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## 水浸泡玉米秸基质对番茄育苗效果的影响

### Effects of water-soaked corn stalk substrate on tomato seedling culture

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中文关键词: [农业废弃物](#) [发酵](#) [基质](#) [玉米秸](#) [水浸泡](#) [番茄](#) [育苗](#)

英文关键词: [agricultural wastes](#) [fermentation](#) [substrate](#) [corn stalk](#) [water-soak](#) [tomato](#) [grow seedling](#)

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#### 中文摘要:

草炭是一种广泛应用的优良作物栽培基质, 过度开采会对环境造成危害, 研究性能稳定能够替代草炭基质的材料一直受到国内外的重视。该文把单位体积的玉米秸基质加入2倍体积的水中浸泡不同时间, 风干后与一定比例的蛭石混配作为育苗基质, 以草炭基质为对照, 进行番茄育苗试验。在育苗期间, 定期观测幼苗地上部、地下部的形态指标及干物质积累指标, 研究水浸泡时间对玉米秸基质育苗效果的影响, 结果表明: 水浸泡的玉米秸基质能促进番茄幼苗的生长, 增加地上部、地下部及全株鲜质量和干质量, 并且这种效果随播种后天数的延长表现的更为明显; 不同浸泡时间对番茄幼苗生长的影响有差异, 延长浸泡时间对番茄幼苗的生长和干物质积累有明显促进作用, 但浸泡时间过长, 这种效果有减弱趋势, 以浸泡10 d的处理育苗效果最优。浸泡10 d的玉米秸基质可以替代草炭基质用于番茄育苗, 水浸泡是改良玉米秸基质理化性状的有效措施。

#### 英文摘要:

Peat moss as a kind of optical substrate is widely used in horticultural industry, it will be harmful to environment if peat moss is be unrestrained exploited. Exploring alternative substrate with stable performance becomes a hot spot of scientific research at home and abroad. In this experiment, the corn stalk substrate mixed with vermiculite in definite proportion was used for tomato seedling culture and was compared with peat moss. The corn stalk substrate was soaked in water in different time with the volume ratio of 1:2 corn stalk substrate to water the soaked substrates would be air dried before using for growing tomato seedling. The effects of corn stalk substrate soaking in water in different time on the seedling growth were studied by measuring the coefficients of aboveground and underground parts growth and dry matter quantities regularly during the tomato seedling growing stage. The results indicated that the water-soaked corn stalk substrate could accelerated the tomato seedling growth and increased aboveground, underground parts growth and whole plant fresh and dry matter weight, the longer the tomato seedling growth, the more obviously the effects of these were. It was different that the effects of different soaking time in water on tomato seedling growth, prolonging soaking time properly could promote tomato growth and seedling dry matter accumulation, but these effects would be decreased with overtime soaking. The corn stalk substrate soaked in water in 10 d was an optimal treatment and could alternative peat moss in growing tomato seedling. It was an effective method for modified physicochemical properties of corn stalk substrate by soaked in water in some time.

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