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### 园艺—研究报告

## 不同土壤含水量对菲油果幼苗生长及生理生化特性的影响

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摘要:

为了探索菲油果幼苗生长所需的最适土壤水分条件,对所试材料的耐性进行初步研究,采用不同梯度的土壤水分含量(20%、40%、60%、80%)分别对1年生菲油果扦插苗进行栽培处理,正常管理作为对照。通过对菲油果幼苗生长特性及生理生化特性,如过氧化物酶(POD)和超氧化物歧化酶(SOD)的活性等指标的测定,研究菲油果幼苗对不同土壤含水量的耐受特性,并探索菲油果适宜生长的水分含量区间。结果表明,在不同含水量处理下,菲油果幼苗均可以生长;当水分含量高于80%时出现淹水胁迫,表现为茎干生长过快,其POD、SOD活性也随着胁迫时间的延长表现为持续上升;水分含量低于20%时出现干旱胁迫,菲油果则表现出生长受到抑制,POD、SOD酶活则随着胁迫的加剧,均出现先降低后增加的趋势。菲油果在40%~50%的土壤质量含水量范围内生长最为健壮;所试材料在一定时间内(50天)对不适宜的含水量具有一定耐性。

关键词: 生理生化

The Influence of Different Soil Moisture Content on Growth and Physiological and Biochemical Characteristic of Feijoa sellowiana Berg Seedlings

Abstract:

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In order to select the best soil water content and study the tolerance of materials, 1-year Feijoa seedlings were treated with different soil moisture content (20%, 40%, 60%, 80%) and normal management was taken as contrast. The author studied the characteristics of morphology and physiological and biochemical (POD and SOD), the option content of soil moisture on seedling growth was screening. The results showed that: all seedlings were grown in different soil water content. When the water content attained more than 80% ,seedlings appeared flooding stress and grown more fast, SOD and POD activities increased gradually with the stress time extending; When Lower than 20%, seedlings appeared drought stress, and their growth were retarded, meanwhile SOD and POD activities showed the trend of declining first and then increasing. The conclusion indicated that 40%-50% soil water content was the best for seedlings grown in this range. And the texting materials had the tolerance for different water content in a long time (within 50 days).

Keywords: physiological and biochemical

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