生产提供科学依据。测定种子的吸水率；通过磨破种皮、热水处理和浓硫酸处理等找到破除种子硬实的最佳方法；考察不同温度和光照、发芽床、贮藏对种子萌发的影响。结果表明，大叶千斤拔种子吸水率为31.26%，种皮透水性差是影响种子发芽的关键因素。种子适宜萌发的温度范围为25～30℃，发芽前用磨擦种皮+80℃热水浸种4 h的方法可使种子的发芽率提高到66.67%；光照和发芽床对种子萌发无显著影响。种子在4℃低温条件下贮藏3年发芽率仍有61%，贮藏4年发芽率降至32%。综上，大叶千斤拔种子为硬实性种子，发芽前需要预处理；种子为高温萌发型、光中性种子；种子寿命在4年以上。

关键词: 种子贮藏

Study on germination characteristics of Flemingia macrophylla seeds

Abstract:

To discuss the optimal condition for the seed germination and seed longevity of Flemingia macrophylla, and provide scientific evidences for cultivation and production of F. macrophylla. The rate of water absorption of the seed was determined. Methods of frazzling seed coat, soaking in warm water, immersing seed in H2SO4 were used to treat hard seed. And the germination energy, germination rate and germination index of F. macrophylla was determined under different temperature and light, different germination bed and different storage time in the experiment. The rate of water absorption of F. macrophylla seed was 31.26%. The poor water permeability of seed coat was a crucial factor which affects the germination of seeds. 25-30℃ was the suitable temperature range of F. macrophylla germination. The germination rate could rise to 66.67% when the seed was cracked by sad and soaked 4 h in 80℃ warm water. The effect of the light and germination bed was insignificant. The germination rate of seeds stored for three years was 61% under 4℃ lower temperature condition, but it reduced to 32% stored for four years. F. macrophylla seeds were hard seeds and needed pretreatment before experiment. The seeds belonged to the high-temperature-germinating and non-photoblastic type. Seed longevity was longer and can store four years.

Keywords: seed storage

收稿日期 2010-11-22 **修回日期** 2011-01-12 **网络版发布日期** 2011-06-13

DOI:

基金项目:

国家科技基础条件平台工作项目

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